Name & Address of the Client	:	Dy.CME/Plg RWP, Bela 3rd Floor Administrative Building PO: Arvind Nagar, Dariarpur Block District: Saran (Chhapra) Bihar, Pin Code- 841221
Name of Project	:	Rail Wheel Plant/Bela (Indian Railways) Govt. of India.

Description of Test Site: Rail Wheel Plant, Bela has become a Production Unit of Indian Railways w.e.f 01.08.2014. It is situated at Bela in Dariyapur Block of Saran district in Bihar (India). It is being built at an approx. cost of Rs. 1500 crores. It is spread over a land area of 295 acres.

Description & Identification of Test	:	Monthly Ambient Air Quality Monitoring, Stack Emission Monitoring, Plant Effluents, Noise & Ground Water
Executing Agency	:	EMTRC Consultants Private Limited, Delhi Recognized by Ministry of Environment, Forests & Climate Change, Govt. of India
Order Reference	:	RWPBELA HQ-MECHANICAL/ RWP-Environment - 2021/10167440057069, Dated: 30.06.2022
Month of Commencement of Study	:	July 2022
Reporting Period	:	1st August to 30th August 2023
Monitoring Team	:	Mr. Mukesh Kumar, Govt Analyst Mr. Rajesh Kumar, Field Officer Mr. Subhonand Bharti



Authorized Signatory
EMTRC Consultants Private Limited

Date & Seal

EMTRC CONSULTANTS PRIVATE LIMITED

Registered Office: Tower 5 / 102 (FF), CWG village, NH24, Delhi 110092

Phone: 9810032481, email: emtrcjkm@gmail.com, website: www.emtrc.in

----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-197/2023-2024

Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221

No. of Pages : 1 of 2

WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022

Nature of Sampling : Ambient Air Quality Monitoring (Monthly)

Sampling Location : Near Material Gate

Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

Sr. No	Date	Parameters						
		PM_{10} $\mu g/m^3$	$PM_{2.5}$ $\mu g/m^3$	SO_2 $\mu g/m^3$	NO_2 $\mu g/m^3$	O_3 $\mu g/m^3$	NH_3 $\mu g/m^3$	CO mg/m^3
1	01-08-2023	65.4	32.2	5.8	12.5	22	9.5	0.35
2	04-08-2023	62.6	30.4	5.2	11.2	24	8.2	0.28
3	07-08-2023	56.4	27.2	4.5	9.5	22	7.5	0.25
4	10-08-2023	60.2	28.6	4.8	10.2	25	10.8	0.32
5	14-08-2023	64.5	31.4	5.8	11.8	24	11.2	0.45
6	17-08-2023	58.6	28.2	5.2	9.8	20	9.5	0.28
7	21-08-2023	52.8	25.4	<4.0	<9.0	22	7.2	0.24
8	24-08-2023	60.5	28.8	4.5	9.5	24	9.5	0.32
9	28-08-2023	63.4	31.6	5.2	10.2	20	10.8	0.40
Nationl Standard		100 (24-h avg)	60 (24-h avg)	80 (24-h avg)	80 (24-h avg)	100 (8-h avg)	400 (24-h avg)	4 (1-h avg)

Note: BDL = Below Detection Limit.

PM_{10} <5, $PM_{2.5}$ <5, SO_2 <4.0 $\mu g/m^3$, NO_2 <9.0 $\mu g/m^3$, O_3 <5.0 $\mu g/m^3$, NH_3 <5.0$\mu g/m^3$

MUKESH KUMAR
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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-197/2023-2024

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Bihar, Pin Code- 841221

No. of Pages : 2 of 2

WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022

Nature of Sampling : Ambient Air Quality Monitoring (Monthly)

