

<b>RAIL WHEEL PLANT/BELA (INDIAN RAILWAYS) GOVT. OF INDIA</b>		<b>OFFICE OF THE CHIEF ADMINISTRATIVE OFFICER, ADMINISTRATIVE BUILDING, VILLAGE-BELA, BLOCK- DARIAPUR, SARAN (CHHAPRA), BIHAR.</b>
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**MONTH WISE ANALYSIS OF GROUND WATER SAMPLE FEB.'2014-MARCH.'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		Feb - 2014		March - 2014	
		Limit (Max) (mg/l) Desirable	<i>Permissible limit in the absence of alternative source</i>	<i>Borewell No. 2</i>	<i>Borewell No. 4</i>	<i>Borewell No. 2</i>	<i>Borewell No. 4</i>
1. Colour	Hazen	5.0	25	< 5.00	< 5.00	< 5.00	< 5.00
2. pH	--	6.5 to 8.5	--	7.27	7.22	7.17	7.28
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	442.0	437.0	452.0	448.0
5. Total Hardness as CaCO <sub>3</sub>	mg/l.	300.00	600.00	272.0	288.0	276.0	288.0
6. Calcium as Ca	mg/l.	75.00	200.00	51.3	54.5	44.8	48.8
7. Magnesium as Mg	mg/l.	30.00	--	35.0	36.9	39.8	40.3
8. Iron as Fe	mg/l.	0.30	1.00	0.14	0.17	0.15	0.16
9. Total Alkalinity as CaCO <sub>3</sub>	mg/l.	200.00	600.00	296.0	312.0	298.0	302.0
10. Chloride as Cl	mg/l.	250.00	1000.00	28.0	22.0	32.0	36.0
11. Sulphate as SO <sub>4</sub>	mg/l.	200.00	400.00	20.8	18.1	20.6	22.8
12. Nitrate as NO <sub>3</sub>	mg/l.	45.00	100.00	3.1	3.4	3.5	2.9
13. Fluoride as F	mg/l.	1.00	1.50	0.12	0.19	0.16	0.18
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

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

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**MONTH WISE ANALYSIS OF EFFLUENT SAMPLE FEB.'2014-MARCH.'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	Feb-2014	March -2014
1. pH	--	<b>5.5-9.0</b>	<b>6.9</b>	<b>7.0</b>
2. Suspended Solids	mg/l.	<b>200.00</b>	<b>55.5</b>	<b>64.0</b>
3. Total Dissolved Solids	mg/l.	<b>2100.00</b>	<b>830.5</b>	<b>935.0</b>
4. Oil & Grease	mg/l.	<b>10.00</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>
5. B.O.D.(3 days at 27°C)	mg/l.	<b>100.00</b>	<b>49.0</b>	<b>58.0</b>
6. C.O.D.	mg/l.	<b>Not specified</b>	<b>154.0</b>	<b>155.0</b>
7. Sulphate as SO <sub>4</sub>	mg/l.	<b>1000.00</b>	<b>38.2</b>	<b>39.3</b>
8. Chloride as Cl	mg/l.	<b>1000.00</b>	<b>113.0</b>	<b>128.0</b>
9. Dissolved Phosphate as P	mg/l.	<b>5.00</b>	<b>1.5</b>	<b>1.5</b>
10. Ammonical Nitrogen as N	mg/l.	<b>50.00</b>	<b>16.3</b>	<b>18.6</b>
11. Total Kjeldahl Nitrogen as N	mg/l.	<b>100.00</b>	<b>31.4</b>	<b>36.2</b>

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

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**MONTH WISE ANALYSIS OF AMBIENT NOISE LEVEL FEB.'2014-MARCH.'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)**


Monitoring Location	Unit	Limit(Max)	Feb-2014	March -2014
1. Near Main Gate	dB(A)	<b>Industrial area-75.0 Commercial area-65.0 Residential area-55.0</b>	<b>61.1</b>	<b>64.7</b>
2. Near ADM Building	dB(A)		<b>53.3</b>	<b>59.2</b>
3. Near Final Wheel Processing Sec.	dB(A)		<b>65.4</b>	<b>69.1</b>
4. Near Furnace	dB(A)		<b>68.1</b>	<b>74.4</b>

