


<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 NOVEMBER - 2017**

- 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.

**(Sampling & Analysis done by MoEF Recognized Environmental Laboratory, EMTRC Consultants Pvt. Ltd. )**

<i>Ground Water sample</i>	UNIT	Limit as per IS10500:2012		November -2017	
		Limit (Max) (mg/l) Desirable	<i>Permissible limit in the absence of alternative source</i>	<i>Borewell No. 03</i>	<i>Borewell No. 4</i>
1. pH	--	6.5 to 8.5	--	7.64	7.62
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	460	470
5. Total Alkalinity as CaCO <sub>3</sub>	mg/l.	200	600	190	190
6. Total Hardness as CaCO <sub>3</sub>	mg/l.	200	600	220	230
7. Calcium as Ca	mg/l.	75	200	64	68
8. Magnesium as Mg	mg/l.	30	100	14.6	14.6
9. Sulphate as SO <sub>4</sub>	mg/l.	200	400	20	24
10. Chloride as Cl	mg/l.	250	1000	28	30
11. Nitrate as NO <sub>3</sub>	mg/l.	45	---	5.2	5.8
12. Iron as Fe	mg/l.	0.3	---	0.15	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	0.78	0.76
15. Total Coliform	MPN/100 ml	0	--	6	5

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**MONTH WISE ANALYSIS OF NOISE SAMPLE NOVEMBER -2017**

- (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.

**(Sampling & Analysis done by MoEF Recognized Environmental Laboratory, EMTRC Consultants Pvt. Ltd. )**

Monitoring Location	Limit (Max) Leq: dBA	Test result	
		Day time Leq: dBA	Night time Leq: dBA
1. Near Main Gate	<b>Day time- 75 dBA Night time- 70 dBA</b>	<b>52.6</b>	<b>43.2</b>
2. Near ADM Building		<b>49.6</b>	<b>42.2</b>

Monitoring Location	Limit (Max) <b>90 dBA</b> (as per Bihar Factories Rule, 1950)	Daytime dB	Night time dB
3. Near Final Wheel Processing Sec.	1- 105 ¾- 107	<b>71.8</b>	<b>66.2</b>
4. Near Furnace	½- 110 ¼- 115	<b>94.2</b>	<b>89.8</b>

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**MONTH WISE ANALYSIS OF STACK EMISSION MONITORING NOVEMBER -2017**

- (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.


**(Sampling & Analysis done by MoEF Recognized Environmental Laboratory, EMTRC Consultants Pvt. Ltd. )**

**STACK EMISSION MONITORING REPORT NOVEMBER -2017**

<b>Stack connected to Bag House attached with Electric Arc Furnace</b>	<b>Prescribed Standard Limit</b>	<b>Test result November 2017</b>
a. PM mg / NM <sup>3</sup>	<b>50</b>	<b>40</b>
b. SO <sub>2</sub> mg / NM <sup>3</sup>	<b>Not specified</b>	<b>&lt; 1 (BDL)</b>
c. NO <sub>x</sub> mg / NM <sup>3</sup>	<b>Not specified</b>	<b>68</b>
d. Gas Temp °C	<b>---</b>	<b>55</b>
e. Velocity m/s	<b>----</b>	<b>10.8</b>

<b>Stack connected to Draw Furnace</b>	<b>Prescribed Standard Limit</b>	<b>Test result November 2017</b>
f. PM mg / NM <sup>3</sup>	<b>50</b>	<b>24</b>
g. SO <sub>2</sub> mg / NM <sup>3</sup>	<b>Not specified</b>	<b>&lt; 1 (BDL)</b>
h. NO <sub>x</sub> mg / NM <sup>3</sup>	<b>Not specified</b>	<b>15</b>
i. Gas Temp °C	<b>---</b>	<b>45</b>
j. Velocity m/s	<b>----</b>	<b>7.8</b>

<b>Stack connected to Normalizing Furnace</b>	<b>Prescribed Standard Limit</b>	<b>Test result November 2017</b>
k. PM mg / NM <sup>3</sup>	<b>50</b>	<b>38</b>
l. SO <sub>2</sub> mg / NM <sup>3</sup>	<b>Not specified</b>	<b>&lt; 1 (BDL)</b>
m. NO <sub>x</sub> mg / NM <sup>3</sup>	<b>Not specified</b>	<b>24</b>
n. Gas Temp °C	<b>---</b>	<b>322</b>
o. Velocity m/s	<b>----</b>	<b>12.8</b>


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**MONTH WISE ANALYSIS OF WASTE WATER FROM CANTEEN (BEFORE TREATMENT) NOVEMBER  
2017**

- 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.