Sampling Location : Near Material Gate

Sample Collected By : Staff of EMTRC Lab

TEST RESULTS TEST RESULTS

SN	Date	Parameters				
		B(a)P ng/m^3	Benzene $\mu g/m^3$	As ng/m^3	Ni ng/m^3	Pb $\mu g/m^3$
1	01-08-2023	<0.1	<0.1	<1.0	2.2	<0.1
2	04-08-2023	<0.1	<0.1	<1.0	1.8	<0.1
3	07-08-2023	<0.1	<0.1	<1.0	1.6	<0.1
4	10-08-2023	<0.1	<0.1	<1.0	1.8	<0.1
5	14-08-2023	<0.1	<0.1	<1.0	2.0	<0.1
6	17-08-2023	<0.1	<0.1	<1.0	1.8	<0.1
7	21-08-2023	<0.1	<0.1	<1.0	1.4	<0.1
8	24-08-2023	<0.1	<0.1	<1.0	1.6	<0.1
9	28-08-2023	<0.1	<0.1	<1.0	1.8	<0.1
National Standard		1 (annual avg)	5 (annual avg)	6 (annual avg)	20 (annual avg)	1 (24-h avg)

Note: BDL = Below Detection Limit.
CO <0.1 mg/m^3, B(a)P <0.1 ng/m^3, Benzene <0.1 $\mu g/m^3$, As <1.0 ng/m^3 , Ni <0.5 ng/m^3, Pb <0.1 $\mu g/m^3$

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Date: 30-08-2023

Report No. : EMTRC/RWPB-198/2023-2024

Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221

No. of Pages : 1 of 2

WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022

Nature of Sampling : Ambient Air Quality Monitoring (Monthly)

Sampling Location : Near Store Area

Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

Sr. No	Date	Parameters						
		PM_{10} $\mu g/m^3$	$PM_{2.5}$ $\mu g/m^3$	SO_2 $\mu g/m^3$	NO_2 $\mu g/m^3$	O_3 $\mu g/m^3$	NH_3 $\mu g/m^3$	CO mg/m^3
1	01-08-2023	67.2	33.4	6.5	12.8	24	10.8	0.32
2	04-08-2023	65.8	32.2	5.8	11.5	23	9.5	0.26
3	07-08-2023	61.4	30.4	5.2	9.8	24	8.2	0.22
4	10-08-2023	64.2	31.8	5.5	10.5	24	11.5	0.28
5	14-08-2023	65.4	32.2	6.2	12.2	25	12.8	0.40
6	17-08-2023	60.2	28.8	5.4	10.5	22	10.2	0.26
7	21-08-2023	58.4	27.6	4.5	9.8	24	8.5	0.22
8	24-08-2023	62.6	30.4	5.2	10.2	22	10.2	0.28
9	28-08-2023	65.2	32.4	6.0	11.2	22	11.8	0.36
National Standard		100 (24-h avg)	60 (24-h avg)	80 (24-h avg)	80 (24-h avg)	100 (8-h avg)	400 (24-h avg)	4 (1-h avg)

Note: BDL = Below Detection Limit.
PM_{10} <5, $PM_{2.5}$ <5, SO_2 <4.0 $\mu g/m^3$, NO_2 <9.0 $\mu g/m^3$, O_3 <5.0 $\mu g/m^3$, NH_3 <5.0$\mu g/m^3$

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-198/2023-2024

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Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
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Bihar, Pin Code- 841221

No. of Pages : 2 of 2

WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022

Nature of Sampling : Ambient Air Quality Monitoring (Monthly)

Sampling Location : Near Store Area

Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

SN	Date	Parameters				
		B(a)P ng/m^3	Benzene $\mu g/m^3$	As ng/m^3	Ni ng/m^3	Pb $\mu g/m^3$
1	01-08-2023	<0.1	<0.1	<1.0	2.5	<0.1
2	04-08-2023	<0.1	<0.1	<1.0	2.2	<0.1
3	07-08-2023	<0.1	<0.1	<1.0	1.8	<0.1
4	10-08-2023	<0.1	<0.1	<1.0	2.0	<0.1
5	14-08-2023	<0.1	<0.1	<1.0	2.2	<0.1
6	17-08-2023	<0.1	<0.1	<1.0	1.8	<0.1
7	21-08-2023	<0.1	<0.1	<1.0	1.6	<0.1
8	24-08-2023	<0.1	<0.1	<1.0	1.8	<0.1
9	28-08-2023	<0.1	<0.1	<1.0	2.2	<0.1
National Standard		1 (annual avg)	5 (annual avg)	6 (annual avg)	20 (annual avg)	1 (24-h avg)

Note: BDL = Below Detection Limit.

