



MONITORING & ANALYSIS OF ENVIRONMENTAL PARAMETERS OF RAIL WHEEL PLANT BELA

Sampling & Analysis done by, EMTRC Consultants Pvt. Ltd. (Recognized by Ministry of Environmental , forest & climate change , Gov of India)

- REF: (i) Ministry of Environment and Forest (MoEF)/GOI environmental Clearance no. J-11011/527/2010-IA.II(I) dated 12.01.2012.
ii) Bihar State Pollution Control Board (BSPCB) Discharge Consent Order Letter No. pt 2-116/11 t-6094, dated 03.08.2016.
iii) BSPCB Emission Consent Order letter No. PT(NOC)-628/09 T-6095, dated 03.08.2016.

1. MONTH WISE ANALYSIS OF GROUND WATER AUGUST 2018

Ground Water sample	UNIT	Limit as per IS10500:2012		August 2018	
		Limit (Max) (mg/l) Desirable	Permissible limit in the absence of alternative source	Borewell No. 1	Borewell No. 2
1. pH	--	6.5 to 8.5	--	7.765	7.39
2. Colour	Hazen	5	15	Colorless	Colorless
3. Turbidity on NTU	NTU	1	5	<1	<1
4. Total Dissolved Solids (TDS)	mg/l.	500	2000	470	520
5. Total Alkalinity as CaCO ₃	mg/l.	200	600	170	210
6. Total Hardness as CaCO ₃	mg/l.	200	600	210	230
7. Calcium as Ca	mg/l.	75	200	56	64
8. Magnesium as Mg	mg/l.	30	100	17	17
9. Sulphate as SO ₄	mg/l.	200	400	18	45
10. Chloride as Cl	mg/l.	250	1000	20	30
11. Nitrate as NO ₃	mg/l.	45	---	4.5	5.2
12. Iron as Fe	mg/l.	0.3	---	0.14	0.15
13. Arsenic as As	mg/l.	0.01	0.05	<0.001	<0.001
14. Fluoride as F	mg/l.	1.0	1.5	0.75	0.76
15. Total Coliform	MPN/100 ml	0	--	0	0

2. MONTH WISE ANALYSIS OF NOISE SAMPLE AUGUST -2018

Monitoring Location	Limit (Max) Leq: dBA	Test result	
		Day time Leq: dBA	Night time Leq: dBA
1. Near Main Gate	Day time- 75 dBA Night time- 70 dBA	53.6	43.8
2. Near ADM Building		51.2	43.2

Monitoring Location	Limit (Max)	Test result
3. Near Final Wheel Processing Sec.	Up to 90 dBA as per Bihar Factories Rules, 1950	82.6
4. Near Electric Arc Furnace		84.8

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3. MONTH WISE ANALYSIS OF STACK EMISSION MONITORING AUGUST 2018

Stack connected to Electric Arc Furnace	Prescribed Standard Limit	Test result July 2018
Gas Temp °C	---	52
Velocity m/s	----	12.5
PM mg / NM ³	50	84
SO ₂ mg / NM ³	Not specified	< 1 (BDL)
NO _x mg / NM ³	Not specified	120

Stack connected to DG 1	Prescribed Standard Limit as per EP Act 1986 GSR 280E, Dated 11-04-2008	Test result July 2018
a. Gas Temp °C	---	210
b. Velocity m/s	----	20.8
c. PM mg / NM ³	75	74
d. SO ₂ mg / NM ³	S in fuel < 2 %	52
e. NO _x ppm	710	510
f. NMHC, mg/ NM ³	100	84
g. Co, mg/ NM ³	150	380

4. MONTH WISE ANALYSIS OF WASTE WATER FROM CANTEEN (BEFORE TREATMENT) AUGUST - 2018

S.N	Parameters	Unit	Test Method	Result	General discharge standard Inland surface water
1.	pH	-	APHA-4500	6.91	5.5 -9.0
2.	Colour	Hazen Unit	APHA-2120B	8	-
3.	Total suspended solids	Mg/l	APHA-2540D	80	100
4.	Total dissolved solids	Mg/l	APHA-2540B	750	2100
5.	BOD	Mg/l	APHA-5210B	26	30
6.	COD	Mg/l	APHA-5220D	85	250
7.	Oil and grease	Mg/l	APHA4500D	7.5	10
8.	Chloride as Cl	Mg/l	APHA-4500B	80	1000
9.	Sulphate as SO ₂	Mg/l	APHA-4500E	45	1000
10.	Ammonical N as N	Mg/l	APHA-5220D	18	50
11.	Total Kjeldahl Nitrogen as N	Mg/l	APHA-4500B	32	100
12.	Dissolved Phosphate	Mg/l	APHA-4500C	2.8	5.0

5. MONTH WISE ANALYSIS OF POUND WATER TEST RESULT AUGUST-2018

S.N	Parameters	Unit	Test Method	Result	General discharge standard Inland surface water
1.	pH	-	APHA-4500	7.72	5.5 -9.0
2.	Colour	Hazen Unit	APHA-2120B	4	-
3.	Total suspended solids	Mg/l	APHA-2540D	22	100
4.	Total dissolved solids	Mg/l	APHA-2540B	460	2100
5.	BOD	Mg/l	APHA-5210B	8.5	30
6.	COD	Mg/l	APHA-5220D	52	250
7.	Oil and grease	Mg/l	APHA4500D	1.6	10
8.	Chloride as Cl	Mg/l	APHA-4500B	40	1000
9.	Sulphate as SO ₂	Mg/l	APHA-4500E	35	1000
10.	Ammonical N as N	Mg/l	APHA-5220D	5.2	50
11.	Total Kjeldahl Nitrogen as N	Mg/l	APHA-4500B	14.8	100
12.	Dissolved Phosphate	Mg/l	APHA-4500C	1.8	5.0

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6. MONTH WISE MONITORING & ANALYSIS OF AMBIENT AIR QUALITY AUGUST - 2018

Month	Parameters	Limit(Max)	Near Main Gate	Near East Side Boundary Wall (Store Yard)	Near Main Store 2	Near ADM Building	Near Main Gate	Near East Side Boundary Wall (Store Yard)	Near Main Store 2	Near ADM Building
24 Hrs. Average Concⁿ in µg/m³										
AUGUST 2018	01st Monitoring					02nd Monitoring				
	PM ₁₀	100 µg/m ³ (24 hours average)	54	56	58	50	58	52	62	54
	PM _{2.5}	60 µg/m ³ (24 hours average)	24	24	26	22	26	22	28	24
	SO ₂	80 µg/m ³ (24 hours average)	5.4	5.5	5.8	5.2	6.2	4.8	6.2	5.8
	NO ₂	80 µg/m ³ (24 hours average)	10.8	10.8	11.5	9.5	11.5	9.5	12.8	10.2

*Conc
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