

Ref: FACOR/Bhadrak/HSE/01/2025-26  
Dtd: 30.05.2025

To

**Deputy Director General of Forests (C),**  
Ministry of Env., Forest & Climate Change,  
Integrated Regional Office,  
A/3, Chandersekharapur,  
Bhubaneswar – 751023  
Email: [roez.bsr-mef@nic.in](mailto:roez.bsr-mef@nic.in)

**Ref:** 1. **Environment Clearance letter No.** F.No. J-11011/594/2008-IA.II(I) dtd. 31.10.2022  
2. **Name of the Project:** Expansion of Ferro Alloys Plant High Carbon Ferro Chrome production from 75000TPA to 145000TPA at Randia, District Bhadrak, Orissa by M/s. Ferro Alloys Corporation Ltd.

**Sub:** Submission of Six Monthly Compliances Report against Environment Clearance letter No. : F.No. J-11011/594/2008-IA.II(I) dtd.31.10.2022 , issued to M/s. Ferro Alloys Corporation Ltd., for the period from October 2024 to March 2025.

Dear Sir,

In compliance to the Stipulated Condition No.ix of the Environment Clearance letter No. . F.No. J-11011/594/2008-IA.II(I) dtd. 31.10.2022 issued by your good office, we are submitting herewith Six-Monthly Compliance Report with respect to Charge Chrome Plant of M/s Ferro Alloys Corporation Limited, situated at D.P.Nagar, Po-Randia, District-Bhadrak for the period from October 2024 to March 2025.

The monthly Environmental Monitoring data and other required information with respect to compliance of the said Environment Clearance for the period from October 2024 to March 2025 are also enclosed herewith as Annexure for your kind perusal and records.

Thanking you

Yours faithfully

**For Ferro Alloys Corporation Ltd. (Charge Chrome Plant)**



**Krutisunder Mohapatra**  
**Chief HSE Officer**

Enclosed: As above.

Copy to: Director I.A. Division, Ministry of Environment and Forests, Paryavaran Bhawan, New Delhi

**M/s. Ferro Alloys Corporation Ltd. (A subsidiary of Vedanta Ltd.)**

**Registered Office:**

D.P.Nagar, PO : Randia, Dist.: Bhadrak, Odisha, India - 756 135

T +91-6784 240320/240347, Email: [facor.mines@vedanta.co.in](mailto:facor.mines@vedanta.co.in) / [facor.ccp@vedanta.co.in](mailto:facor.ccp@vedanta.co.in)

Website: [www.facorgroup.in](http://www.facorgroup.in), CIN: U45201OR1955PLC008400.

Six Monthly Environmental Compliance Report For the period from October 2024 up to March 2025			
S.No.		Conditions	Compliance of Conditions
	A.	Specific Conditions	
1	i	The project proponent shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management and risk mitigation measures relating to the project shall be implemented.	All the environmental protection measures along with recommendations in EIA/EMP in respect of environmental management and risk mitigation measures are being followed.
2	ii	The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.	We are using the latest technology provided by M/s Ghalsashi for Ferro chrome industry for lower carbon emission. We are also planning to implement RE power at our location. Carbon generation and emission data are attached as <b>Annexure 1</b> .
3	iii	The project proponent shall strictly comply with the timelines as per submitted ATR on the partially/non-complied conditions of previous EC(s) observed by IRO. The revised timeline for installation of AAQMS and OCEMS shall be complied. The status of the same shall be submitted to IRO, MoEF&CC.	The timeline for installation of AAQMS and OCEMS has been compiled, and the report has been submitted to the Ministry within the stipulated time. ATR compliance status has been submitted to IRO.
4	iv	The Salandi River (0.5 km, E) and Akhaupada High Level Main canal (0.5 km, S) exists within the study area of 10 km around the project site. A robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters along with Soil conservation scheme and multiple Erosion control measures shall be implemented	To protect natural drainage and its flow parameters a Surface Runoff Treatment unit has been set up to collect all the surface runoff. Treated water is stored in rainwater harvesting pond and then reused in multipurpose inside the plant. As per ZLD policy, whatever liquid effluent is being generated, is treated and reused. There is no discharge of water outside the plant premises. Greenbelt around the boundary wall has been developed as a soil conservation and erosion control measure.
5	v	The PP shall undertake flood protection measures due to presence of Salandi river as committed.	Plant MSL is much higher than the riverbed. The plant is outside flood prone area as per record of 25 years of floods as confirmed by Salandi





