MONITORING & ANALYSIS OF ENVIRONMENTAL PARAMETERS

DY.CME/PLG. RWP, BELA, 3RD FLOOR ADMINISTRATIVE BUILDING

RAIL WHEEL PLANT BELA (INDIAN RAILWAYS)
PO- Arvind Nagar, Block- Dariapur
District: Saran (Chhapra), Pincode- 841221

BY

EMTRC CONSULTANTS PRIVATE LIMITED

Lab: F-66, Road No.2, UPSIDC, Masuri Gulawthi Road Industrial Area, Ghaziabad 209010 (UP)

Registered Office: Tower 5/102 (FF), CWG Village NH24, Near Akshardham Temple, Delhi 110092

emtrcjkm@gmail.com,
emtrcjkm@rediffmail.com

JUNE 2023

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 June to 30th June 2023
Monitoring Team	:	Mr. Mukesh Kumar, Govt Analyst Mr. Swetank Kumar, Chemist Mr. Rajesh Kumar, Field Officer Mr. Subhonand Bharti

05/07/2023

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: 05-07-2023

Report No. : EMTRC/RWPB-168/2023-2024
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	01-06-2023	65.6	32.2	6.5	11.5	28	11.2	0.35
2	05-06-2023	62.8	30.6	5.5	10.2	24	8.5	0.25
3	08-06-2023	69.4	34.2	6.8	12.5	22	11.8	0.28
4	12-06-2023	67.2	32.8	6.5	11.8	26	10.5	0.38
5	16-06-2023	72.4	35.4	6.8	12.8	25	12.8	0.52
6	19-06-2023	65.6	31.8	5.8	10.2	20	10.2	0.38
7	22-06-2023	60.4	28.6	4.5	9.5	18	8.5	0.45
8	26-06-2023	66.8	32.2	6.2	10.2	22	10.8	0.28
9	29-06-2023	69.2	34.4	6.8	11.8	26	12.5	0.32
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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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	01-06-2023	<0.1	<0.1	<1.0	2.5	<0.1
2	05-06-2023	<0.1	<0.1	<1.0	1.8	<0.1
3	08-06-2023	<0.1	<0.1	<1.0	2.8	<0.1
4	12-06-2023	<0.1	<0.1	<1.0	2.5	<0.1
5	16-06-2023	<0.1	<0.1	<1.0	3.2	<0.1
6	19-06-2023	<0.1	<0.1	<1.0	2.2	<0.1
7	22-06-2023	<0.1	<0.1	<1.0	1.8	<0.1
8	26-06-2023	<0.1	<0.1	<1.0	2.5	<0.1
9	29-06-2023	<0.1	<0.1	<1.0	2.8	<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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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	01-06-2023	74.6	36.2	7.5	13.5	30	12.5	0.48
2	05-06-2023	76.8	37.4	8.2	14.2	26	13.8	0.35
3	08-06-2023	72.4	35.5	7.2	12.8	25	12.2	0.32
4	12-06-2023	65.8	31.6	6.5	11.2	28	9.5	0.45
5	16-06-2023	74.6	36.4	7.2	13.8	26	11.8	0.62
6	19-06-2023	76.4	37.5	7.8	14.5	22	13.5	0.45
7	22-06-2023	68.5	33.4	7.0	12.8	20	11.2	0.52
8	26-06-2023	72.4	35.6	7.5	13.2	23	12.8	0.35
9	29-06-2023	71.5	34.8	6.8	12.8	25	11.5	0.38
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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Bihar, Pin Code- 841221
No. of Pages : 2 of 2
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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 µg/m^3	As ng/m^3	Ni ng/m^3	Pb µg/m^3
1	01-06-2023	<0.1	<0.1	<1.0	3.2	<0.1
2	05-06-2023	<0.1	<0.1	<1.0	3.8	<0.1
3	08-06-2023	<0.1	<0.1	<1.0	3.5	<0.1
4	12-06-2023	<0.1	<0.1	<1.0	2.8	<0.1
5	16-06-2023	<0.1	<0.1	<1.0	3.5	<0.1
6	19-06-2023	<0.1	<0.1	<1.0	3.8	<0.1
7	22-06-2023	<0.1	<0.1	<1.0	3.0	<0.1
8	26-06-2023	<0.1	<0.1	<1.0	3.5	<0.1
9	29-06-2023	<0.1	<0.1	<1.0	3.0	<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 µg/m^3, As <1.0 ng/m^3, Ni <0.5 ng/m^3, Pb <0.1 µg/m^3

