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● Mine Planning & Design
● Mineral/Sub-Soil Exploration
● Waste Management Services

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Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

TEST REPORT

Test Report No: ENVLAB/23-24/TR-12563

Date: 04.01.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	15.12.2023
			Sample Received on	:	16.12.2023
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt. 04.09.2021
			Sampling Location	:	AUTO GARAGE
Environment Condition during Sampling	:	Atmospheric Temp.: 29 – 33°C Barometric Pressure : 755 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550), VOC Sampler
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	16.12.2023	Test Completed on	:	20.12.2023

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 th Nov. 2009	Analysis Result
1	Particulate matter as PM ₁₀	(µg/m ³)	IS 5182 : Part 23: 2006, RA 2017	100	55.6
2	Particulate matter as PM _{2.5}	(µg/m ³)	IS 5182 (Part 24):2019	60	28.4
3	Sulphur Oxides as SO ₂	(µg/m ³)	IS 5182 (Part 2): 2001, RA 2017	80	11.2
4	Nitrogen Oxides as NO _x	(µg/m ³)	IS 5182 (Part 6): 2006, RA 2017	80	18.9
5	Carbon monoxide as CO(1 Hr)	(mg/m ³)	IS 5182(Part 10):2019	4	0.074
6	Ozone as O ₃ (1 Hr)	(µg/m ³)	IS 5182 (Part-09):2019	180	5.8
7	Ammonia as NH ₃	(µg/m ³)	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m ³)	IS 5182(Part -22):2019	1	<0.006
9	Nickel as Ni	(ng/m ³)	IS 5182(Part -22):2019	20	<3.1
10	Arsenic as As	(ng/m ³)	IS 5182(Part -22):2019	6	<0.16
11	Benzene as C ₆ H ₆	(µg/m ³)	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m ³)	IS 5182 (Part 12):2017	1	<0.5

BDL Values: SO₂ < 4 µg/m³, NO_x < 9 µg/m³, O₃ < 5 µg/m³, NH₃ < 20 µg/m³, Ni < 3.1 ng/m³, As < 0.16 ng/m³, C₆H₆ < 4.0 µg/m³, BaP < 0.5 ng/m³, Pb < 0.006 µg/m³, CO < 0.1 mg/m³

Remarks: The above Sample test results are within the prescribed standard for the above mentioned parameters.

TERMS AND CONDITION:-

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*** End Report***





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• Renewable Energy

• Agricultural Development
• Information Technology
• Public Health Engineering

• Mine Planning & Design
• Mineral/Sub-Soil Exploration
• Waste Management Services

TEST REPORT

Test Report No: ENVLAB/23-24-TR-12564

Date: 04.01.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	15.12.2023
			Sample Received on	:	16.12.2023
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt. 04.09.2021
			Sampling Location	:	MRP
Environment Condition during Sampling	:	Atmospheric Temp.: 29 – 33°C Barometric Pressure : 755 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550), VOC Sampler
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	16.12.2023	Test Completed on	:	20.12.2023

2. Chemical Testing

B. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 th Nov. 2009	Analysis Result
1	Particulate matter as PM ₁₀	($\mu\text{g}/\text{m}^3$)	IS 5182 : Part 23: 2006, RA 2017	100	61.8
2	Particulate matter as PM _{2.5}	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 24):2019	60	31.2
3	Sulphur Oxides as SO ₂	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 2): 2001. RA 2017	80	12.9
4	Nitrogen Oxides as NO _x	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 6): 2006. RA 2017	80	22.1
5	Carbon monoxide as CO(1 Hr)	(mg/m^3)	IS 5182(Part 10):2019	2	0.066
6	Ozone as O ₃ (1 Hr)	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part-09):2019	180	6.4
7	Ammonia as NH ₃	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	($\mu\text{g}/\text{m}^3$)	IS 5182(Part -22):2019	1	<0.006
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	20	<3.1
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	6	<0.16
11	Benzene as C ₆ H ₆	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m^3)	IS 5182 (Part 12):2017	1	<0.5

BDL Values: SO₂< 4 $\mu\text{g}/\text{m}^3$, NO_x< 9 $\mu\text{g}/\text{m}^3$, O₃<5 $\mu\text{g}/\text{m}^3$, NH₃<20 $\mu\text{g}/\text{m}^3$, Ni<3.1 ng/m^3 , As <0.16 ng/m^3 , C₆H₆<4.0 $\mu\text{g}/\text{m}^3$, BaP<0.5 ng/m^3 , Pb<0.006 $\mu\text{g}/\text{m}^3$, CO<0.1 mg/m^3

Remarks: The above Sample test results are within the prescribed standard for the above mentioned parameters.