**STACK EMISSION MONITORING REPORT FROM FEB.'2014-MARCH.'2014**

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

		Feb-2014	March -2014
<b>Stack connected to Bag House attached with Electric Arc Furnace</b>	<b>Limit (Max)</b>		
a. PM, mg / NM <sup>3</sup>	<b>75.00</b>	<b>41.4</b>	<b>43.5</b>
b. SO <sub>2</sub> , mg / NM <sup>3</sup>	<b>Not specified</b>	<b>19.8</b>	<b>20.2</b>
c. NO <sub>2</sub> , mg / NM <sup>3</sup>	<b>710.00</b>	<b>43.1</b>	<b>52.2</b>
<b>Stack connected to Normalizing Furnace</b>			
a. PM, mg / NM <sup>3</sup>	<b>75.00</b>	<b>16.4</b>	<b>Not in Operation</b>
b. SO <sub>2</sub> , mg / NM <sup>3</sup>	<b>Not specified</b>	<b>Not Detectable</b>	
c. NO <sub>2</sub> , mg / NM <sup>3</sup>	<b>710.00</b>	<b>23.7</b>	
<b>Stack connected to 2400 KVA DG Sets</b>			
a. PM, mg / NM <sup>3</sup>	<b>75.00</b>	<b>45.2</b>	<b>48.2</b>
b. SO <sub>2</sub> , mg / NM <sup>3</sup>	<b>Not specified</b>	<b>60.2</b>	<b>62.7</b>
c. NO <sub>2</sub> , mg / NM <sup>3</sup>	<b>710.00</b>	<b>243.1</b>	<b>253.3</b>
<b>Stack connected to Draw Furnace</b>			
a. PM, mg / NM <sup>3</sup>	<b>75.00</b>	<b>Not in Operation</b>	<b>Not in Operation</b>
b. SO <sub>2</sub> , mg / NM <sup>3</sup>	<b>Not specified</b>		
c. NO <sub>2</sub> , mg / NM <sup>3</sup>	<b>710.00</b>		

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

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**MONTH WISE MONITORING & ANALYSIS OF AMBIENT AIR QUALITY DEC. FEB.'2014-MARCH.'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.

**(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
<b>24 Hrs. Average Conc<sup>n</sup> in µg/m<sup>3</sup></b>											
Feb-2014	<b>01<sup>st</sup> Monitoring</b>					<b>02<sup>nd</sup> Monitoring</b>					
	PM <sub>10</sub>	100 µg/m <sup>3</sup>	53.7	59.8	69.8	57.9	50.9	54.8	67.6	48.0	<b>57.8</b>
	PM <sub>2.5</sub>	60 µg/m <sup>3</sup>	29.4	33.7	40.3	30.4	29.3	31.0	39.9	25.6	<b>32.5</b>
	SO <sub>2</sub>	80 µg/m <sup>3</sup>	22.9	20.1	27.5	16.6	23.8	21.6	31.1	18.0	<b>22.7</b>
	NO <sub>2</sub>	80 µg/m <sup>3</sup>	37.8	31.4	41.3	28.8	31.5	33.6	43.3	27.9	<b>34.5</b>
March-2014	<b>01<sup>st</sup> Monitoring</b>					<b>02<sup>nd</sup> Monitoring</b>					
	PM <sub>10</sub>	100 µg/m <sup>3</sup>	63.1	59.2	74.3	56.4	59.3	64.2	67.6	51.7	<b>62.0</b>
	PM <sub>2.5</sub>	60 µg/m <sup>3</sup>	36.2	38.0	44.1	31.2	40.7	42.7	47.4	33.9	<b>39.3</b>
	SO <sub>2</sub>	80 µg/m <sup>3</sup>	17.4	15.9	23.9	20.4	28.7	27.1	29.1	20.6	<b>22.9</b>
	NO <sub>2</sub>	80 µg/m <sup>3</sup>	30.7	26.9	42.8	36.3	38.4	41.0	44.7	33.0	<b>36.7</b>

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