


<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 FEBRUARY-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>February-2018</i>	
		Limit (Max) (mg/l) Desirable	<i>Permissible limit in the absence of alternative source</i>	<i>Borewell No. 01</i>	<i>Borewell No. 2</i>
1. pH	--	6.5 to 8.5	--	7.43	7.58
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	490	520
5. Total Alkalinity as CaCO <sub>3</sub>	mg/l.	200	600	170	220
6. Total Hardness as CaCO <sub>3</sub>	mg/l.	200	600	230	240
7. Calcium as Ca	mg/l.	75	200	64	60
8. Magnesium as Mg	mg/l.	30	100	17	21.9
9. Sulphate as SO <sub>4</sub>	mg/l.	200	400	24	48
10. Chloride as Cl	mg/l.	250	1000	30	32
11. Nitrate as NO <sub>3</sub>	mg/l.	45	---	5.8	5.4
12. Iron as Fe	mg/l.	0.3	---	0.15	0.14
13. Arsenic as As	mg/l.	0.01	0.05	<0.001	<0.001
14. Fluoride as F	mg/l.	1.0	1.5	0.72	0.70
15. Total Coliform	MPN/100 ml	0	--	6	6

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**MONTH WISE ANALYSIS OF NOISE SAMPLE FEBRUARY-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.

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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>54.8</b>	<b>44.6</b>
2. Near ADM Building		<b>52.2</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>74.2</b>	<b>67.2</b>
4. Near Furnace	½- 110 ¼- 115	<b>92.8</b>	<b>87.4</b>

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### MONTH WISE ANALYSIS OF STACK EMISSION MONITORING FEBRUARY-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 FEBRUARY-2018

Stack connected to Bag House attached with Electric Arc Furnace	Prescribed Standard Limit	Test result February-2018
PM mg / NM <sup>3</sup>	<b>50</b>	<b>44</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>48</b>
Gas Temp °C	<b>---</b>	<b>52</b>
Velocity m/s	<b>----</b>	<b>11.5</b>

Stack connected to Draw Furnace	Prescribed Standard Limit	Test result February-2018
PM mg / NM <sup>3</sup>	<b>50</b>	<b>25</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>18</b>
Gas Temp °C	<b>---</b>	<b>40</b>
Velocity m/s	<b>----</b>	<b>7.5</b>

Stack connected to Normalizing Furnace	Prescribed Standard Limit	Test result February-2018
PM mg / NM <sup>3</sup>	<b>50</b>	<b>45</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>32</b>
Gas Temp °C	<b>---</b>	<b>316</b>
Velocity m/s	<b>----</b>	<b>12.2</b>

Stack connected to DG SET(1)	Prescribed Standard Limit	Test result February-2018
PM mg / NM <sup>3</sup>	<b>75</b>	<b>70</b>
SO <sub>2</sub> mg / NM <sup>3</sup>	<b>S in fuel&lt;2%</b>	<b>76</b>
NO <sub>x</sub> mg / ppm	<b>710</b>	<b>310</b>
Gas Temp °C	<b>---</b>	<b>194</b>
Velocity m/s	<b>----</b>	<b>20.8</b>
NMHC ,mg/ NM <sup>3</sup>	<b>100</b>	<b>86</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  
FEBRUARY-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	6.83	5.5 -9.0
2.	Colour	Hazen Unit	APHA-2120B	8	-
3.	Total suspended solids	Mg/l	APHA-2540D	80	100
4.	Total dissolved solids	Mg/l	APHA-2540B	730	2100
5.	BOD	Mg/l	APHA-5210B	22	30
6.	COD	Mg/l	APHA-5220D	68	250
7.	Oil and grease	Mg/l	APHA4500D	7.5	10
8.	Chloride as Cl	Mg/l	APHA-4500B	120	1000
9.	Sulphate as SO <sub>2</sub>	Mg/l	APHA-4500E	65	1000
10.	Ammonical N as N	Mg/l	APHA-5220D	18	50
11.	Total Kjeldahl Nitrogen as N	Mg/l	APHA-4500B	32	100
12.	Dissolved Phosphate	Mg/l	APHA-4500C	2.5	5.0

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**MONTH WISE ANALYSIS OF POND WATER, TEST RESULT FEBRUARY-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	7.76
2.	Colour	Hazen Unit	APHA-2120B	6
3.	Total suspended solids	Mg/l	APHA-2540D	24
4.	Total dissolved solids	Mg/l	APHA-2540B	580
5.	BOD	Mg/l	APHA-5210B	16
6.	COD	Mg/l	APHA-5220D	60
7.	Oil and grease	Mg/l	APHA4500D	3.8
8.	Chloride as Cl	Mg/l	APHA-4500B	55
9.	Sulphate as SO <sub>2</sub>	Mg/l	APHA-4500E	48
10.	Ammonical N as N	Mg/l	APHA-5220D	5.2
11.	Total Kjeldahl Nitrogen as N	Mg/l	APHA-4500B	18
12.	Dissolved Phosphate	Mg/l	APHA-4500C	1.45

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**MONTH WISE MONITORING & ANALYSIS OF AMBIENT AIR QUALITY, FEBRUARY-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>DECEMBER 2017</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)	78	88	86	76	82	84	80	<b>72</b>
	PM <sub>2.5</sub>	60 µg/m <sup>3</sup> (24 hours average)	38	45	42	38	40	43	40	<b>35</b>
	SO <sub>2</sub>	80 µg/m <sup>3</sup> (24 hours average)	6.5	7.8	7.2	6.5	6.8	7.5	6.5	<b>6.0</b>
	NO <sub>2</sub>	80 µg/m <sup>3</sup> (24 hours average)	14.2	17.8	17.8	15.2	15.8	15.6	15.8	<b>14.8</b>