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

Date: 05-07-2023

Report No. : EMTRC/RWPB-170/2023-2024
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 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	01-06-2023	72.8	35.4	7.2	13.2	28	11.5	0.42
2	05-06-2023	75.2	36.8	7.9	13.5	25	13.2	0.30
3	08-06-2023	70.6	34.9	6.8	12.5	24	11.5	0.28
4	12-06-2023	64.8	31.6	6.2	10.8	26	9.2	0.40
5	16-06-2023	72.6	35.5	6.9	13.5	25	11.5	0.52
6	19-06-2023	75.8	37.2	7.5	13.8	23	12.8	0.40
7	22-06-2023	67.2	32.8	6.7	12.2	22	10.5	0.48
8	26-06-2023	70.8	34.6	7.2	12.5	24	11.2	0.32
9	29-06-2023	69.6	34.2	6.5	12.2	26	12.5	0.35
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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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 µg/m^3	As ng/m^3	Ni ng/m^3	Pb µg/m^3
1	01-06-2023	<0.1	<0.1	<1.0	3.0	<0.1
2	05-06-2023	<0.1	<0.1	<1.0	3.5	<0.1
3	08-06-2023	<0.1	<0.1	<1.0	3.2	<0.1
4	12-06-2023	<0.1	<0.1	<1.0	2.6	<0.1
5	16-06-2023	<0.1	<0.1	<1.0	3.4	<0.1
6	19-06-2023	<0.1	<0.1	<1.0	3.6	<0.1
7	22-06-2023	<0.1	<0.1	<1.0	2.9	<0.1
8	26-06-2023	<0.1	<0.1	<1.0	3.4	<0.1
9	29-06-2023	<0.1	<0.1	<1.0	2.8	<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 µg/m^3, As <1.0 ng/m^3, Ni <0.5 ng/m^3, Pb <0.1 µg/m^3

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

Date: 05-07-2023

Report No. : EMTRC/RWPB-171/2023-2024

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	01-06-2023	62.5	30.2	5.5	10.2	25	9.2	0.28
2	05-06-2023	60.8	28.5	4.8	9.5	22	7.8	0.22
3	08-06-2023	64.5	31.2	6.5	10.8	20	10.2	0.26
4	12-06-2023	61.4	29.6	5.8	9.5	24	9.5	0.28
5	16-06-2023	65.6	32.4	6.8	10.8	23	11.2	0.32
6	19-06-2023	56.2	26.8	4.5	<9.0	18	7.2	0.25
7	22-06-2023	60.6	28.4	4.8	9.2	18	8.5	0.35
8	26-06-2023	64.5	21.6	5.5	10.8	20	9.2	0.32
9	29-06-2023	60.2	28.8	4.8	9.5	24	8.8	0.26
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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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	01-06-2023	<0.1	<0.1	<1.0	1.6	<0.1
2	05-06-2023	<0.1	<0.1	<1.0	1.5	<0.1
3	08-06-2023	<0.1	<0.1	<1.0	2.2	<0.1
4	12-06-2023	<0.1	<0.1	<1.0	2.0	<0.1
5	16-06-2023	<0.1	<0.1	<1.0	2.5	<0.1
6	19-06-2023	<0.1	<0.1	<1.0	1.4	<0.1
7	22-06-2023	<0.1	<0.1	<1.0	1.6	<0.1
8	26-06-2023	<0.1	<0.1	<1.0	2.2	<0.1
9	29-06-2023	<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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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)	23-06-2023	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)	12-06-2023	71.6	
3	Near MRS Area	22-06-2023	70.4	
4	Near Time Office	29-06-2023	54.2	

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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		**29-06-2023**	**29-06-2023**	
1	Gas Temp ^0C	95	105	-
2	Velocity m/s	11.5	10.4	-
3	PM mg/Nm^3	32	36	50
4	SO_2 mg/Nm^3	<1 (BDL)	<1(BDL)	Not Specified
5	NO_x mg/Nm^3	35	38	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: 05-07-2023

Report No. : EMTRC/RWPB-174/2023-2024
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		**29-06-2023**	
1	Gas Temp ^0C	56	-
2	Velocity m/s	9.8	-
3	PM mg/Nm^3	34	50
4	SO_2 mg/Nm^3	<1 (BDL)	Not Specified
5	NO_x mg/Nm^3	32	Not Specified

Note: BDL= Below Detectable Limit.