CO <0.1 mg/m^3, B(a)P <0.1 ng/m^3, Benzene <0.1 $\mu g/m^3$, As <1.0 ng/m^3 , Ni <0.5 ng/m^3, Pb <0.1 $\mu g/m^3$

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Date: 30-08-2023

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Bihar, Pin Code- 841221

No. of Pages : 1 of 2

WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022

Nature of Sampling : Ambient Air Quality Monitoring (Monthly)

Sampling Location : Near Canteen Area

Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

Sr. No	Date	Parameters						
		PM_{10} $\mu g/m^3$	$PM_{2.5}$ $\mu g/m^3$	SO_2 $\mu g/m^3$	NO_2 $\mu g/m^3$	O_3 $\mu g/m^3$	NH_3 $\mu g/m^3$	CO mg/m^3
1	01-08-2023	68.6	33.5	7.0	13.2	23	10.2	0.40
2	04-08-2023	66.4	32.8	6.5	11.8	22	9.8	0.32
3	07-08-2023	64.2	31.6	6.2	10.2	25	8.5	0.28
4	10-08-2023	67.6	33.2	6.8	10.8	25	12.2	0.32
5	14-08-2023	70.4	34.5	7.2	12.5	24	12.5	0.45
6	17-08-2023	64.2	21.4	6.5	10.8	23	9.8	0.28
7	21-08-2023	59.4	28.2	5.2	10.2	22	9.2	0.26
8	24-08-2023	65.2	31.8	6.5	10.5	24	10.8	0.32
9	28-08-2023	67.4	32.6	6.5	11.8	22	12.2	0.40
National Standard		100 (24-h avg)	60 (24-h avg)	80 (24-h avg)	80 (24-h avg)	100 (8-h avg)	400 (24-h avg)	4 (1-h avg)

Note: BDL = Below Detection Limit.

PM_{10} <5, $PM_{2.5}$ <5, SO_2 <4.0 $\mu g/m^3$, NO_2 <9.0 $\mu g/m^3$, O_3 <5.0 $\mu g/m^3$, NH_3 <5.0$\mu g/m^3$

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Date: 30-08-2023

Report No. : EMTRC/RWPB-199/2023-2024
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PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221
No. of Pages : 2 of 2
WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022
Nature of Sampling : Ambient Air Quality Monitoring (Monthly)
Sampling Location : Near Canteen Area
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

SN	Date	Parameters				
		B(a)P ng/m^3	Benzene $\mu g/m^3$	As ng/m^3	Ni ng/m^3	Pb $\mu g/m^3$
1	01-08-2023	<0.1	<0.1	<1.0	2.8	<0.1
2	04-08-2023	<0.1	<0.1	<1.0	2.5	<0.1
3	07-08-2023	<0.1	<0.1	<1.0	2.4	<0.1
4	10-08-2023	<0.1	<0.1	<1.0	2.6	<0.1
5	14-08-2023	<0.1	<0.1	<1.0	3.2	<0.1
6	17-08-2023	<0.1	<0.1	<1.0	2.5	<0.1
7	21-08-2023	<0.1	<0.1	<1.0	1.8	<0.1
8	24-08-2023	<0.1	<0.1	<1.0	2.0	<0.1
9	28-08-2023	<0.1	<0.1	<1.0	2.6	<0.1
National Standard		1 (annual avg)	5 (annual avg)	6 (annual avg)	20 (annual avg)	1 (24-h avg)

Note: BDL = Below Detection Limit.
CO <0.1 mg/m^3, B(a)P <0.1 ng/m^3, Benzene <0.1 $\mu g/m^3$, As <1.0 ng/m^3 , Ni <0.5 ng/m^3, Pb <0.1 $\mu g/m^3$

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-200/2023-2024

Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221

No. of Pages : 1 of 2

WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022

Nature of Sampling : Ambient Air Quality Monitoring (Monthly)