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TEST REPORT

Test Report No: ENVLAB/23-24-TR-12565

Date: 04.01.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.12.2023
		Sample Received on	: 16.12.2023
Sample Description	: Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt. 04.09.2021
		Sampling Location	: MRSS
Environment Condition during Sampling	: Atmospheric Temp.: 29 – 33°C Barometric Pressure : 755 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550), VOC Sampler
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 16.12.2023	Test Completed on	: 20.12.2023

3. Chemical Testing

C. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 th Nov. 2009	Analysis Result
1	Particulate matter as PM ₁₀	($\mu\text{g}/\text{m}^3$)	IS 5182 : Part 23: 2006, RA 2017	100	65.9
2	Particulate matter as PM _{2.5}	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 24):2019	60	33.7
3	Sulphur Oxides as SO ₂	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 2): 2001, RA 2017	80	15.2
4	Nitrogen Oxides as NO _x	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 6): 2006, RA 2017	80	22.8
5	Carbon monoxide as CO(1 Hr)	(mg/m^3)	IS 5182(Part 10):2019	2	0.075
6	Ozone as O ₃ (1 Hr)	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part-09):2019	180	6.4
7	Ammonia as NH ₃	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	($\mu\text{g}/\text{m}^3$)	IS 5182(Part -22):2019	1	<0.006
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	20	<3.1
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	6	<0.16
11	Benzene as C ₆ H ₆	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m^3)	IS 5182 (Part 12):2017	1	<0.5

BDL Values: SO₂< 4 $\mu\text{g}/\text{m}^3$, NO_x< 9 $\mu\text{g}/\text{m}^3$, O₃<5 $\mu\text{g}/\text{m}^3$, NH₃<20 $\mu\text{g}/\text{m}^3$, Ni<3.1 ng/m^3 , As <0.16 ng/m^3 , C₆H₆<4.0 $\mu\text{g}/\text{m}^3$, BaP<0.5 ng/m^3 , Pb<0.006 $\mu\text{g}/\text{m}^3$, CO<0.1 mg/m^3

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TEST REPORT

Test Report No: ENVLAB/23-24/TR-12566

Date: 04.01.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.12.2023
		Sample Received on	: 16.12.2023
Sample Description	: Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt. 04.09.2021
		Sampling Location	: R & C LABORATORY
Environment Condition during Sampling	: Atmospheric Temp.: 29 – 33°C Barometric Pressure : 755 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550), VOC Sampler
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 16.12.2023	Test Completed on	: 20.12.2023

4. Chemical Testing

D. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 th Nov. 2009	Analysis Result
1	Particulate matter as PM ₁₀	($\mu\text{g}/\text{m}^3$)	IS 5182 : Part 23: 2006, RA 2017	100	57.4
2	Particulate matter as PM _{2.5}	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 24):2019	60	29.1
3	Sulphur Oxides as SO ₂	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 2): 2001, RA 2017	80	20.2
4	Nitrogen Oxides as NO _x	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 6): 2006, RA 2017	80	24.7
5	Carbon monoxide as CO(1 Hr)	(mg/m^3)	IS 5182(Part 10):2019	2	0.066
6	Ozone as O ₃ (1 Hr)	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part-09):2019	180	6.3
7	Ammonia as NH ₃	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	($\mu\text{g}/\text{m}^3$)	IS 5182(Part -22):2019	1	<0.006
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	20	<3.1
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	6	<0.16
11	Benzene as C ₆ H ₆	($\mu\text{g}/\text{m}^3$)	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m^3)	IS 5182 (Part 12):2017	1	<0.5

BDL Values: SO₂< 4 $\mu\text{g}/\text{m}^3$, NO_x< 9 $\mu\text{g}/\text{m}^3$, O₃<5 $\mu\text{g}/\text{m}^3$, NH₃<20 $\mu\text{g}/\text{m}^3$, Ni<3.1 ng/m^3 , As <0.16 ng/m^3 , C₆H₆<4.0 $\mu\text{g}/\text{m}^3$, BaP<0.5 ng/m^3 , Pb<0.006 $\mu\text{g}/\text{m}^3$, CO<0.1 mg/m^3

Remarks: The above Sample test results are within the prescribed standard for the above mentioned parameters.