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

Date: 05-07-2023

Report No. : EMTRC/RWPB-175/2023-2024
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 : 22-06-2023
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	7.84	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	580	500	2000
5	Total Alkalinity	mg/l	APHA-2320B	180	200	600
6	Total Hardness as $CaCO_3$	mg/l	APHA-2340C	240	200	600
7	Calcium as Ca	mg/l	APHA-4500B	69	75	200
8	Magnesium as Mg	mg/l	APHA-4500B	16.5	30	100
9	Sulphate	mg/l	APHA-4500B	54	200	400
10	Chlorides as Cl	mg/l	APHA-4500B	72	250	1000
11	Nitrates as NO_3	mg/l	APHA-4500	5.5	45	-
12	Iron as Fe	mg/l	APHA-3111B	0.14	0.3	-
13	Arsenic as As	mg/l	APHA-3111B	<0.001	0.01	0.05
14	Fluoride as F	mg/l	APHA-4500D	0.58	1.0	1.5
15	Total Coliform	MPN/100ml	APHA-9230B	Absent	Absent	-

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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 : Grab Sampling
Sampling Location : Emergency Tank (Bore Well -Inside Plant)
Date of Sampling : 22-06-2023
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	550	500	2000
5	Total Alkalinity	mg/l	APHA-2320B	190	200	600
6	Total Hardness as $CaCO_3$	mg/l	APHA-2340C	230	200	600
7	Calcium as Ca	mg/l	APHA-4500B	68	75	200
8	Magnesium as Mg	mg/l	APHA-4500B	14.6	30	100
9	Sulphate	mg/l	APHA-4500B	54	200	400
10	Chlorides as Cl	mg/l	APHA-4500B	68	250	1000
11	Nitrates as NO_3	mg/l	APHA-4500	4.8	45	-
12	Iron as Fe	mg/l	APHA-3111B	0.13	0.3	-
13	Arsenic as As	mg/l	APHA-3111B	<0.001	0.01	0.05
14	Fluoride as F	mg/l	APHA-4500D	0.60	1.0	1.5
15	Total Coliform	MPN/100ml	APHA-9230B	Absent	Absent	-

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

Date: 05-07-2023

Report No. : EMTRC/RWPB-177/2023-2024
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 : Canteen Waste water
Nature of Sampling : Grab Sampling
Date of Sampling : 22-06-2023
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

	Parameters	Unit	Test Method	Result	General Discharge Standard Inland Surface Water
1	pH	-	APHA-4500	8.05	5.5 – 9.0
2	Colour	Hazen Unit	APHA-2120B	8	-
3	Total Suspended solids	mg/l	APHA-2540D	74	100
4	Total Dissolved Solids	mg/l	APHA-2540B	620	2100
5	BOD	mg/l	APHA-5210-B	14.2	30
6	COD	mg/l	APHA-5220D	60	250
7	Oil and Grease	mg/l	APHA-4500D	2.8	10
8	Chloride as Cl	mg/l	APHA-4500B	98	1000
9	Sulphate as SO_4	mg/l	APHA-4500E	48	1000
10	Ammonical N as N	mg/l	APHA-5220D	12.2	50
11	Total Kjeldahl Nitrogen as N	mg/l	APHA-4500B	16.8	100
12	Dissolved Phosphate	mg/l	APHA-4500C	2.8	5.0

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

Date: 05-07-2023

Report No. : EMTRC/RWPB-178/2023-2024
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 : 22-06-2023
Sample Collected By : Staff of EMTRC Lab

TEST RESULTS

	Parameters	Unit	Test Method	Result	General Discharge Standard Inland Surface Water
1	pH	-	APHA-4500	7.58	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	510	2100
5	BOD	mg/l	APHA-5210-B	10.2	30
6	COD	mg/l	APHA-5220D	52	250
7	Oil and Grease	mg/l	APHA-4500D	1.2	10
8	Chloride as Cl	mg/l	APHA-4500B	65	1000
9	Sulphate as SO_4	mg/l	APHA-4500E	45	1000
10	Ammonical N as N	mg/l	APHA-5220D	6.8	50
11	Total Kjeldahl Nitrogen as N	mg/l	APHA-4500B	10.2	100
12	Dissolved Phosphate	mg/l	APHA-4500C	1.8	5.0

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Date: 05-07-2023

Report No. : EMTRC/RWPB-179/2023-2024

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 : 23-06-2023

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	$\mu g/m^3$	1320	2000

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

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

Date: 05-07-2023

Report No. : EMTRC/RWPB-180/2023-2024
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 : 12-06-2023
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	$\mu g/m^3$	810	2000

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

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

Date: 05-07-2023

Report No.	: EMTRC/RWPB-181/2023-2024
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	: 27-06-2023
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: 05-07-2023

Report No. : EMTRC/RWPB-182/2023-2024
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 : 26-06-2023
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	$\mu g/m^3$	930	2000

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

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