

RAIL WHEEL PLANT/BELA (INDIAN RAILWAYS) GOVT. OF INDIA		OFFICE OF THE CHIEF ADMINISTRATIVE OFFICER, ADMINISTRATIVE BUILDING, VILLAGE-BELA, BLOCK- DARIAPUR, SARAN (CHHAPRA), BIHAR.
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MONTH WISE ANALYSIS OF GROUND WATER SAMPLE DEC.'2013-JAN.'2014

- 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-17582, dated 22.11.12.
(iii) BSPCB Emission Consent Order letter No. PT(NOC)-628/09 T-17581, dated 22.11.12.

(Sampling & Analysis done by MoEF Recognized Environmental Laboratory, Shiva Test House, Patna, Bihar)

<i>Ground Water sample</i>	UNIT	Limit as per IS10500:1991		Dec- 2013		Jan- 2014	
		Limit (Max) (mg/l) Desirable	<i>Permissible limit in the absence of alternative source</i>	<i>Borewell No. 1</i>	<i>Borewell No. 3</i>	<i>Borewell No. 1</i>	<i>Borewell No. 3</i>
1. Colour	Hazen	5.0	25	< 5.00	< 5.00	< 5.00	< 5.00
2. pH	--	6.5 to 8.5	--	7.22	7.12	7.18	7.31
3. Turbidity on NTU	NTU	5.00	10.00	< 1.00	< 1.00	< 1.00	< 1.00
4. Total Dissolved Solids (TDS)	mg/l.	500.00	2000.00	434.0	381.0	447.0	412.0
5. Total Hardness as CaCO ₃	mg/l.	300.00	600.00	276.0	248.0	282.0	272.0
6. Calcium as Ca	mg/l.	75.00	200.00	49.7	41.6	52.5	45.2
7. Magnesium as Mg	mg/l.	30.00	--	36.9	35.0	36.7	38.6
8. Iron as Fe	mg/l.	0.30	1.00	0.15	0.13	0.19	0.11
9. Total Alkalinity as CaCO ₃	mg/l.	200.00	600.00	304.0	284.0	318.0	300.0
10. Chloride as Cl	mg/l.	250.00	1000.00	42.0	30.0	34.0	26.0
11. Sulphate as SO ₄	mg/l.	200.00	400.00	23.6	17.6	21.4	19.4
12. Nitrate as NO ₃	mg/l.	45.00	100.00	3.2	3.8	3.6	3.0
13. Fluoride as F	mg/l.	1.00	1.50	0.14	0.18	0.17	0.15
14. Arsenic as As	mg/l.	0.05	No relaxation	< 0.01	< 0.01	< 0.01	< 0.01
15. Coliform	MPN	10 in 100 ml	--	NIL	NIL	NIL	NIL
16.							

Remark: All the above monitoring parameters are within the limit.

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MONTH WISE ANALYSIS OF EFFLUENT SAMPLE DEC.'2013-JAN.'2014

- 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-17582, dated 22.11.12.
(iii) BSPCB Emission Consent Order letter No. PT(NOC)-628/09 T-17581, dated 22.11.12.

(Sampling & Analysis done by MoEF Recognized Environmental Laboratory, Shiva Test House, Patna, Bihar)

Parameters	UNIT	Limit(Max) (mg/l) as per Board's Standard	Dec-2013	Jan-2014
1. pH	--	5.5-9.0	7.3	7.2
2. Suspended Solids	mg/l.	200.00	77.7	65.0
3. Total Dissolved Solids	mg/l.	2100.00	970.0	940.5
4. Oil & Grease	mg/l.	10.00	<1.0	<1.0
5. B.O.D.(3 days at 27°C)	mg/l.	100.00	52.3	54.0
6. C.O.D.	mg/l.	Not specified	157.7	160.0
7. Sulphate as SO ₄	mg/l.	1000.00	33.3	36.7
8. Chloride as Cl	mg/l.	1000.00	122.0	121.0
9. Dissolved Phosphate as P	mg/l.	5.00	1.4	1.7
10. Ammonical Nitrogen as N	mg/l.	50.00	16.8	15.5
11. Total Kjeldahl Nitrogen as N	mg/l.	100.00	33.3	29.5

Remark: All the above monitoring parameters are within the limit.

