

# **ENVIRONMENTAL MONITORING REPORT**

**December, 2019**

**PROJECT: REDI IRON ORE MINE (Block -1)**  
village Redi, Vengurla taluka, Sindhudurg district,  
Maharashtra State.

**Lessee: M/S. GOGTE MINERALS**  
**BELAGAVI**  
**KARNATAKA**

**CONSULTANT**

**MINERAL ENGINEERING SERVICES**

**Mining & Environmental Engineers**

25/XXV, Club Road, BALLARI - 583 103.

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# MINERAL ENGINEERING SERVICES



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12-Q-1800012-TIC  
BS-OHSAS-18001-2007  
12-O-1800013-TIC

Table No. 1 a

## Analysis Report of Fugitive Emission

MES/AQ/FTR/08/00

Name of the Project	: Redi Iron Ore Mine (203)
Name of the Client	: M/s. Gogte Minerals
Station at & Code	: A - I, Loading Point
Duration	: 08 Hrs
Date of Report	: 02.01.2020
Report No	: MES/WS/ARN/34
Date of sample	Particulate mater ( $\mu\text{g}/\text{m}^3$ )
06.12.2019	418
09.12.2019	362

Station at & Code	: A - II, Dumping Point
Duration	: 08 Hrs
Date of Report	: 02.01.2020
Date of sample	Particulate mater ( $\mu\text{g}/\text{m}^3$ )
07.12.2019	308
10.12.2019	365

Station at & Code	: A - III, Haulage Road
Duration	: 08 Hrs
Date of Report	: 02.01.2020
Date of sample	Particulate mater ( $\mu\text{g}/\text{m}^3$ )
06.12.2019	374
09.12.2019	366
Ref	: Environmental (Protection) Rules, 2010 (Sixth Amendment)
	Particulate mater ( $\mu\text{g}/\text{m}^3$ )
Permissible limits for Fugitive Emissions	1200 $\mu\text{g}/\text{m}^3$

  
(M.R. DURGA PRASAD)  
GOVT. ANALYST

  
(M.S. RAJU)  
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BS-OHSAS-18001-2007  
12-D-1800013-TTC

Table No. 1 b

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

MES/AQ/FTR/08/00

Name of the Project	: Redi Iron Ore Mine (203)					
Name of the Client	: M/s. Gogte Minerals					
Station at & Code	: A - IV, Core Zone (ML Area, behind the Mines Office)					
Duration	: 24 Hrs					
Date of Report	: 02.01.2020					
Reference IS 5182	Report No : MES/WS/ARN/29					
Date of Sampling	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	Ammonia (NH <sub>3</sub> ), µg/m <sup>3</sup>	Benzene (C <sub>6</sub> H <sub>6</sub> ), µg/m <sup>3</sup>
06.12.2019	7	10	31	19	<20	<1
07.12.2019	9	11	50	27	<20	<1
09.12.2019	8	13	63	30	<20	<1
10.12.2019	11	15	40	21	<20	<1
20.12.2019	7	10	48	23	<20	<1
21.12.2019	9	13	43	28	<20	<1
23.12.2019	8	14	58	35	<20	<1
24.12.2019	7	12	51	37	<20	<1
Limits for Industrial , Residential, Rural and other Areas	80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	400 24 Hrs	5 Annual

Date of Sampling	Lead (Pb), µg/m <sup>3</sup>	Nickel (Ni), ng/m <sup>3</sup>	Arsenic (As), ng/m <sup>3</sup>	Benzo(a) Pyrene (BaP), ng/m <sup>3</sup>	Carbon Monoxide* (CO), mg/m <sup>3</sup>	Ozone* (O <sub>3</sub> ), µg/m <sup>3</sup>
06.12.2019	0.06	<0.5	<0.5	<0.5	0.17	20
07.12.2019	0.24	<0.5	<0.5	<0.5	0.19	27
09.12.2019	0.10	<0.5	<0.5	<0.5	0.10	21
10.12.2019	0.08	<0.5	<0.5	<0.5	0.16	20
20.12.2019	0.05	<0.5	<0.5	<0.5	0.22	24
21.12.2019	0.08	<0.5	<0.5	<0.5	0.13	20
23.12.2019	0.11	<0.5	<0.5	<0.5	0.26	25
24.12.2019	0.20	<0.5	<0.5	<0.5	0.19	24
Limits for Industrial , Residential, Rural and other Areas	1.0 24 Hrs	20 Annual	6 Annual	1 Annual	4 1 Hr	180 1 Hr

