


<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, MAY -2018**

- 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		<i>May-2018</i>	
		Limit (Max) (mg/l) Desirable	<i>Permissible limit in the absence of alternative source</i>	<i>Borewell No. 03</i>	<i>Borewell No. 04</i>
1. pH	--	6.5 to 8.5	--	7.48	7.44
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	480
5. Total Alkalinity as CaCO <sub>3</sub>	mg/l.	200	600	200	210
6. Total Hardness as CaCO <sub>3</sub>	mg/l.	200	600	230	230
7. Calcium as Ca	mg/l.	75	200	68	72
8. Magnesium as Mg	mg/l.	30	100	14.6	12.2
9. Sulphate as SO <sub>4</sub>	mg/l.	200	400	24	30
10. Chloride as Cl	mg/l.	250	1000	35	38
11. Nitrate as NO <sub>3</sub>	mg/l.	45	---	4.8	4.8
12. Iron as Fe	mg/l.	0.3	---	0.16	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	0.74	0.76
15. Total Coliform	MPN/100 ml	0	--	0	0

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**MONTH WISE ANALYSIS OF NOISE SAMPLE, MAY-2018**

- (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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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>53.8</b>	<b>44.6</b>
2. Near ADM Building		<b>51.8</b>	<b>43.2</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>73.8</b>	<b>66.4</b>
4. Near Furnace	½- 110 ¼- 115	<b>72.4</b>	<b>68.6</b>

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**MONTH WISE ANALYSIS OF STACK EMISSION MONITORING MAY -2018**

- (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 MAY -2018**

Stack connected to Draw Furnace	Prescribed Standard Limit	Test result May-2018
PM mg / NM <sup>3</sup>	<b>50</b>	<b>28</b>
SO <sub>2</sub> mg / NM <sup>3</sup>	<b>Not specified</b>	<b>&lt; 1 (BDL)</b>
NO <sub>x</sub> mg / NM <sup>3</sup>	<b>Not specified</b>	<b>30</b>
Gas Temp °C	---	<b>52</b>
Velocity m/s	----	<b>8.2</b>

Stack connected to Normalizing Furnace	Prescribed Standard Limit	Test result May-2018
PM mg / NM <sup>3</sup>	<b>50</b>	<b>48</b>
SO <sub>2</sub> mg / NM <sup>3</sup>	<b>Not specified</b>	<b>&lt; 1 (BDL)</b>
NO <sub>x</sub> mg / NM <sup>3</sup>	<b>Not specified</b>	<b>45</b>
Gas Temp °C	---	<b>332</b>
Velocity m/s	----	<b>12.5</b>

Stack connected to DG SET(1)	Prescribed Standard Limit	Test result May-2018
PM mg / NM <sup>3</sup>	<b>75</b>	<b>72</b>
SO <sub>2</sub> mg / NM <sup>3</sup>	<b>S in fuel&lt;2%</b>	<b>68</b>
NO <sub>x</sub> mg / ppm	<b>710</b>	<b>388</b>
Gas Temp °C	---	<b>232</b>
Velocity m/s	----	<b>21.4</b>
NMHC ,mg/ NM <sup>3</sup>	<b>100</b>	<b>82</b>
CO, mg/ NM <sup>3</sup>	<b>150</b>	<b>224</b>


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**MONTH WISE ANALYSIS OF WASTE WATER FROM CANTEEN (BEFORE TREATMENT), TEST RESULT  
MAY-2018**

- 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	General Discharge Standard Inland Surface Water
1.	pH	-	APHA-4500	6.68	5.5 -9.0
2.	Colour	Hazen Unit	APHA-2120B	9	-
3.	Total suspended solids	Mg/l	APHA-2540D	88	100
4.	Total dissolved solids	Mg/l	APHA-2540B	880	2100
5.	BOD	Mg/l	APHA-5210B	26	30
6.	COD	Mg/l	APHA-5220D	80	250
7.	Oil and grease	Mg/l	APHA4500D	8.2	10
8.	Chloride as Cl	Mg/l	APHA-4500B	130	1000
9.	Sulphate as SO <sub>2</sub>	Mg/l	APHA-4500E	68	1000
10.	Ammonical N as N	Mg/l	APHA-5220D	22	50
11.	Total Kjeldahl Nitrogen as N	Mg/l	APHA-4500B	35	100
12.	Dissolved Phosphate	Mg/l	APHA-4500C	2.8	5.0

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**MONTH WISE ANALYSIS OF POND WATER, TEST RESULT MAY -2018**

**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	7.65
2.	Colour	Hazen Unit	APHA-2120B	4
3.	Total suspended solids	Mg/l	APHA-2540D	18
4.	Total dissolved solids	Mg/l	APHA-2540B	410
5.	BOD	Mg/l	APHA-5210B	9.8
6.	COD	Mg/l	APHA-5220D	48
7.	Oil and grease	Mg/l	APHA4500D	2.5
8.	Chloride as Cl	Mg/l	APHA-4500B	40
9.	Sulphate as SO <sub>2</sub>	Mg/l	APHA-4500E	38
10.	Ammonical N as N	Mg/l	APHA-5220D	4.2
11.	Total Kjeldahl Nitrogen as N	Mg/l	APHA-4500B	15.6
12.	Dissolved Phosphate	Mg/l	APHA-4500C	1.08

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**MONTH WISE MONITORING & ANALYSIS OF AMBIENT AIR QUALITY, MAY-2018**

- (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>MAY 2018</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)	80	86	90	76	86	89	84	<b>78</b>
	PM <sub>2.5</sub>	60 µg/m <sup>3</sup> (24 hours average)	42	45	48	36	45	48	44	<b>39</b>
	SO <sub>2</sub>	80 µg/m <sup>3</sup> (24 hours average)	7.5	8.2	7.8	6.5	8.2	8.8	7.5	<b>6.8</b>
	NO <sub>2</sub>	80 µg/m <sup>3</sup> (24 hours average)	18.2	18.5	16.8	14.2	19.5	19.2	15.4	<b>14.8</b>