Sampling Location : Near Training Centre

Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

Sr. No	Date	Parameters						
		PM_{10} $\mu g/m^3$	$PM_{2.5}$ $\mu g/m^3$	SO_2 $\mu g/m^3$	NO_2 $\mu g/m^3$	O_3 $\mu g/m^3$	NH_3 $\mu g/m^3$	CO mg/m^3
1	01-08-2023	58.4	27.4	4.5	9.0	20	6.2	0.15
2	04-08-2023	60.2	28.8	4.8	9.8	22	7.5	0.22
3	07-08-2023	54.8	26.6	4.0	9.5	24	6.5	0.18
4	10-08-2023	57.6	27.2	4.8	9.8	22	7.8	0.20
5	14-08-2023	60.4	28.8	5.5	10.2	23	8.2	0.26
6	17-08-2023	48.8	23.6	<4.0	<9.0	22	7.5	0.15
7	21-08-2023	52.6	25.4	<4.0	<9.0	25	6.8	0.18
8	24-08-2023	48.2	22.8	<4.0	<9.0	22	8.2	0.15
9	28-08-2023	54.6	26.4	4.2	<9.0	24	7.5	0.22
National Standard		100 (24-h avg)	60 (24-h avg)	80 (24-h avg)	80 (24-h avg)	100 (8-h avg)	400 (24-h avg)	4 (1-h avg)

Note: BDL = Below Detection Limit.

PM_{10} <5, $PM_{2.5}$ <5, SO_2 <4.0 $\mu g/m^3$, NO_2 <9.0 $\mu g/m^3$, O_3 <5.0 $\mu g/m^3$, NH_3 <5.0$\mu g/m^3$

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-200/2023-2024

Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
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PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221

No. of Pages : 2 of 2

WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022

Nature of Sampling : Ambient Air Quality Monitoring (Monthly)

Sampling Location : Near Training Centre

Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

SN	Date	Parameters				
		B(a)P ng/m^3	Benzene $\mu g/m^3$	As ng/m^3	Ni ng/m^3	Pb $\mu g/m^3$
1	01-08-2023	<0.1	<0.1	<1.0	1.5	<0.1
2	04-08-2023	<0.1	<0.1	<1.0	1.8	<0.1
3	07-08-2023	<0.1	<0.1	<1.0	1.4	<0.1
4	10-08-2023	<0.1	<0.1	<1.0	1.6	<0.1
5	14-08-2023	<0.1	<0.1	<1.0	1.8	<0.1
6	17-08-2023	<0.1	<0.1	<1.0	1.2	<0.1
7	21-08-2023	<0.1	<0.1	<1.0	1.2	<0.1
8	24-08-2023	<0.1	<0.1	<1.0	1.0	<0.1
9	28-08-2023	<0.1	<0.1	<1.0	1.4	<0.1
National Standard		1 (annual avg)	5 (annual avg)	6 (annual avg)	20 (annual avg)	1 (24-h avg)

Note: BDL = Below Detection Limit.
CO <0.1 mg/m^3, B(a)P <0.1 ng/m^3, Benzene <0.1 $\mu g/m^3$, As <1.0 ng/m^3 , Ni <0.5 ng/m^3, Pb <0.1 $\mu g/m^3$

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-201/2023-2024
Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
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Bihar, Pin Code- 841221
No. of Pages : 1 of 1
WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022
Nature of Sampling : Ambient Noise Quality Monitoring (Monthly)
Type of Sample : Noise
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

	Monitoring Location	Date of Monitoring	Day Time dB	**Standard Level of Exposure as per Factories Act, 1986**
1	Near Furnace (Inside Shed)	25-08-2023	80.8	90 dB – 8 hr 92 dB – 6 hr 95 dB – 4 hr 97 dB – 3 hr 100 dB – 2 hr 105 dB – 1 hr
2	Near Mould Room (inside Shed)	28-08-2023	74.4	
3	Near MRS Area	29-08-2023	72.6	
4	Near Time Office	31-08-2023	54.8	

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-202/2023-2024

Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221

No. of Pages : 1 of 1

WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022

Nature of Sampling : Stack Emission Monitoring (Monthly)

Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

Parameters		**Electric Arc Furnace**	**Normalizing Furnace**	**Prescribed Standard Limit**
Date of Monitoring		**24-08-2023**	**24-08-2023**	
1	Gas Temp ^0C	95	105	-
2	Velocity m/s	11.5	10.2	-
3	PM mg/Nm^3	36	32	50
4	SO_2 mg/Nm^3	<1 (BDL)	<1(BDL)	Not Specified
5	NO_x mg/Nm^3	42	38	Not Specified

Note: BDL= Below Detectable Limit.