Note : \* Parameters monitored for period of 1 hr

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12-0-1800013-TTC

Table No. 1 c

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

MES/AQ/FTR/08/00

Name of the Project	: Redi Iron Ore Mine (203)					
Name of the Client	: M/s. Gogte Minerals					
Station at & Code	: A - V, Redi village					
Duration	: 24 Hrs					
Date of Report	: 06.01.2020					
Reference IS 5182	Report No : MES/WS/ARN/30					
Date of Sampling	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	Ammonia (NH <sub>3</sub> ), µg/m <sup>3</sup>	Benzene (C <sub>6</sub> H <sub>6</sub> ), µg/m <sup>3</sup>
06.12.2019	9	15	37	17	<20	<1
07.12.2019	12	15	30	18	<20	<1
09.12.2019	9	10	42	26	<20	<1
10.12.2019	11	12	39	20	<20	<1
20.12.2019	10	14	52	27	<20	<1
21.12.2019	9	13	46	21	<20	<1
23.12.2019	6	9	35	23	<20	<1
24.12.2019	10	12	44	28	<20	<1
Limits for Industrial , Residential, Rural and other Areas	80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	400 24 Hrs	5 Annual

Date of Sampling	Lead (Pb), µg/m <sup>3</sup>	Nickel (Ni), ng/m <sup>3</sup>	Arsenic (As), ng/m <sup>3</sup>	Benzo(a) Pyrene (BaP), ng/m <sup>3</sup>	Carbon Monoxide* (CO), mg/m <sup>3</sup>	Ozone* (O <sub>3</sub> ), µg/m <sup>3</sup>
06.12.2019	0.16	<0.5	<0.5	<0.5	0.35	22
07.12.2019	0.05	<0.5	<0.5	<0.5	0.15	20
09.12.2019	<0.05	<0.5	<0.5	<0.5	0.16	24
10.12.2019	0.09	<0.5	<0.5	<0.5	0.25	21
20.12.2019	0.07	<0.5	<0.5	<0.5	0.07	20
21.12.2019	0.05	<0.5	<0.5	<0.5	0.18	22
23.12.2019	0.15	<0.5	<0.5	<0.5	0.23	20
24.12.2019	0.05	<0.5	<0.5	<0.5	0.17	24
Limits for Industrial , Residential, Rural and other Areas	1.0 24 Hrs	20 Annual	6 Annual	1 Annual	4 1 Hr	180 1 Hr

Note : \* Parameters monitored for period of 1 hr

  
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Table No. 1 d

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

MES/AQ/FTR/08/00

Name of the Project : Redi Iron Ore Mine (203)  
Name of the Client : M/s. Gogte Minerals  
Station at & Code : A - VI, Shiroda village  
Duration : 24 Hrs  
Date of Report : 06.01.2020  
Reference IS 5182 Report No : MES/WS/ARN/33

Date of Sampling	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	Ammonia (NH <sub>3</sub> ), µg/m <sup>3</sup>	Benzene (C <sub>6</sub> H <sub>6</sub> ), µg/m <sup>3</sup>
06.12.2019	10	15	35	23	<20	<1
07.12.2019	11	9	43	24	<20	<1
09.12.2019	8	10	64	24	<20	<1
10.12.2019	10	13	42	25	<20	<1
20.12.2019	9	17	46	29	<20	<1
21.12.2019	15	14	49	30	<20	<1
23.12.2019	12	13	55	21	<20	<1
24.12.2019	12	15	37	23	<20	<1
Limits for Industrial , Residential, Rural and other Areas	80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	400 24 Hrs	5 Annual

