

<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 OCT.'2013- NOV.'2013**

- 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		Oct- 2013		Nov- 2013	
		Limit (Max) (mg/l) Desirable	<i>Permissible limit in the absence of alternative source</i>	<i>Borewell No. 3</i>	<i>Borewell No. 4</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	--	7.32	7.13	7.27	7.16
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	414.0	392.0	426.0	378.0
5. Total Hardness as CaCO <sub>3</sub>	mg/l.	300.00	600.00	272.0	244.0	268.0	260.0
6. Calcium as Ca	mg/l.	75.00	200.00	51.3	41.6	46.5	38.4
7. Magnesium as Mg	mg/l.	30.00	--	35.0	34.0	36.9	39.4
8. Iron as Fe	mg/l.	0.30	1.00	0.16	0.12	0.13	0.16
9. Total Alkalinity as CaCO <sub>3</sub>	mg/l.	200.00	600.00	296.0	284.0	312.0	296.0
10. Chloride as Cl	mg/l.	250.00	1000.00	32.0	28.0	40.0	36.0
11. Sulphate as SO <sub>4</sub>	mg/l.	200.00	400.00	22.6	16.4	21.8	18.6
12. Nitrate as NO <sub>3</sub>	mg/l.	45.00	100.00	4.1	3.7	3.8	4.2
13. Fluoride as F	mg/l.	1.00	1.50	0.16	0.14	0.15	0.21
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 OCT.'2013- Nov.'2013**

- 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	Oct- 2013	Nov- 2013
1. pH	--	<b>5.5-9.0</b>	7.2	7.3
2. Suspended Solids	mg/l.	<b>200.00</b>	67.5	82.5
3. Total Dissolved Solids	mg/l.	<b>2100.00</b>	898.8	999.0
4. Oil & Grease	mg/l.	<b>10.00</b>	<1.0	<1.0
5. B.O.D.(3 days at 27 <sup>0</sup> C)	mg/l.	<b>100.00</b>	54.5	63.5
6. C.O.D.	mg/l.	<b>Not specified</b>	172.0	177.5
7. Sulphate as SO <sub>4</sub>	mg/l.	<b>1000.00</b>	36.6	34.6
8. Chloride as Cl	mg/l.	<b>1000.00</b>	122.5	118.0
9. Dissolved Phosphate as P	mg/l.	<b>5.00</b>	1.4	1.6
10. Ammonical Nitrogen as N	mg/l.	<b>50.00</b>	16.5	17.9
11. Total Kjeldahl Nitrogen as N	mg/l.	<b>100.00</b>	31.0	33.8

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

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**MONTH WISE AMBIENT NOISE LEVEL MONITORING REPORT OCT.'2013- NOV.'2013**

- 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)	Oct- 2013	Nov- 2013
1. Near Main Gate	dB(A)	<b>Industrial area-75.0 Commercial area-65.0 Residential area-55.0</b>	<b>67.8</b>	<b>62.4</b>
2. Near ADM Building	dB(A)		<b>53.4</b>	<b>55.2</b>
3. Near Final Wheel Processing Sec.	dB(A)		<b>71.5</b>	<b>69.1</b>
4. Near Furnace	dB(A)		<b>79.6</b>	<b>71.4</b>

**STACK EMISSION MONITORING REPORT FROM OCT.'2013- NOV.'2013**

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

		Oct- 2013	Nov- 2013
<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>36.8</b>	<b>32.1</b>
b. SO <sub>2</sub> , mg / NM <sup>3</sup>	<b>Not specified</b>	<b>22.0</b>	<b>26.6</b>
c. NO <sub>2</sub> , mg / NM <sup>3</sup>	<b>710.00</b>	<b>44.9</b>	<b>41.2</b>
<b>Stack connected to Normalizing Furnace</b>			
a. PM, mg / NM <sup>3</sup>	<b>75.00</b>	<b>15.2</b>	<b>Not in Operation</b>
b. SO <sub>2</sub> , mg / NM <sup>3</sup>	<b>Not specified</b>	<b>No Detectable</b>	
c. NO <sub>2</sub> , mg / NM <sup>3</sup>	<b>710.00</b>	<b>26.3</b>	
<b>Stack connected to 2400 KVA DG Sets</b>			
a. PM, mg / NM <sup>3</sup>	<b>75.00</b>	<b>49.3</b>	<b>46.0</b>
b. SO <sub>2</sub> , mg / NM <sup>3</sup>	<b>Not specified</b>	<b>67.7</b>	<b>63.5</b>
c. NO <sub>2</sub> , mg / NM <sup>3</sup>	<b>710.00</b>	<b>251.2</b>	<b>233.2</b>
<b>Stack connected to Draw Furnace</b>			
a. PM, mg / NM <sup>3</sup>	<b>75.00</b>	<b>19.4</b>	<b>Not in Operation</b>
b. SO <sub>2</sub> , mg / NM <sup>3</sup>	<b>Not specified</b>	<b>No Detectable</b>	
c. NO <sub>2</sub> , mg / NM <sup>3</sup>	<b>710.00</b>	<b>30.1</b>	

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**MONTH WISE MONITORING & ANALYSIS OF AMBIENT AIR QUALITY OCT.'2013- NOV.'2013**

**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>											
Oct 2013	<b>01<sup>st</sup> Monitoring</b>					<b>02<sup>nd</sup> Monitoring</b>					
	PM <sub>10</sub>	100 µg/m <sup>3</sup>	61.6	64.0	79.8	53.1	57.2	67.1	73.0	48.0	<b>57.8</b>
	PM <sub>2.5</sub>	60 µg/m <sup>3</sup>	32.0	41.3	47.1	33.7	29.4	38.0	42.0	25.6	<b>32.5</b>
	SO <sub>2</sub>	80 µg/m <sup>3</sup>	17.5	18.9	24.1	22.1	19.7	22.5	26.1	18.0	<b>22.7</b>
	NO <sub>2</sub>	80 µg/m <sup>3</sup>	33.8	36.8	38.7	34.7	32.7	39.2	42.2	27.9	<b>34.5</b>
Nov 2013	<b>01<sup>st</sup> Monitoring</b>					<b>02<sup>nd</sup> Monitoring</b>					
	PM <sub>10</sub>	100 µg/m <sup>3</sup>	58.9	66.6	69.7	61.2	58.8	61.9	86.5	51.7	<b>62.0</b>
	PM <sub>2.5</sub>	60 µg/m <sup>3</sup>	26.6	32.6	33.6	29.1	28.0	30.4	41.6	33.9	<b>39.3</b>
	SO <sub>2</sub>	80 µg/m <sup>3</sup>	23.5	25.6	21.9	20.6	19.7	23.8	29.4	20.6	<b>22.9</b>
	NO <sub>2</sub>	80 µg/m <sup>3</sup>	37.0	38.3	34.2	30.8	29.6	35.6	45.8	33.0	<b>36.7</b>

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