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TEST REPORT

Test Report No: ENVLAB/23-24/TR-12567

Date: 04.01.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 22.12.2023
		Sample Received on	: 23.12.2023
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-1: GCP STACK (33 MVA)
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 23.12.2023	Test Completed on	: 27.12.2023

1. Chemical Testing

A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	Temperature	⁰ K	--	372
2	Velocity	m/sec	--	8.1
3	Particulate Matter as PM	mg/Nm ³	--	41.8
4	Sulphur Dioxide as SO ₂	mg/Nm ³	--	28.7
5	Oxides of Nitrogen as NO _x	mg/Nm ³	--	33.1
6	Carbon Monoxide as CO	mg/m ³	--	0.079
7	Carbon dioxide as (CO ₂)	%	--	7.5
8	Mercury (as Hg)	mg/Nm ³	--	0.041
9	Quantity of Gas flow	Nm ³ /hr	--	163120

Remarks: The above Sample test results are within the prescribed standard for the above mentioned parameters.

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• Waste Management Services

TEST REPORT

Test Report No: ENVLAB/23-24/TR-12568

Date: 04.01.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	15.12.2023
			Sample Received on	:	16.12.2023
Sample Description	:	Source Emission	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-2: Dedusting System
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	16.12.2023	Test Completed on	:	20.12.2023

2. Chemical Testing

B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	Temperature	⁰ K	--	370
2	Velocity	m/sec	--	9.8
3	Particulate Matter as PM	mg/Nm ³	--	50.8
4	Sulphur Dioxide as SO ₂	mg/Nm ³	--	29.5
5	Oxides of Nitrogen as NO _x	mg/Nm ³	--	36.7
6	Carbon Monoxide as CO	mg/m ³	--	0.014
7	Carbon dioxide as (CO ₂)	%	--	6.5
8	Mercury (as Hg)	mg/Nm ³	--	0.58

Remarks: The above Sample test results are within the prescribed standard for the above mentioned parameters.

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TEST REPORT

Test Report No: ENVLAB/23-24/TR-12569

Date: 04.01.2024

Name of the Industry	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	15.12.2023
		Sample Received on	:	16.12.2023
Sample Description	Source Emission	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	:	ST-3: DRYER STACK
Sample Condition	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	16.12.2023	Test Completed on	:	20.12.2023

3. Chemical Testing

C. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	Temperature	⁰ K	--	353
2	Velocity	m/sec	--	7.5
3	Particulate Matter as PM	mg/Nm ³	--	95.1
4	Sulphur Dioxide as SO ₂	mg/Nm ³	--	29.8
5	Oxides of Nitrogen as NO _x	mg/Nm ³	--	32.6
6	Carbon Monoxide as CO	mg/m ³	--	0.075
7	Carbon dioxide as (CO ₂)	%	--	7.4
8	Mercury (as Hg)	mg/Nm ³	--	0.83
9	Quantity of Gas flow	Nm ³ /hr	--	1352

Remarks: The above Sample test results are within the prescribed standard for the above mentioned parameters.

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TEST REPORT

Test Report No: ENVLAB/23-24-TR-12570

Date: 04.01.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.12.2023
		Sample Received on	: 16.12.2023
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-4: GCP STACK (45 MVA)
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 16.12.2023	Test Completed on	: 20.12.2023

4. Chemical Testing

D. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-4
1	Temperature	⁰ K	--	376
2	Velocity	m/sec	--	7.1
3	Particulate Matter as PM	mg/Nm ³	--	88.6
4	Sulphur Dioxide as SO ₂	mg/Nm ³	--	31.2
5	Oxides of Nitrogen as NO _x	mg/Nm ³	--	38.6
6	Carbon Monoxide as CO	mg/m ³	--	0.080
7	Carbon dioxide as (CO ₂)	%	--	7.9
8	Mercury (as Hg)	mg/Nm ³	--	0.055
9	Quantity of Gas flow	Nm ³ /hr	--	48075

Remarks: The above Sample test results are within the prescribed standard for the above mentioned parameters.

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TEST REPORT

Test Report No: ENVLAB/23-24/TR-12571

Date: 04.01.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	15.12.2023
			Sample Received on	:	16.12.2023
Sample Description	:	Source Emission	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-5: DG STACK/01
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	16.12.2023	Test Completed on	:	20.12.2023

5. Chemical Testing

E. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-5
1	Temperature	⁰ K	--	386
2	Velocity	m/sec	--	6.2
3	Particulate Matter as PM	mg/Nm ³	--	45.3
4	Sulphur Dioxide as SO ₂	mg/Nm ³	--	21.4
5	Oxides of Nitrogen as NO _x	mg/Nm ³	--	32.6
6	Carbon Monoxide as CO	mg/m ³	--	0.075
7	Carbon dioxide as (CO ₂)	%	--	7.8
8	Mercury (as Hg)	mg/Nm ³	--	0.023
9	Quantity of Gas flow	Nm ³ /hr	--	85.3

Remarks: The above Sample test results are within the prescribed standard for the above mentioned parameters.