Date of Sampling	Lead (Pb), µg/m <sup>3</sup>	Nickel (Ni), ng/m <sup>3</sup>	Arsenic (As), ng/m <sup>3</sup>	Benzo(a) Pyrene (BaP), ng/m <sup>3</sup>	Carbon Monoxide* (CO), mg/m <sup>3</sup>	Ozone* (O <sub>3</sub> ), µg/m <sup>3</sup>
06.12.2019	0.07	<0.5	<0.5	<0.5	0.23	<20
07.12.2019	0.22	<0.5	<0.5	<0.5	0.14	22
09.12.2019	0.25	<0.5	<0.5	<0.5	0.28	25
10.12.2019	0.21	<0.5	<0.5	<0.5	0.29	<20
20.12.2019	0.11	<0.5	<0.5	<0.5	0.33	23
21.12.2019	0.06	<0.5	<0.5	<0.5	0.16	22
23.12.2019	0.18	<0.5	<0.5	<0.5	0.17	23
24.12.2019	0.22	<0.5	<0.5	<0.5	0.24	<20
Limits for Industrial , Residential, Rural and other Areas	1.0 24 Hrs	20 Annual	6 Annual	1 Annual	4 1 Hr	180 1 Hr

Note : \* Parameters monitored for period of 1 hr

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Table No. 1 e

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

MES/AQ/FTR/08/00

Name of the Project : Redi Iron Ore Mine (203)  
Name of the Client : M/s. Gogte Minerals  
Station at & Code : A - VII, Gaontala village  
Duration : 24 Hrs  
Date of Report : 06.01.2020  
Reference IS 5182 Report No : MES/WS/ARN/31

Date of Sampling	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	Ammonia (NH <sub>3</sub> ), µg/m <sup>3</sup>	Benzene (C <sub>6</sub> H <sub>6</sub> ), µg/m <sup>3</sup>
06.12.2019	8	14	47	18	<20	<1
07.12.2019	11	13	48	20	<20	<1
09.12.2019	7	10	50	20	<20	<1
10.12.2019	9	15	49	28	<20	<1
20.12.2019	7	11	47	21	<20	<1
21.12.2019	9	13	50	29	<20	<1
23.12.2019	13	15	54	25	<20	<1
24.12.2019	6	9	49	22	<20	<1
Limits for Industrial , Residential, Rural and other Areas	80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	400 24 Hrs	5 Annual

Date of Sampling	Lead (Pb), µg/m <sup>3</sup>	Nickel (Ni), ng/m <sup>3</sup>	Arsenic (As), ng/m <sup>3</sup>	Benzo(a) Pyrene (BaP), ng/m <sup>3</sup>	Carbon Monoxide* (CO), mg/m <sup>3</sup>	Ozone* (O <sub>3</sub> ), µg/m <sup>3</sup>
06.12.2019	0.17	<0.5	<0.5	<0.5	0.25	26
07.12.2019	0.18	<0.5	<0.5	<0.5	0.19	29
09.12.2019	0.12	<0.5	<0.5	<0.5	0.18	26
10.12.2019	0.17	<0.5	<0.5	<0.5	0.12	22
20.12.2019	0.06	<0.5	<0.5	<0.5	0.25	22
21.12.2019	0.09	<0.5	<0.5	<0.5	0.24	23
23.12.2019	0.11	<0.5	<0.5	<0.5	0.35	24
24.12.2019	0.05	<0.5	<0.5	<0.5	0.12	20
Limits for Industrial , Residential, Rural and other Areas	1.0 24 Hrs	20 Annual	6 Annual	1 Annual	4 1 Hr	180 1 Hr

Note : \* Parameters monitored for period of 1 hr

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12-0-1800013-TTC

Table No. 1 f

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

MES/AQ/FTR/08/00

Name of the Project	: Redi Iron Ore Mine (203)					
Name of the Client	: M/s. Gogte Minerals					
Station at & Code	: A - VIII, Kanyalwadi village					
Duration	: 24 Hrs					
Date of Report	: 06.01.2020					
Reference IS 5182	Report No : MES/WS/ARN/32					
Date of Sampling	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	PM <sub>10</sub> , (µg/m <sup>3</sup> )	PM <sub>2.5</sub> , (µg/m <sup>3</sup> )	Ammonia (NH <sub>3</sub> ), µg/m <sup>3</sup>	Benzene (C <sub>6</sub> H <sub>6</sub> ), µg/m <sup>3</sup>
06.12.2019	6	10	55	23	<20	<1
07.12.2019	10	11	57	25	<20	<1
09.12.2019	9	12	47	23	<20	<1
10.12.2019	6	10	42	26	<20	<1
20.12.2019	11	14	53	26	<20	<1
21.12.2019	7	10	49	26	<20	<1
23.12.2019	9	16	41	21	<20	<1
24.12.2019	9	12	48	22	<20	<1
Limits for Industrial , Residential, Rural and other Areas	80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	400 24 Hrs	5 Annual