			Canal Division. Copy is enclosed as <b>Annexure 2</b> .
6	vi	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. b. Proper covered vehicle shall be used while transport of materials. c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.	Following steps are taken to control fugitive emission: a. The raw materials like Ferro Chrome Ore and Concentrate are kept in covered shed. Two new shed has been constructed to enhance storage space. Additionally, water sprinkling is being carried out in raw material storage areas to control fugitive emission. b. Vehicles are completely covered during transport of materials. c. Wheel washing system has been provided with complete recirculation system.
7	vii	All internal road and connecting road from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to existing and proposed project	All internal road and connecting road from project site to main highway connected with PQC (Pavement Quality Concrete Road) construct as per the IRC guideline to maintain suitable with MSA standard as per the traffic load.
8	viii	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.	The performance of the major pollution control devices are being tested on a monthly basis by external NABL authorized lab. Reports are enclosed with <b>Annexure 3</b> .
9	ix	Particulate matter emission from stacks shall be less than 30 mg/Nm <sup>3</sup> .	Particulate emission from stack is under prescribed limit as per latest Consent order no. 7239 IND-I-CON 5461 Dated 04.05.2023.
10	x	PP shall carry out periodically occupational health surveys as per the applicable norms.	Periodical occupational health check-ups are being carried out annually. IME/PME report attached as <b>Annexure 4</b>
11	xi	The 4th hole extraction system shall be provided in the Sub Merged Arc Furnaces	In the Submerged Arc Furnace, the off-gas generation is being sucked by Creating induced draft with the help of three nos. of Induced Draft fans (2 working and one standby) of 2,00,000m <sup>3</sup> /hr. capacity each through two nos. of duct connected to the roof of the SAF. The off-gas is being cooled in force draft cooler to 120 deg C. Then the off-gas is fed into the air purging type



			baghouse, where the off-gas is collected at the bottom hopper of the baghouse. Cleared gas is blown out to the environment by a dedicated stack 34 meters above ground.
12	xii	100% of the slag generated through the process shall be utilized.	100% Slag utilization is being maintained
13	xiii	The water requirement for the proposed project is estimated as 2521 KLD, out of which 1750 KLD of freshwater requirement shall be obtained from Ground water. Necessary permission shall be obtained from the Competent Authority in this regard. PP shall explore the possibility of shifting to alternate source of water to reduce dependency on groundwater	NOC from CGWA for drawl of 1750KLD has been obtained. However, the recycled water from rainwater harvesting pond, STP treated water, SRTP treated water etc. is being reused in various processes to minimize the ground water extraction.
14	xiv	The proposed project shall be designed as "Zero Liquid Discharge" Plant. ETP shall be installed and there shall be no discharge of effluent from the plant. Domestic effluent shall be treated in Sewage Treatment Plant. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body.	The plant has already been designed as a Zero Liquid Discharge plant. All the runoff water is being treated through SRTP and stored in rainwater harvesting pond. STP has been installed to treat domestic wastewater. No wastewater is being released outside plant premises with or without treatment.
15	xv	The company shall also undertake rainwater harvesting measures as per the plan submitted in the EIA/EMP report and reduce water dependence from the outside source.	As rainwater harvesting measures three rainwater harvesting ponds are being used to store and reuse water in various processes to minimize water abstraction. Additionally, five recharge wells are also constructed for ground water recharge during rainy season.
16	xvi	PP shall adopt nearby villages and prepare and implement a robust plan to develop them into model villages in next 10 years.	CSR department is working in nearby six-gram panchayats in thematic areas of health, education, livelihood and community development.
17	xvii	Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.	Briquetting and Jigging unit has already installed and in operational.
18	xviii	A proper action plan must be implemented to dispose of the electronic waste generated in the industry.	Disposal of E-waste is being carried out as per E-Waste Management Rule 2022. And if generated, E-waste is being handed over to registered producer, refurbisher or recycler.





19	xix	Three tier Green Belt shall be developed in at least 33% of the project area in a time frame of one year with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.	As per Greenbelt assessment by expert agency, greenbelt coverage is 34.84% . Native species have been planted along the periphery of the plant. Efforts are being made continuously to achieve the tree density to 2500/Ha by using the existing vacant land and replacement of damaged plants. Report in this regard shall be submitted to Regional Office of the MOEF & CC. Greenbelt details are enclosed as <b>Annexure 5</b> .
20	xx	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface	Greenbelt along with stone patching boundary wall in the periphery of the plant boundaries have been developed to arrest soil erosion and dust pollution control.
21	xxi	The PP shall minimize the evaporation losses in jigging operation to less than 10% using suitable advanced process.	Being followed. Water usage in Jigging operation is attached as <b>Annexure 6</b> .
22	xxii	The PP shall install CO sensors at the furnace top level and the monitoring report shall be submitted to the IRO, MOEFCC in this regard.	CO sensors have been installed in furnace top level and a report regarding installation has been sent to the IRO, MOEFCC in this regard. Copy attached as <b>Annexure 7</b> .
23	xxiii	All the commitments made to the public during the Public Hearing/Public Consultation shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC.	The same is compiled and report has been submitted to Regional Office of MOEF & CC. EMP compliance Copy attached as <b>Annexure 8</b> .
24	xxiv	The PP shall strengthen the social entrepreneurship opportunities; strengthen Self Help Groups into SMEs; strengthen Health infrastructure in the surrounding nearby villages and the compliance report in this regard needs to be submitted to IRO, MoEFCC.	PP has initiated some opportunities to strengthen SHG like initiating workshop on leadership skill training and conducted health camps nearby villages. PH Compliance report in this regard has been submitted to IRO, MOEF & CC.