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TEST REPORT

Test Report No: ENVLAB/23-24-TR-12573

Date: 04.01.2024

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak		
Sample Description	:	Surface Runoff Treatment Plant	Date of Sampling	: 15.12.2023
			Sample Received on	: 16.12.2023
			Sampling Procedure	: APHA 1060 B
Identification by Customer	:	SRTS	Sampling Location	: S1:Surface Runoff Treatment Plant Outlet
Sample Condition	:	Ice Preserved	Sampling done by	: Ashutosh Mohanty
Test Started on	:	16.12.2023	Test Completed on	: 20.12.2023

1. Chemical Testing

A. Pollution & Environment

Sl. No.	Parameters	Unit	Testing Methods	General Standards for discharge of Environmental Pollutants Part A-Effluents, Amendment Rules, 2015, Dt. 01.01.2016	Analysis Results
					S-1
1	pH at 25°C	-	APHA 4500H+ B	6.0-9.0	7.18
2	Total Dissolve Solids as TDS	mg/l	APHA 2540 C	2100	219
3	Total Suspended Solids as TSS	mg/l	APHA 2540 D	100	31
4	BOD (3 days at 27°C)	mg/l	APHA 5210 B	30	8.0
5	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	250	25.0
6	Oil & Grease	mg/l	APHA 5520 B	10	ND
7	Iron (as Fe)	mg/l	APHA 3500-Fe, B	3	0.20
8	Total Chromium as Cr	mg/l	APHA 3500Cr B	2	<0.1
9	Cyanide (as CN)	mg/l	APHA 4500 CN- C,D	0.2	<0.01
10	Ammonical nitrogen (as N)	mg/l	APHA 4500-NH ₃ ,C	50	<0.5
11	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA 5530 B, D	1	<0.05
12	Hexavalent Chromium (as Cr ⁺⁶)	mg/l	APHA 3500 Cr B	0.1	<0.05

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TEST REPORT

Test Report No: ENVLAB/23-24/TR- 12574

Date: 04.01.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	15.12.2023
			Sample Received on	:	16.12.2023
Sample Description	:	Waste Water	Sampling Procedure	:	APHA 1060 B
Sample Condition	:	Ice Preservation	Sampling Location	:	WW-1: MRP POND
			Sampling done by	:	Ashutosh Mahanty
Test Started on	:	16.12.2023	Test Completed on	:	20.12.2023

Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per IS 2296 Class C	Analysis Results WW1
1.	pH at 25°C	mg/l	APHA4500 H ⁺ B	6.5-9.0	7.79
2.	Suspended Solids	mg/l	APHA 2540 D	<100	81.0
3.	Biochemical Oxygen Demand (as BOD at 27°C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	4.0
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	14.0
5.	Ammonical nitrogen (as NH ₄ -N)	mg/l	APHA 4500-NH ₃ ,C	5	1.36
6.	Total Nitrogen	mg/l	APHA 4500-N	10	4.2
7.	Oil & Grease	mg/l	APHA 5520 B	—	2.0
8.	Fecal Coliform	MPN/100 ml	APHA 9221 E	<1000	84

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TEST REPORT

Test Report No: ENVLAB/23-24/TR-12575

Date: 04.01.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	15.12.2023
			Sample Received on	:	16.12.2023
Sample Description	:	Waste Water	Sampling Procedure	:	APHA 1060 B
Sample Condition	:	Ice Preservation	Sampling Location	:	WW-2: Cooling Tower Waste Water
			Sampling done by	:	Ashutosh Mohanty
Test Started on	:	16.12.2023	Test Completed on	:	20.12.2023

Chemical Testing

WATER :					
Sl. No	Parameter	Unit	Testing Methods	Standard as per IS 2296 Class C	Analysis Results
					WW2
1.	pH at 25°C	mg/l	APHA4500 H ⁺ B	6.5-9.0	7.23
2.	Suspended Solids	mg/l	APHA 2540 D	<100	49.0
3.	Biochemical Oxygen Demand (as BOD at 27°C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	3.8
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	13.0
5.	Ammonical nitrogen (as NH ₄ -N)	mg/l	APHA 4500-NH ₃ ,C	5	2.2
6.	Total Nitrogen	mg/l	APHA 4500-N	10	4.9
7.	Oil & Grease	mg/l	APHA 5520 B	--	1.6
8.	Fecal Coliform	MPN/100 ml	APHA 9221 E	<1000	54