Date of Sampling	Lead (Pb), µg/m <sup>3</sup>	Nickel (Ni), ng/m <sup>3</sup>	Arsenic (As), ng/m <sup>3</sup>	Benzo(a) Pyrene (BaP), ng/m <sup>3</sup>	Carbon Monoxide* (CO), mg/m <sup>3</sup>	Ozone* (O <sub>3</sub> ), µg/m <sup>3</sup>
06.12.2019	0.25	<0.5	<0.5	<0.5	0.19	28
07.12.2019	0.27	<0.5	<0.5	<0.5	0.11	21
09.12.2019	0.07	<0.5	<0.5	<0.5	0.22	22
10.12.2019	0.08	<0.5	<0.5	<0.5	0.18	26
20.12.2019	0.24	<0.5	<0.5	<0.5	0.20	20
21.12.2019	0.22	<0.5	<0.5	<0.5	0.22	21
23.12.2019	0.15	<0.5	<0.5	<0.5	0.34	22
24.12.2019	0.35	<0.5	<0.5	<0.5	0.30	25
Limits for Industrial , Residential, Rural and other Areas	1.0 24 Hrs	20 Annual	6 Annual	1 Annual	4 1 Hr	180 1 Hr

Note : \* Parameters monitored for period of 1 hr

  
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12-0-1800013-TIC

Table No. 1 g

## STATISTICAL AIR QUALITY DATA

Project : Redi Iron Ore Mine (203)

Month : December, 2019

Station Code : A IV - Core Zone (ML Area, behind the Mines Office)					Station Code : A V - Redi village				Station Code : A VI - Shiroda village			
	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Min.	7	10	31	19	6	9	30	17	8	9	35	21
10%	7	10	37	20	8	10	34	18	9	10	36	22
25%	7	11	42	23	9	12	37	20	10	12	41	23
50%	8	13	49	28	10	13	41	22	11	14	45	24
75%	9	13	53	31	10	14	45	26	12	15	51	26
98%	11	15	62	37	12	15	51	28	15	17	63	30
Max.	11	15	63	37	12	15	52	28	15	17	64	30
Avg.	8	12	48	28	10	13	41	22	11	13	46	25
SD	1	2	10	6	2	2	7	4	2	3	10	3
No. of obs	8				8				8			
Station Code : A VII - Gaontala village					Station Code : A VIII- Kanyalwadi village							
	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>				
Min.	6	9	47	18	6	10	41	21				
10%	7	10	47	19	6	10	42	22				
25%	7	11	48	20	7	10	46	23				
50%	9	13	49	22	9	12	49	24				
75%	10	14	50	26	9	13	54	26				
98%	13	15	53	29	11	16	57	26				
Max.	13	15	54	29	11	16	57	26				
Avg.	9	13	49	23	8	12	49	24				
SD	2	2	2	4	2	2	6	2				
No. of obs	8				8							

  
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ISO 9001 : 2015  
12-Q-1800012-TTC  
BS-OHSAS-18001-2007  
12-0-1800013-TTC

Table No. 2

## WATER ANALYSIS REPORT

MES/W/FTR/11/00

Name of the Project	: Redi (203) Iron Ore Mine
Name of the Client	: M/s. Gogte Minerals
Month	: December, 2019
Date of sampling	: 10.12.2019
Date of Report	: 02.01.2020
Report No	: MES/WS/WRN/01
Ref	: Environmental (P) Rules, 1986 SCHEDULE I,- 01.01.2016