25	xxv	<p>The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at <a href="https://cpcb.nic.in/technical-guidelines-3/">https://cpcb.nic.in/technical-guidelines-3/</a>. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report being submitted by the project proponents.</p>	<p>Awareness sessions on the ban of single use plastics have been conducted to sensitize people on Ban of Single Use plastic. Action plan has been prepared on Banning SUP and handling of plastic waste inside plant premises. Report in this regard is enclosed in <b>Annexure 9</b>.</p>
26	xxvi	<p>The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.</p>	<p>To control emissions from furnace and other operation bag filters, dedusting units and dust suppression systems have been installed. To arrest suspended dust during transportation, truck mounted mist cannon has been deployed for dust suppression inside and outside village roads.</p>
	<b>B.</b>	<b>General Conditions</b>	
	<b>I.</b>	<b>Statutory compliance:</b>	
27	i	<p>The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other</p>	<p>Agree to abide</p>





		Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.	
	<b>II.</b>	<b>Air quality monitoring and preservation</b>	
28	i	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as two Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Two continuous emission monitoring systems have been installed in GCP stacks and two numbers of Continuous Ambient Air Quality Station have been installed inside the plant premises. All CEMS & CAAQMS has been interconnected with SPCB online server.
29	ii	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories	The fugitive emission inside the plant premises is being monitored quarterly by NABL approved laboratory. Reports are attached as <b>Annexure 10</b> .
30	iii	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Two dedusting Units with bag filters have been provided in the dust prone area to control fugitive emission. Additional water sprinkling is being done on a regular basis in the dust generation sources to control fugitive dust emission. To control stack emission Gas Cleaning Plants have been installed.
31	iv	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	An auto pulsing system has been installed to dislodge from bags into hopper. Bag cleaning procedure is enclosed as <b>Annexure 11</b> .
32	v	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.	All the raw material fines collected through pollution control devices are being recycled and reused for briquette & pellets making.
33	vi	The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.	All the raw material are transporting through covered vehicle and conveying of ore & other raw material through covered conveyors.



34	vii	The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.	Fume extraction system has been installed to control primary and secondary emission. Flue gas is being filtered in GCP bag filters and filtered gas is released through GCP Stack.
35	viii	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	The ventilation system has been designed as per requirement.
	<b>III.</b>	<b>Water quality monitoring and preservation</b>	
36	i	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Effluent quality from Surface runoff treatment plant (SRTP) and Sewage treatment plant (STP) is being monitored on a monthly basis by NABL accredited laboratories. Parameters are under prescribed limit. Reports are attached as <b>Annexure 12.</b>
37	ii.	The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.	Ground water monitoring is being carried out by NABL accredited laboratories in piezometers / sampling wells in the plant and also in nearby villages. Report enclosed in <b>Annexure 13.</b>
38	iii.	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Sewage Treatment Plant (STP) of 10KLD capacity has been installed for treatment of domestic wastewater and treated water are being utilized in gardening purpose.
39	iv.	The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.	There is no rolling mills unit available.
40	v.	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	A Surface Run-off Treatment Plant (SRTP) has been set up to collect all the runoff water during rain and after treatment water is stored in rainwater harvesting pond and reuse in process. Water Quality is being tested by NABL accredited lab monthly.





41	vi.	Tyre washing facilities shall be provided at the entrance/exit of the plant gates.	Wheel washing system has been provided with complete recirculation system.
	<b>IV.</b>	<b>Noise monitoring and prevention</b>	
42	i.	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Noise quality monitoring is being carried out regularly as per Noise Pollution (Regulation and Control) Rules, 2000. Reports are enclosed in <b>Annexure 14</b> .
	<b>V.</b>	<b>Energy Conservation measures</b>	
43	i.	Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.	PP has taken various energy conservation measures like Solar streetlights have been provided to various villages and convention lights replaced by LED etc.
	<b>VI.</b>	<b>Waste management</b>	
44	i.	Used refractories shall be recycled.	We will ensure to recycle the used refractories when generates.
45	ii.	Kitchen waste shall be composted or converted to biogas for further use.	Kitchen waste is being composted and used in plantation as an organic manure. We have planned for the installation of organic waste converter for composting.
	<b>VII.</b>	<b>Green Belt</b>	
46	i.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	A preliminary report has been prepared by the external agency which includes a program for reduction of GHG and carbon sequestration including plantation. We are exploring the possibilities for implementation.
47	ii.	Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be	Carbon Assessment has been done by External Agency. Various projects proposed by the consultant related to reduction in carbon footprint are under review. A roadmap has been prepared. Copy is enclosed as <b>Annexure 15</b>



		measurable and monitor able with defined time frames.	
	<b>VIII.</b>	<b>Public hearing and Human health issues</b>	
48	i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Emergency Preparedness Plan and Disaster Management Plan is available and implemented accordingly.
49	ii.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act	PP has carried out Qualitative & Quantitative analysis for heat stress those are working in high temperature work zone. All the appropriate PPE's are being provided to the workmen.
50	iii.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Periodical occupational health check-up of workers is being conducted annually, and records are maintained.
	<b>IX.</b>	<b>Environment Management</b>	
51	i	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.	PP is working in nearby six gram panchayats in thematic areas of health, education, livelihood and community development in consultation with village Panchayat and District Administration.
52	ii.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Environment policy duly approved by the Board of Directors and Board resolution in this regard is being submitted herewith. <b>Annexure 16.</b>