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-203/2023-2024
Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221
No. of Pages : 1 of 1
WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022
Nature of Sampling : Stack Emission Monitoring (Monthly)
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

Parameters		**Draw Furnace**	**Prescribed Standard Limit**
Date of Monitoring		**24-08-2023**	
1	Gas Temp ^{0}C	60	-
2	Velocity m/s	10.5	-
3	PM mg/Nm^3	30	50
4	SO_2 mg/Nm^3	<1 (BDL)	Not Specified
5	NO_x mg/Nm^3	40	Not Specified

Note: BDL= Below Detectable Limit.

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Registered Office: Tower 5 / 102 (FF), CWG village, NH24, Delhi 110092
Phone: 9810032481, email: emtrcjkm@gmail.com, website: www.emtrc.in

----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-204/2023-2024
Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221
No. of Pages : 1 of 1
WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022
Nature of Sampling : Grab Sampling
Type of Sample : Bore Well
Sampling Location : Engineering Tank (Bore Well- Inside Plant)
Date of Sampling : 18-08-2023
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

	Parameters	Unit	Test Method	Results	Acceptable Limit IS:10500:2012	Permissible Limit IS:10500: 2012
1	pH	-	APHA-4500	7.82	6.5 to 8.5	-
2	Colour	Hazen Unit	APHA-2120B	Colorless	5	15
3	Turbidity	NTU	APHA-2030B	<1	1	5
4	Total Dissolved Solids	mg/l	APHA-2540B	540	500	2000
5	Total Alkalinity	mg/l	APHA-2320B	170	200	600
6	Total Hardness as $CaCO_3$	mg/l	APHA-2340C	220	200	600
7	Calcium as Ca	mg/l	APHA-4500B	64	75	200
8	Magnesium as Mg	mg/l	APHA-4500B	14.6	30	100
9	Sulphate	mg/l	APHA-4500B	48	200	400
10	Chlorides as Cl	mg/l	APHA-4500B	65	250	1000
11	Nitrates as NO_3	mg/l	APHA-4500	4.8	45	-
12	Iron as Fe	mg/l	APHA-3111B	0.10	0.3	-
13	Arsenic as As	mg/l	APHA-3111B	<0.001	0.01	0.05
14	Fluoride as F	mg/l	APHA-4500D	0.54	1.0	1.5
15	Total Coliform	MPN/100ml	APHA-9230B	Absent	Absent	-

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-205/2023-2024
Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221
No. of Pages : 1 of 1
WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022
Nature of Sampling : Grab Sampling
Sampling Location : Emergency Tank (Bore Well -Inside Plant)
Date of Sampling : 18-08-2023
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

	Parameters	Unit	Test Method	Results	Acceptable Limit IS:10500:2012	Permissible Limit IS:10500: 2012
1	pH	-	APHA-4500	7.79	6.5 to 8.5	-
2	Colour	Hazen Unit	APHA-2120B	Colorless	5	15
3	Turbidity	NTU	APHA-2030B	<1	1	5
4	Total Dissolved Solids	mg/l	APHA-2540B	520	500	2000
5	Total Alkalinity	mg/l	APHA-2320B	170	200	600
6	Total Hardness as $CaCO_3$	mg/l	APHA-2340C	210	200	600
7	Calcium as Ca	mg/l	APHA-4500B	60	75	200
8	Magnesium as Mg	mg/l	APHA-4500B	14.6	30	100
9	Sulphate	mg/l	APHA-4500B	45	200	400
10	Chlorides as Cl	mg/l	APHA-4500B	62	250	1000
11	Nitrates as NO_3	mg/l	APHA-4500	4.2	45	-
12	Iron as Fe	mg/l	APHA-3111B	0.10	0.3	-
13	Arsenic as As	mg/l	APHA-3111B	<0.001	0.01	0.05
14	Fluoride as F	mg/l	APHA-4500D	0.54	1.0	1.5
15	Total Coliform	MPN/100ml	APHA-9230B	Absent	Absent	-