Sl. No.	Parameters	Method of Testing	General Standards For Effluent Discharge of Environmental Pollutants	Samples	
				SW1	AD1
1	pH	IS 3025 (Part-11)	6.0-9.0	8.42	8.32
2	Biochemical Oxygen Demand mg/l, BOD <sub>5</sub> 27° C	IS 3025 (Part-44)	30	4.32	4.03
3	Chemical Oxygen Demand (COD) mg/l	IS 3025 (Part-58)	250	28	26
4	Total Suspended Solids, mg/l	IS 3025 (Part-17)	100	8	8
5	Fixed Dissolved Solids (FDS) mg/l	IS 3025(part 18)	2100	530	560
6	Temperature ° C	IS 3025 (Part-9)	Shall not 5°c above the receiving water temp	25	25
7	Oil & Grease, mg/l	IS 3025 (Part-39)	10	<1	<1
8	Ammonical Nitrogen, mg/l	IS 3025 (Part-34)	50	<0.1	<0.1
9	Total Kjeldahl Nitrogen, mg/l	IS 3025 (Part-34)	50	<0.5	<0.5
10	Nitrate Nitrogen (as N), mg/l	IS 3025 (Part-34)	10	<0.1	<0.1
11	Phosphates (as P), mg/l	IS 3025 (Part-31)	5	<0.1	<0.1
12	Chlorides (as Cl), mg/l	IS 3025 (Part-32)	1000	280	282
13	Sulphates (as SO <sub>4</sub> ) mg/l	IS 3025 (Part-24)	1000	36	38
14	Fluoride (as F), mg/l	IS 3025 (Part-60)	2	<0.1	<0.1
15	Sulphide (as S), mg/l	IS 3025 (Part-29)	2	<0.01	<0.01
16	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	IS 3025 (Part-43)	1	<0.001	<0.001
17	Total Residual Chlorine, mg/l	IS 3025 (Part-26)	1	<0.1	<0.1
18	Zinc (as Zn), mg/l	IS 3025 (Part-49)	5	<0.05	<0.05
19	Iron (as Fe), mg/l	IS 3025 (Part-53)	3	0.08	0.12
20	Copper (as Cu), mg/l	IS 3025 (Part-42)	3	<0.03	<0.03
21	Trivalent Chromium (as Cr <sup>+3</sup> ),mg/l	IS 3025 (Part-52)	2	<0.03	<0.03
22	Manganese (as Mn), mg/l	IS 3025 (Part-59)	2	<0.03	<0.03
23	Nickel (as Ni), mg/l	IS 3025 (Part-54)	3	<0.01	<0.01
24	Arsenic (as As), mg/l	IS 3025 (Part-37)	0.2	<0.002	<0.002
25	Cyanide (as CN), mg/l	IS 3025 (Part-27)	0.2	<0.01	<0.01
26	Vanadium (as V), mg/l	APHA 21 <sup>st</sup> Edition	0.2	<0.001	<0.001
27	Lead (as Pb), mg/l	IS 3025 (Part-47)	0.1	<0.005	<0.005
28	Hexavalent Chromium (as Cr <sup>+6</sup> ),mg/l	IS 3025 (Part-52)	2	<0.03	<0.03
29	Selenium (as Se), mg/l	IS 3025 (Part-56)	0.05	<0.005	<0.005
30	Cadmium (as Cd), mg/l	IS 3025 (Part-41)	2	<0.002	<0.002
31	Mercury (as Hg), mg/l	IS 3025 (Part-48)	0.01	<0.0005	<0.0005

Sample Code : SW1 - Survey No. 203 Lease No.1 Pit water AD1 - Pit discharge water  
Samples Collected & Analysed by Mineral Engineering Services, Ballari

  
(M.R. DURGA PRASAD)  
GOVT. ANALYST

  
(M.S. RAJU)  
HEAD OF LABORATORY

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# MINERAL ENGINEERING SERVICES



(Recognised by GOI, MoEF&CC under E(P) Act 1986 Vide Gazette Notification  
No. SO 857 (E) dated 26.02.2018. Recognition valid upto 25.02.2023  
ISO 9001 : 2015 AND BS OHSAS 18001 : 2007 Certification Valid upto 18.03.2021