53	iii.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	A dedicated Environment Cell consisting of qualified personnel has been set up to look after environmental management. Details attached as <b>Annexure 17</b> .
	<b>X.</b>	<b>Miscellaneous</b>	
54	i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Complied. Copy enclosed along with <b>Annexure 18</b> .
55	ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	PP has submitted the copies of the environmental clearances to the relevant local bodies; panchayats, municipal bodies and govt offices within the time. Copy enclosed in <b>Annexure 19</b> .
56	iii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Being followed.
57	iv.	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	PP is monitoring the pollutants for ambient air and stack emission on monthly basis by NABL accredited lab. Copy enclosed in <b>Annexure 20</b> . Digital display board has been installed at main entrance point for public view. Monitoring Reports are also displayed on the website of the company as well.
58	v.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the Ministry of Environment, Forest and Climate Change at environment clearance portal.	Being followed
59	vi.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986,	Being followed, Copy enclosed in <b>Annexure-21</b> .



		as amended subsequently and put on the website of the company.	
60	vii.	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Agree to abide
61	viii.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Agree to abide
62	ix.	The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left-over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.	Compliance Report is enclosed with <b>Annexure 22. &amp; Annexure 8.</b>  PH & EMP compliance reports are available on the company website.
63	x.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Agree to abide
64	xi.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Agree to abide.





***Charge Chrome Plant  
of M/S Ferro Alloys Corporation Limited***

**Details of Scope 1 & 2 Emissions & GHG intensity during the period of  
October2024-March 2025.**

Industry Name	Parameters	Oct24	Nov24	Dec24	Jan25	Feb25	Mar25
Ferro Alloys Corporation Limited (Charge Chrome Plant)	Scope 1+2 (tCO <sub>2</sub> eq.)	12,754	10,463	9,603	9,393	5,710	6,826
	Metal production (MT)	6743	5877	5366	4645	2630	4024
	GHG intensity (tCO <sub>2</sub> eq./ MT)	1.891	1.780	1.789	2.022	2.171	1.696



**OFFICE OF THE SUPERINTENDING ENGINEER, SALANDI CANAL DIVISION,  
BHADRAK**

**E-mail ID:-scdbdk1960@gmail.com (Ph.06787-250231)**

Letter No. 1068 /dt. 17/2/2024

To

The Chief Executive Officer,  
Facor Charge Chrome Plant of M/S Ferro Alloys Corporation Ltd.  
At-D.P.Nagar,Post-Randia,Dist-Bhadrak.

Sub:

Requesting to provide clearance to M/s Ferro Alloys Corporation Ltd. Located at village Randia,P.S-Bhadrak (Rural)Dist-Bhadrak,Odisha is not coming under the vicinity of Flood plain area.

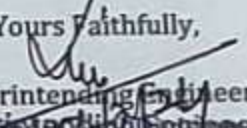
Ref:

Your Letter No-FACL/BDK/GP/001/2023-24 Dt. 14.11.2023

Sir,

With reference to your letter & subject cited above, it is to intimate you that the Charge Chrome Plant of M/S Ferro Alloys Corporation Ltd. is not coming under Flood plain Zone as per the record of 25 years of Floods.

Yours Faithfully,

  
Superintendent Engineer,  
Salandi Canal Division  
Bhadrak

Memo No.

1019

Date

17/2/2024

Copy forwarded to the Chief Asst. Executive Engineer, Bhadrak Irrigation Sub-Division,Bhadrak,for favour of kind information.

  
Superintendent Engineer,  
Salandi Canal Division  
Bhadrak





# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

Annexure-3

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-12138

Date: 06.11.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 30.10.2024
		Sample Received on	: 31.10.2024
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-1: Dedusting System
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 31.10.2024	Test Completed on	: 05.11.2024

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	Temperature	<sup>0</sup> K	--	353
2	Velocity	m/sec	--	9.6
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	57.3
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	32.1
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	36.6
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.025
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.5
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.51
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1715

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

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\*\*\* End Report\*\*\*



Reviewed by



Approved by



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## TEST REPORT

Test Report No: ENVLAB/24-25/TR-12139

Date: 06.11.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 30.10.2024
		Sample Received on	: 31.10.2024
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-2: DRYER STACK
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 31.10.2024	Test Completed on	: 05.11.2024