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-206/2023-2024
Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221
No. of Pages : 1 of 1
WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022
Type of Sample : S.T.P Outlet
Nature of Sampling : Grab Sampling
Date of Sampling : 18-08-2023
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

	Parameters	Unit	Test Method	Result	General Discharge Standard Inland Surface Water
1	pH	-	APHA-4500	7.38	5.5 – 9.0
2	Colour	Hazen Unit	APHA-2120B	3	-
3	Total Suspended solids	mg/l	APHA-2540D	40	100
4	Total Dissolved Solids	mg/l	APHA-2540B	450	2100
5	BOD	mg/l	APHA-5210-B	9.8	30
6	COD	mg/l	APHA-5220D	52	250
7	Oil and Grease	mg/l	APHA-4500D	1.4	10
8	Chloride as Cl	mg/l	APHA-4500B	65	1000
9	Sulphate as SO_4	mg/l	APHA-4500E	42	1000
10	Ammonical N as N	mg/l	APHA-5220D	7.2	50
11	Total Kjeldahl Nitrogen as N	mg/l	APHA-4500B	9.8	100
12	Dissolved Phosphate	mg/l	APHA-4500C	1.8	5.0

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-207/2023-2024
Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221
No. of Pages : 1 of 1
WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022
Nature of Sampling : Fugitive Emission Monitoring (Monthly)
Date of Sampling : 14-08-2023
Sampling Location : Near Electric Arc Furnace
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

	Parameter	Test Methods	Unit	RESULTS	Standard
1	Suspended Particulate Matter	IS-5182-P-4-2005	$\mu g/m^3$	1540	2000

Note: - Fugitive Emission Standard, MOEF, Govt of India, GSR 414(E) Dated 30 May 2008

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-208/2023-2024
Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221
No. of Pages : 1 of 1
WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022
Nature of Sampling : Fugitive Emission Monitoring (Monthly)
Date of Sampling : 17-08-2023
Sampling Location : Mould Room Area
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

	Parameter	Test Methods	Unit	RESULTS	Standard
1	Suspended Particulate Matter	IS-5182-P-4-2005	$\mu g/m^3$	960	2000

Note: - Fugitive Emission Standard, MOEF, Govt of India, GSR 414(E) Dated 30 May 2008

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-209/2023-2024
Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
Dy.CME/Plg RWP, Bela, 3rd Floor Administrative Building
PO: Arvind Nagar, Dariapur Block, District: Saran (Chhapra)
Bihar, Pin Code- 841221
No. of Pages : 1 of 1
WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022
Nature of Sampling : Fugitive Emission Monitoring (Monthly)
Date of Sampling : 18-08-2023
Sampling Location : WFPS Area
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

	Parameter	Test Methods	Unit	RESULTS	Standard
1	Suspended Particulate Matter	IS-5182-P-4-2005	$\mu g/m^3$	980	2000

Note: - Fugitive Emission Standard, MOEF, Govt of India, GSR 414(E) Dated 30 May 2008

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----------TEST REPORT----------

Date: 30-08-2023

Report No. : EMTRC/RWPB-210/2023-2024
Issued To : Rail Wheel Plant/Bela (Indian Railways) Govt. of India
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Bihar, Pin Code- 841221
No. of Pages : 1 of 1
WO / PO No : RWPBELA HQ-MECHANICAL/ RWP-Environment -021/10167440057069, Dated: 30.06.2022
Nature of Sampling : Fugitive Emission Monitoring (Monthly)
Date of Sampling : 21-08-2023
Sampling Location : MRS Area
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

	Parameter	Test Methods	Unit	RESULTS	Standard
1	Suspended Particulate Matter	IS-5182-P-4-2005	$\mu g/m^3$	920	2000

Note: - Fugitive Emission Standard, MOEF, Govt of India, GSR 414(E) Dated 30 May 2008

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