ISO 9001 : 2015  
12-Q-1800012-TIC  
BS-OHSAS-18001-2007  
12-0-1800013-TIC

Table No. 3

## WATER ANALYSIS REPORT

MES/W/FTR/12/00

Name of the Project : Redi (203) Iron Ore Mine  
Name of the Client : M/s. Gogte Minerals  
Month : December, 2019  
Date of sampling : 10.12.2019  
Date of Report : 02.01.2020  
Report No : MES/WS/WRN/02  
Ref:IS : 2296, 1982 Class C Norms (Stream Water Standards)

Sl.No.	Parameters	Method of Testing	Limits For Stream Water Standards	Result		
				SW2	SW3	SW4
i	pH	IS:3025(Part-11)	6.5 to 8.5	8.26	8.19	8.23
ii	Dissolved Oxygen (as O <sub>2</sub> ), mg/l, Min	IS:3025(Part-38)	4	5.8	5.4	5.6
iii	Biochemical Oxygen Demand (as O <sub>2</sub> ), mg/l, Max	IS:3025(Part-44)	3	1.3	1.9	1.8
iv	Total Coliform (mpn/100ml), Max	IS:1622	5000	52	75	68
v	Colour (Hazen Units), Max	IS:3025(Part-4)	300	<1	5	5
vi	Fluoride (as F),mg/l, Max	IS:3025(Part-60)	1.5	<0.1	<0.1	<0.1
vii	Cadmium (as Cd), mg/l, Max	IS:3025(Part-41)	0.01	<0.002	<0.002	<0.002
viii	Chloride (as Cl),mg/l, Max	IS:3025(Part-32)	600	137	138	88
ix	Chromium (as Cr <sup>+6</sup> ), mg/l, Max	IS:3025(Part-52)	0.05	<0.03	<0.03	<0.03
x	Cyanides (as CN), mg/l, Max	IS:3025(Part-27)	0.05	<0.01	<0.01	<0.01
xi	Total Dissolved Solids (mg/l), Max	IS:3025(Part-16)	1500	318	380	210
xii	Selenium (as Se), mg/l, Max	IS:3025(Part-56)	0.05	<0.005	<0.005	<0.005
xiii	Sulphates as SO <sub>4</sub> (mg/l), Max	IS:3025(Part-24)	400	28.6	35.2	15.0
xiv	Lead (as Pb) mg/l, Max	IS:3025(Part-47)	0.1	<0.005	<0.005	<0.005
xv	Copper (as Cu),mg/l, Max	IS:3025(Part-42)	1.5	<0.01	<0.01	<0.01
xvi	Arsenic as As (mg/l), Max	IS:3025(Part-37)	0.2	<0.002	<0.002	<0.002
xvii	Iron (as Fe),mg/l, MAX	IS:3025(Part-53)	50	0.13	0.08	0.06
xviii	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),mg/l, Max	IS:3025(Part-43)	0.005	<0.001	<0.001	<0.001
xix	Zinc (as Zn),mg/l, Max	IS:3025(Part-49)	15	<0.005	<0.005	<0.005
xx	Insecticides, mg/l, Max	APHA 21 <sup>st</sup>	Absent	NA	NA	NA
xxi	Anionic detergents (as MBAS),mg/l, Max	Annex K of IS 13248	1	<0.1	<0.1	<0.1
xxii	Oils and grease, mg/l, Max	IS:3025(Part-39)	0.1	<0.01	<0.01	<0.01
xxiii	Nitrates (as NO <sub>3</sub> ),mg/l, Max	IS:3025(Part-34)	50	1.60	2.26	6.83
xxiv	Alpha Emitters (µcurie/ml), Max	APHA 21 <sup>st</sup>	10 <sup>-9</sup>	1.29	NA	NA
xxv	Beta Emitters (µcurie/ml), Max	APHA 21 <sup>st</sup>	10 <sup>-8</sup>	NA	NA	NA

### SAMPLE CODE :

SW2 - Kanyal tank water

SW3 - Nallah water near Kanyalwadi village

SW4- Spring water near Hanuman temple Kanyalwadi village

Samples Collected & Analysed by Mineral Engineering Services, Ballari Note : NA - Not Analysed

  
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