### 2. Chemical Testing

#### B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	Temperature	<sup>o</sup> K	--	355
2	Velocity	m/sec	--	8.6
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	60.8
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	33.4
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	35.9
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.072
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.3
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.72
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1527

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/24-25/TR-12140

Date: 06.11.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 30.10.2024
		Sample Received on	: 31.10.2024
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-3: GCP STACK (45 MVA)
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 31.10.2024	Test Completed on	: 05.11.2024

### 3. Chemical Testing

#### C. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	Temperature	<sup>0</sup> K	--	376
2	Velocity	m/sec	--	8.2
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	77.8
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	28.7
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	35.2
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.080
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	7.1
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.074
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	55012

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/24-25/TR-13850

Date: 06.12.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.11.2024
		Sample Received on	: 16.11.2024
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, DL 01.08.2019
		Sampling Location	: ST-1: Dedusting System
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 16.11.2024	Test Completed on	: 20.11.2024

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	Temperature	<sup>0</sup> K	--	352
2	Velocity	m/sec	--	9.4
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	56.6
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	31.7
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	35.0
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.027
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.8
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.53
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1686

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/24-25/TR-13851

Date: 06.12.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.11.2024
		Sample Received on	: 16.11.2024
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-2: DRYER STACK
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 16.11.2024	Test Completed on	: 20.11.2024

### 2. Chemical Testing

#### B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	Temperature	<sup>o</sup> K	--	354
2	Velocity	m/sec	--	8.6
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	61.7
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	32.8
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	36.1
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.070
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.6
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.71
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1534

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/24-25/TR-13852

Date: 06.12.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.11.2024
		Sample Received on	: 16.11.2024
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-3: GCP STACK (45 MVA)
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 16.11.2024	Test Completed on	: 20.11.2024

### 3. Chemical Testing

#### C. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	Temperature	<sup>0</sup> K	--	374
2	Velocity	m/sec	--	7.6
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	76.3
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	28.8
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	34.3
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.082
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	7.6
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.069
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	51327

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/24-25/TR-13854

Date: 06.12.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	15.11.2024
			Sample Received on	:	16.11.2024
Sample Description	:	Source Emission	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-5: DG STACK/02
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	16.11.2024	Test Completed on	:	20.11.2024

### 5. Chemical Testing

#### E. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-5
1	Temperature	<sup>0</sup> K	--	387
2	Velocity	m/sec	--	6.5
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	44.8
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	22.3
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	35.1
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.072
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	7.8
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.028
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	89.0

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\*\*\* End Report\*\*\*



## TEST REPORT

Test Report No: ENVLAB/24-25/TR-14569

Date: 05.01.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 26.12.2024
		Sample Received on	: 27.12.2024
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-1: Dedusting System
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 27.12.2024	Test Completed on	: 30.12.2024

### I. Chemical Testing

#### A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	Temperature	<sup>o</sup> K	--	350
2	Velocity	m/sec	--	9.9
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	54.9
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	31.2
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	35.6
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.026
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.6
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.55
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1692

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

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\*\*\* End Report \*\*\*





## TEST REPORT

Test Report No: ENVLAB/24-25/TR-14570

Date: 05.01.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	26.12.2024
			Sample Received on	:	27.12.2024
Sample Description	:	Source Emission	Sampling Procedure	:	VCSP/L/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-2: DRYER STACK
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	27.12.2024	Test Completed on	:	30.12.2024

### 2. Chemical Testing

#### B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	Temperature	<sup>0</sup> K	--	352
2	Velocity	m/sec	--	8.8
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	62.8
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	33.5
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	36.9
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.074
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.7
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.74
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1528

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

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Reviewed by 

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## TEST REPORT

Test Report No: ENVLAB/24-25/TR-14571

Date: 05.01.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 26.12.2024
		Sample Received on	: 27.12.2024
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-3: GCP STACK (45 MVA)
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 27.12.2024	Test Completed on	: 30.12.2024

### 3. Chemical Testing

#### C. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	Temperature	<sup>0</sup> K	--	373
2	Velocity	m/sec	--	7.2
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	75.8
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	29.4
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	34.1
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.085
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	7.3
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.072
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	51332

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/24-25/TR-15828

Date: 05.02.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	24.01.2025
			Sample Received on	:	25.01.2025
Sample Description	:	Source Emission	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-1: Dedusting System
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	25.01.2025	Test Completed on	:	30.01.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	Temperature	<sup>0</sup> K	--	351
2	Velocity	m/sec	--	9.4
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	55.1
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	32.5
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	37.8
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.028
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.7
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.58
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1691

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/24-25/TR-15829

Date: 05.02.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 24.01.2025
		Sample Received on	: 25.01.2025
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-2: DRYER STACK
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 25.01.2025	Test Completed on	: 30.01.2025