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MONTH WISE ANALYSIS OF GROUND WATER SAMPLE DEC.'2013-JAN.'2014

- 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-17582, dated 22.11.12.
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(Sampling & Analysis done by MoEF Recognized Environmental Laboratory, Shiva Test House, Patna, Bihar)


Monitoring Location	Unit	Limit(Max)	Dec-2013	Jan-2014
1. Near Main Gate	dB(A)	Industrial area-75.0 Commercial area-65.0 Residential area-55.0	59.7	63.7
2. Near ADM Building	dB(A)		56.4	57.1
3. Near Final Wheel Processing Sec.	dB(A)		72.3	71.6
4. Near Furnace	dB(A)		75.1	76.8

STACK EMISSION MONITORING REPORT FROM DEC.'2013-JAN.'2014

(Sampling & Analysis done by MoEF Recognized Environmental Laboratory, Shiva Test House, Patna, Bihar)

		Dec-2013	Jan-2014
Stack connected to Bag House attached with Electric Arc Furnace	Limit (Max)		
a. PM, mg / NM ³	75.00	39.3	37.2
b. SO ₂ , mg / NM ³	Not specified	24.9	23.1
c. NO ₂ , mg / NM ³	710.00	49.0	47.7
Stack connected to Normalizing Furnace			
a. PM, mg / NM ³	75.00	Not in Operation	Not in Operation
b. SO ₂ , mg / NM ³	Not specified		
c. NO ₂ , mg / NM ³	710.00		
Stack connected to 2400 KVA DG Sets			
a. PM, mg / NM ³	75.00	44.4	43.6
b. SO ₂ , mg / NM ³	Not specified	62.8	66.9
c. NO ₂ , mg / NM ³	710.00	234.8	227.2
Stack connected to Draw Furnace			
a. PM, mg / NM ³	75.00	Not in Operation	Not in Operation
b. SO ₂ , mg / NM ³	Not specified		
c. NO ₂ , mg / NM ³	710.00		

Remark: All the above monitoring parameters are within the limit.

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MONTH WISE MONITORING & ANALYSIS OF AMBIENT AIR QUALITY DEC.'2013-JAN.'2014

- 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-17582, dated 22.11.12.
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(Monitoring & Analysis done by MoEF Recognized Environmental Laboratory, Shiva Test House, Patna, Bihar)

Month	Parameters	Limit(Max)	Near Main Gate	Near East Side Boundary Wall (Store Yard)	Near Main Store 2	Near ADM Building (TTC)	Near Main Gate	Near East Side Boundary Wall (Store Yard)	Near Main Store 2	Near ADM Building (TTC)	Avg. Values
24 Hrs. Average Concⁿ in µg/m³											
DEC-2013	01st Monitoring					02nd Monitoring					
	PM ₁₀	100 µg/m ³	53.7	59.8	69.8	57.9	50.9	54.8	67.6	48.0	57.8
	PM _{2.5}	60 µg/m ³	29.4	33.7	40.3	30.4	29.3	31.0	39.9	25.6	32.5
	SO ₂	80 µg/m ³	22.9	20.1	27.5	16.6	23.8	21.6	31.1	18.0	22.7
	NO ₂	80 µg/m ³	37.8	31.4	41.3	28.8	31.5	33.6	43.3	27.9	34.5
JAN-2014	01st Monitoring					02nd Monitoring					
	PM ₁₀	100 µg/m ³	63.1	59.2	74.3	56.4	59.3	64.2	67.6	51.7	62.0
	PM _{2.5}	60 µg/m ³	36.2	38.0	44.1	31.2	40.7	42.7	47.4	33.9	39.3
	SO ₂	80 µg/m ³	17.4	15.9	23.9	20.4	28.7	27.1	29.1	20.6	22.9
	NO ₂	80 µg/m ³	30.7	26.9	42.8	36.3	38.4	41.0	44.7	33.0	36.7

Remark: All the above monitoring parameters are within the limit.