**(Sampling & Analysis done by MoEF Recognized Environmental Laboratory, EMTRC Consultants Pvt. Ltd.,)**

S.N	Parameters	Unit	Test Method	Result	CPCB Direction on STP dated 21-4-2015
1.	pH	-	APHA-4500	7.12	5.5 -9.0
2.	Colour	Hazen Unit	APHA-2120B	5	-
3.	Total suspended solids	Mg/l	APHA-2540D	95	20
4.	Total dissolved solids	Mg/l	APHA-2540B	540	2100
5.	BOD	Mg/l	APHA-5210B	28	10
6.	COD	Mg/l	APHA-5220D	110	50
7.	Oil and grease	Mg/l	APHA4500D	9.2	10
8.	Chloride as Cl	Mg/l	APHA-4500B	50	-
9.	Sulphate as SO <sub>2</sub>	Mg/l	APHA-4500E	45	-
10.	Ammonical N as N	Mg/l	APHA-5220D	15	5
11.	Total Kjeldahl Nitrogen as N	Mg/l	APHA-4500B	30	10
12.	Dissolved Phosphate	Mg/l	APHA-4500C	2.8	-

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**MONTH WISE ANALYSIS OF POND WATER, NOVEMBER 2017**

- 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.

**(Sampling & Analysis done by MoEF Recognized Environmental Laboratory, EMTRC Consultants Pvt. Ltd. )**

S.N	Parameters	Unit	Test Method	Result
1.	pH	-	APHA-4500	7.82
2.	Colour	Hazen Unit	APHA-2120B	6
3.	Total suspended solids	Mg/l	APHA-2540D	24
4.	Total dissolved solids	Mg/l	APHA-2540B	490
5.	BOD	Mg/l	APHA-5210B	16.2
6.	COD	Mg/l	APHA-5220D	60
7.	Oil and grease	Mg/l	APHA4500D	3.2
8.	Chloride as Cl	Mg/l	APHA-4500B	48
9.	Sulphate as SO <sub>2</sub>	Mg/l	APHA-4500E	45
10.	Ammonical N as N	Mg/l	APHA-5220D	4.8
11.	Total Kjeldahl Nitrogen as N	Mg/l	APHA-4500B	14.2
12.	Dissolved Phosphate	Mg/l	APHA-4500C	0.85

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**MONTH WISE MONITORING & ANALYSIS OF AMBIENT AIR QUALITY NOVEMBER 2017**

- (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.  
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**(Sampling & Analysis done by MoEF Recognized Environmental Laboratory, EMTRC Consultants Pvt. Ltd. )**

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
<b>24 Hrs. Average Conc<sup>n</sup> in µg/m<sup>3</sup></b>										
<b>NOVEMBER ER2017</b>	<b>01<sup>st</sup> Monitoring</b>					<b>02<sup>nd</sup> Monitoring</b>				
	PM <sub>10</sub>	100 µg/m <sup>3</sup> (24 hours average)	68	75	79	65	72	79	84	<b>72</b>
	PM <sub>2.5</sub>	60 µg/m <sup>3</sup> (24 hours average)	33	36	38	32	35	38	40	<b>34</b>
	SO <sub>2</sub>	80 µg/m <sup>3</sup> (24 hours average)	5.2	5.8	6.2	4.8	5.8	6.2	6.5	<b>5.2</b>
	NO <sub>2</sub>	80 µg/m <sup>3</sup> (24 hours average)	12.2	12.8	13.8	11.5	13.5	13.5	14.2	<b>12.2</b>