### 2. Chemical Testing

#### B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	Temperature	<sup>o</sup> K	--	353
2	Velocity	m/sec	--	8.1
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	60.4
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	34.2
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	38.1
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.078
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.3
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.78
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1449

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/24-25/TR-15830

Date: 05.02.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 24.01.2025
		Sample Received on	: 25.01.2025
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-3: GCP STACK (45 MVA)
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 25.01.2025	Test Completed on	: 30.01.2025

### 3. Chemical Testing

#### C. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	Temperature	<sup>o</sup> K	--	374
2	Velocity	m/sec	--	7.6
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	74.1
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	28.8
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	34.6
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.089
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	7.1
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.075
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	51259

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

#### TERMS AND CONDITION:-

1. The Test result is relevant only to the item tested.
2. This report shall not be reproduced in full or part without written approval of Visiontek consultancy services.(P) Ltd
3. The laboratory is not responsible for the authenticity of photocopied test report.
4. The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations.
5. The laboratory's responsibility under this report is limited to: proven wilful negligence.

\*\*\* End Report\*\*\*





# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-17526

Date: 05.03.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	20.02.2025
			Sample Received on	:	21.02.2025
Sample Description	:	Source Emission	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-1: Dedusting System
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	21.02.2025	Test Completed on	:	24.02.2025

### I. Chemical Testing

#### A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	Temperature	<sup>0</sup> K	--	353
2	Velocity	m/sec	--	10.1
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	56.2
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	33.8
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	36.1
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.032
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.9
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.60
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1807

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

#### TERMS AND CONDITION:-

1. The Test result is relevant only to the item tested.
2. This report shall not be reproduced in full or part without written approval of Visiontek consultancy services.(P) Ltd
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4. The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations.
5. The laboratory's responsibility under this report is limited to; proven wilful negligence.

\*\*\* End Report\*\*\*







# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-17527

Date: 05.03.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 20.02.2025
		Sample Received on	: 21.02.2025
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-2: DRYER STACK
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 21.02.2025	Test Completed on	: 24.02.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	Temperature	<sup>0</sup> K	--	355
2	Velocity	m/sec	--	8.9
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	63.0
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	35.8
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	39.6
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.076
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.6
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.75
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1583

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

#### TERMS AND CONDITION:-

1. The Test result is relevant only to the item tested.
2. This report shall not be reproduced in full or part without written approval of Visiontek consultancy services.(P) Ltd
3. The laboratory is not responsible for the authenticity of photocopied test report.
4. The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations.
5. The laboratory's responsibility under this report is limited to; proven willful negligence.

\*\*\* End Report\*\*\*





# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-17528

Date: 05.03.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 20.02.2025
		Sample Received on	: 21.02.2025
Sample Description	: Source Emission	Sampling Procedure	: VCSPL/SOP/003, Dt. 01.08.2019
		Sampling Location	: ST-3: GCP STACK (45 MVA)
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 21.02.2025	Test Completed on	: 24.02.2025

### I. Chemical Testing

#### A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	Temperature	<sup>o</sup> K	--	375
2	Velocity	m/sec	--	7.2
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	75.3
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	29.6
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	35.2
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.092
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	7.6
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.072
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	48495

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

#### TERMS AND CONDITION:-

1. The Test result is relevant only to the item tested.
2. This report shall not be reproduced in full or part without written approval of Visiontek consultancy services.(P) Ltd
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4. The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations.
5. The laboratory's responsibility under this report is limited to: proven wilful negligence.

\*\*\* End Report\*\*\*





## TEST REPORT

Test Report No: ENVLAB/25-26/TR-00703

Date: 05.04.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	25.03.2025
			Sample Received on	:	26.03.2025
Sample Description	:	Source Emission	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-1: Dedusting System
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	26.03.2025	Test Completed on	:	30.03.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results ST-1
1	Temperature	<sup>o</sup> K	--	356
2	Velocity	m/sec	--	10.8
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	54.3
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	34.6
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	37.8
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.036
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.6
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.63
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1913

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

#### TERMS AND CONDITION:-

- The Test result is relevant only to the item tested.
- This report shall not be reproduced in full or part without written approval of Visiontek consultancy services (P) Ltd
- The laboratory is not responsible for the authenticity of photocopied test report.
- The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations.
- The laboratory's responsibility under this report is limited to; proven wilful negligence.

\*\*\* End Report\*\*\*

Reviewed by 

Approved by 

## TEST REPORT

Test Report No: ENVLAB/25-26/TR-00704

Date: 05.04.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	25.03.2025
			Sample Received on	:	26.03.2025
Sample Description	:	Source Emission	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-2: DRYER STACK
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	26.03.2025	Test Completed on	:	30.03.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	Temperature	<sup>0</sup> K	--	357
2	Velocity	m/sec	--	9.4
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	66.2
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	36.1
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	38.7
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.080
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	6.9
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.77
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	1661

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

#### TERMS AND CONDITION:-

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5. The laboratory's responsibility under this report is limited to: proven willful negligence.