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TEST REPORT

Test Report No: ENVLAB/23-24/TR-12576

Date: 04.01.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	15.12.2023
			Sample Received on	:	16.12.2023
Sample Description	:	Waste Water	Sampling Procedure	:	APHA 1060 B
Sample Condition	:	Ice Preservation	Sampling Location	:	WW-3: Cooling Tower 2 Waste Water
			Sampling done by	:	Ashutosh Mohanty
Test Started on	:	16.12.2023	Test Completed on	:	20.12.2023

Chemical Testing

Sl. No	Parameter	Unit	Testing Methods	Standard as per IS 2296 Class C	Analysis Results
					WW3
1.	pH at 25°C	mg/l	APHA4500 H ⁺ B	6.5-9.0	7.17
2.	Suspended Solids	mg/l	APHA 2540 D	<100	53.0
3.	Biochemical Oxygen Demand (as BOD at 27°C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	4.4
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	16.0
5.	Ammonical nitrogen (as NH ₄ -N)	mg/l	APHA 4500-NH ₃ ,C	5	2.5
6.	Total Nitrogen	mg/l	APHA 4500-N	10	5.3
7.	Oil & Grease	mg/l	APHA 5520 B	--	2.0
8.	Fecal Coliform	MPN/100 ml	APHA 9221 E	<1000	63

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TEST REPORT

Test Report No: ENVLAB/23-24/TR- 12577

Date: 04.01.2024

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak
Sample Description	:	Sewage Water (STP)
Identification by Customer	:	STP-1, STP-2
Sample Condition	:	Ice Preserved
Test Started on	:	16.12.2023
Date of Sampling	:	15.12.2023
Sample Received on	:	16.12.2023
Sampling Procedure	:	APHA 1060 B
Sampling Location	:	S-1: Water From Inlet S-2: Water From Outlet
Sampling done by	:	Ashutosh Mohanty
Test Completed on	:	20.12.2023

Chemical Testing :

A. Waste Water

SL No.	Parameters	Unit	Standard (Inland Surface water) Part-A	Test methods	S-1	S-2
1	Total Suspended Solids	mg/l, max	100	APHA 2540 D	48	29
2	pH at 25°C	-	6.5-9.0	APHA 4500H+B	6.95	7.06
3	Biochemical Oxygen Demand (as BOD), 3 Days at 27°C	mg/l, max	30	IS 3025(P-44): 1993 RA 1999	98	20
4	Fecal Coliform (as TC)	mg/l	APHA 9221 E	<1000	380	150

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TEST REPORT

Test Report No: ENVLAB/23-24/TR-12572

Date: 04.01.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak	Date of Sampling	:	15.12.2023
Sample Description	:	NOISE	Sample Received on	:	16.12.2023
Sampling done by :	:	Ashutosh Mohanty	Sampling Procedure	:	IS 9989: 2020

Location ID	Location	Noise Level in dB(A) leq Day Time	Noise Level in dB(A) leq Night time
S-1	NEAR 45 MVA FURNACE	69.8	65.4
S-2	NEAR ADMINISTRATIVE BUILDING	57.3	44.3
S-3	NEAR AGGLOMERATION PLANT	72.6	66.7
S-4	NEAR AUTO GARAGE	61.4	55.2
S-5	NEAR BRIQUETTE STORAGE AREA	70.9	64.2
S-6	NEAR CENTRAL STORE	55.3	45.5
S-7	NEAR DRYER PLANT	72.6	67.5
S-8	NEAR FACOR COLONY	54.2	43.6
S-9	NEAR FINISHED PRODUCT HANDLING	71.5	58.9
S-10	NEAR GCP	73.3	68.9
S-11	NEAR MAIN GATE	65.1	48.6
S-12	NEAR MATERIAL RECOVERY PLANT	70.8	67.3
S-13	NEAR MRSS SWITCH YARD	67.3	55.7
S-14	NEAR STORAGE AREA	53.2	42.6
S-15	NEAR VEHICLE PARKING AREA	51.4	44.5
S-16	NEAR WATER COOLING TOWER AREA	72.2	68.8
S-17	OHC	56.6	47.3
Limit		75.0	70.0

