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| RAIL WHEEL PLANT/BELA (INDIAN RAILWAYS) GOVT. OF INDIA |  | OFFICE OF THE CHIEF ADMINISTRATIVE OFFICER, ADMINISTRATIVE BUILDING, VILLAGE-BELA, BLOCK- DARIAPUR, SARAN (CHHAPRA), BIHAR. |
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MONTH WISE ANALYSIS OF GROUND WATER JUNE-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 IS10500:1991 | | June-2017 | |
|--|------------|------------------------------|---|-----------------------|-----------------------|
| | | Limit (Max) (mg/l) Desirable | <i>Permissible limit in the absence of alternative source</i> | <i>Borewell No. 1</i> | <i>Borewell No. 2</i> |
| 1. pH | -- | 6.5 to 8.5 | -- | 7.22 | 7.14 |
| 2. Colour | Hazen | 5 | 15 | Colorless | Colorless |
| 3. Turbidity on NTU | NTU | 1 | 5 | <1 | <1 |
| 4. Total Dissolved Solids (TDS) | mg/l. | 500 | 2000.00 | 490 | 510 |
| 5. Total Alkalinity as CaCO ₃ | mg/l. | 200 | 600.00 | 236 | 240 |
| 6. Total Hardness as CaCO ₃ | mg/l. | 200 | 600 | 260 | 270 |
| 7. Calcium as Ca | mg/l. | 75 | 200 | 72 | 68 |
| 8. Magnesium as Mg | mg/l. | 30 | 100 | 19.4 | 24.3 |
| 9. Sulphate as SO ₄ | mg/l. | 200 | 400 | 34 | 28 |
| 10. Chloride as Cl | mg/l. | 250 | 1000 | 52 | 45 |
| 11. Nitrate as NO ₃ | mg/l. | 45 | --- | 5.4 | 5.2 |
| 12. Iron as Fe | mg/l. | 0.3 | --- | 0.15 | 0.16 |
| 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 | 0.74 |
| 15. Coliform | MPN/100 ml | 0 | -- | 0 | 0 |


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MONTH WISE ANALYSIS OF NOISE SAMPLE- JUNE 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.)

| Monitoring Location | Unit | Limit(Max) | Daytime | Night time |
|-------------------------------------|-------|---|-------------|-------------|
| 1. Near Main Gate | dB(A) | Day time- 75dBA Night time- 70 dBA | 51.8 | 42.6 |
| 2. Near ADM Building | dB(A) | | 50.2 | 41.8 |
| 3. Near Final Wheel Processing Sec. | dB(A) | | 73.6 | 69.8 |
| 4. Near Furnace | dB(A) | | 62.4 | 58.2 |


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

STACK EMISSION MONITORING REPORT JUNE-2017

| Stack connected to Normalizing Furnace | Parameter Standard Limit | Result |
|---|--------------------------|----------|
| a. PM, mg / NM ³ | 50 | 24 |
| b. SO ₂ , mg / NM ³ | Not specified | <1 (BDL) |
| c. NO _x , mg / NM ³ | Not specified | 10 |
| d. Gas Temp °C | --- | 232 |
| e. Velocity m/s | ---- | 12.2 |

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MONTH WISE MONITORING & ANALYSIS OF AMBIENT AIR QUALITY JUNE-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.)

| 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) |
|--|-----------------------------------|---|----------------|---|-------------------|-----------------------------------|----------------|---|-------------------|-------------------------|
| 24 Hrs. Average Concⁿ. in µg/m³ | | | | | | | | | | |
| June-2017 | 01st Monitoring | | | | | 02nd Monitoring | | | | |
| | PM ₁₀ | 100 µg/m ³ (24 hours average) | 55 | 60 | 58 | 52 | 50 | 56 | 55 | 49 |
| | PM _{2.5} | 60 µg/m ³ (24 hours average) | 24 | 28 | 25 | 22 | 22 | 25 | 23 | 20 |
| | SO ₂ | 80 µg/m ³ (24 hours average) | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| | NO ₂ | 80 µg/m ³ (24 hours average) | 11.2 | 11.8 | 11.8 | 9.8 | 10.6 | 11.2 | 11.5 | <9.0 |