\*\*\* End Report\*\*\*





## TEST REPORT

Test Report No: ENVLAB/25-26/TR-00705

Date: 05.04.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	25.03.2025
			Sample Received on	:	26.03.2025
Sample Description	:	Source Emission	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-3: GCP STACK (45 MVA)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	26.03.2025	Test Completed on	:	30.03.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	Temperature	<sup>0</sup> K	--	378
2	Velocity	m/sec	--	7.5
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	100	76.2
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	29.8
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	35.8
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.090
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	7.8
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.077
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	50049

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

#### TERMS AND CONDITION:-

1. The Test result is relevant only to the item tested.
2. This report shall not be reproduced in full or part without written approval of Visiontek consultancy services.(P) Ltd
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5. The laboratory's responsibility under this report is limited to: proven wilful negligence.

\*\*\* End Report\*\*\*



## TEST REPORT

Test Report No: ENVLAB/25-26/TR-00706

Date: 05.04.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	25.03.2025
			Sample Received on	:	26.03.2025
Sample Description	:	Source Emission	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-4: DG STACK/02
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	26.03.2025	Test Completed on	:	30.03.2025

### 2. Chemical Testing

#### B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-4
1	Temperature	<sup>0</sup> K	--	391
2	Velocity	m/sec	--	6.8
3	Particulate Matter as PM	mg/Nm <sup>3</sup>	--	46.2
4	Sulphur Dioxide as SO <sub>2</sub>	mg/Nm <sup>3</sup>	--	22.4
5	Oxides of Nitrogen as NO <sub>x</sub>	mg/Nm <sup>3</sup>	--	33.6
6	Carbon Monoxide as CO	mg/m <sup>3</sup>	--	0.084
7	Carbon dioxide as (CO <sub>2</sub> )	%	--	7.5
8	Mercury (as Hg)	mg/Nm <sup>3</sup>	--	0.029
9	Quantity of Gas flow	Nm <sup>3</sup> /hr	--	91.5

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

#### TERMS AND CONDITION:-

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- The laboratory's responsibility under this report is limited to: proven willful negligence.

\*\*\* End Report\*\*\*





VEDANTA No. 348

EGD. NO.-

MOB. NO. 7504901352.

DATE OF EXAM. 29/01/25

VALIDITY UPTO 28/01/26

## FORM NO. 31-A

PMB/289/25

2569 95222934.

HEALTH RECORD  
(PRESCRIBED UNDER RULE 6Z-1)

## VEDANTA FERRO ALLOYS CORPORATION LTD.

CHARGE CHROME PLANT, RANDIA

## REPORT OF MEDICAL EXAMINATION (PRE-EMPLOYMENT / PERIODICAL / OTHERS)

- Name of the employee : Sushanta Kumar Rouf Bharati Jena
- Employment no. : CEP0001642 Sex : Male/Female ✓
- Date of birth/age : 07-Feb-1984
- Date of employment : 29-Jul-2008
- Length In service : 17 yrs
- Nature of job : Mechanical.
- Identification marks : Cut mark on left face.
- General Survey :

Health : Good / Fair / Poor

Height - 168 - Cm.

Weight - 86 Kg.

- Blood group : O+
- Eye vision : Normal / Abnormal ✓
- Use of glass - Yes / No
- Hearing : Normal / Abnormal
- Respiratory system & chest measurement :

Inspiration -

Expiration -

Respiratory Rate / min -

Remarks if any -

- Cardiovascular system :

Pulse rate -

Bp-

Heart sounds-

96 bpm  
92 bpm  
16/min  
N

86

130/86

• Abdomen Tenderness : Yes/ No

Liver : Normal / Enlarged

Spleen : Normal / Enlarged

• Nervous system :

History of fits : Yes / No

Epilepsy : Yes / No

Remarks on mental health :

• Locomotor system : Normal / Abnormal

• Skin condition : Normal / Abnormal

Remarks on any skin disease noticed -

• Hernias : Absent / Present

• Hydrocele : Absent / Present

• Present complain, if any

• Summary of findings

Heart disease

Hypertension

Diabetes

T.B.

Epilepsy

Poisoning

Dental

Occupational disease, if any

• Recommendation, if any

For any further investigation

*Sushoma Roul*  
Signature of the Employee

*Dr. Deepak Nayak*  
General Physician  
Reg No-21264/16  
Signature of the Medical Officer



REGD. NO.- VEDANTA No. 79.  
MOB. NO. 9437544658

DATE OF EXAM. 28/11/25  
VALIDITY UPTO 27/11/26

## FORM NO. 31-A

HEALTH RECORD

(PRESCRIBED UNDER RULE 6Z-1)

VEDANTA FERRO ALLOYS CORPORATION LTD.

CHARGE CHROME PLANT, RANDIA

### REPORT OF MEDICAL EXAMINATION (PRE-EMPLOYMENT / PERIODICAL / OTHERS)

- Name of the employee : Pradeep K. Chand. Vedanta Gmp
- Employment no. : 710868 Sex : Male/Female
- Date of birth/age : 06-03-1973
- Date of employment : 2-02-2009
- Length in service : 02.02.2002
- Nature of job :
- Identification marks : Production
- General Survey : Left black mole & Right cutting

Health : ☒ Good / Fair / Poor

Height - 171. Cm.

Weight - 88. Kg.

- Blood group : 107
- Eye vision : Normal/Abnormal
- Use of glass - Yes / No
- Hearing : ☒ Normal / Abnormal
- Respiratory system & chest measurement :

Inspiration - 180 cm.

Expiration - 94 cm NAD

Respiratory Rate / min -

Remarks if any - (N)

- Cardiovascular system :

Pulse rate - 54

Bp-

Heart sounds-

144/92

(N)

- Abdomen Tenderness : Yes/ No
- Liver : Normal / Enlarged
- Spleen : Normal / Enlarged

*NAD*

- Nervous system :

History of fits : Yes / No

Epilepsy : Yes / No

Remarks on mental health :

*NAD*

- Locomotor system : Normal / Abnormal

- Skin condition : Normal / Abnormal

Remarks on any skin disease noticed -

- Hemias : Absent / Present

- Hydrocele : Absent / Present

- Present complain, if any -

- Summary of findings

Heart disease

Hypertension

Diabetes

T.B.

Epilepsy

Poisoning

Dental

Occupational disease, if any

*NAD*

- Recommendation, if any
- For any further investigation

*x Pradeep Kumar*  
Signature of the Employee

Dr. Deepak Nayak  
General Physician  
Reg No. 21264/16

Signature of the Medical Officer



VEDANTA No. 1087-  
REGD. NO.-

MOB. NO. 8093481676.

DATE OF EXAM. 30.1.25

VALIDITY UPTO 29.1.26

1211 | Pme | 25

## FORM NO. 31-A

HEALTH RECORD

(PRESCRIBED UNDER RULE 6Z-1)

79912104 1757.

### VEDANTA FERRO ALLOYS CORPORATION LTD.

CHARGE CHROME PLANT, RANDIA

#### REPORT OF MEDICAL EXAMINATION (PRE-EMPLOYMENT / PERIODICAL / OTHERS)

- Name of the employee : Manoj Kumar Jena ✓ B. Jena
- Employment no. : CCP 0001648. Sex : Male/Female
- Date of birth/age : 05-06-1991
- Date of employment : 22-Jun-2015
- Length in service : 10yrs.
- Nature of job : fitter.
- Identification marks : Black mole on left chest
- General Survey :

Health : Good / Fair / Poor

Height - 175 . Cm.

Weight - 73 Kg.

- Blood group : B<sup>+</sup> +ve
- Eye vision : Normal / Abnormal .....

Use of glass - Yes / No

- Hearing : Normal / Abnormal

- Respiratory system & chest measurement :

Inspiration - 92 cm NAD

Expiration - 89 cm

Respiratory Rate / min -

Remarks if any -

- Cardiovascular system :

Pulse rate - 67

Bp-

Heart sounds-

Normal.

136/85

• Abdomen Tenderness : Yes/ No ✓

Liver : Normal / Enlarged ✓

Spleen : Normal / Enlarged ✓

• Nervous system :

History of fits : Yes / No ✓

Epilepsy : Yes / No ✓

Remarks on mental health : ✓

• Locomotor system : Normal / Abnormal ✓

• Skin condition : Normal / Abnormal ✓

Remarks on any skin disease noticed -

• Hernias : Absent / Present ✓

• Hydrocele : Absent / Present ✓

• Present complain, if any

• Summary of findings

Heart disease

Hypertension

Diabetes

T.B.

Epilepsy

Poisoning

Dental

Occupational disease, if any

• Recommendation, if any

• For any further investigation

Manoj Kumar Jena

Signature of the Employee

Dr. Deepak Nayak  
General Physician  
Regd. No-21264/16

Signature of the Medical Officer

adanta  
Prescribing doctors

Medical history

IL NO: \_\_\_\_\_

Name of E \_\_\_\_\_

Age: \_\_\_\_\_



REGD. NO.-

MOB. NO.

8117083095

DATE OF EXAM. 25.2.25

VALIDITY UPTO 24.2.26

# FORM NO. 31-A

1380/PME/25

## HEALTH RECORD

(PRESCRIBED UNDER RULE 6Z-1)

### VEDANTA FERRO ALLOYS CORPORATION LTD.

CHARGE CHROME PLANT, RANDIA

#### REPORT OF MEDICAL EXAMINATION (PRE-EMPLOYMENT / PERIODICAL / OTHERS)

- Name of the employee
- Employment no.
- Date of birth/age
- Date of employment
- Length in service
- Nature of job
- Identification marks
- General Survey

Mm. Ajit Kumar Mohanty

CEP0001187

20/06/1985

8. July. 2014

11 yrs (Tapper)

Keen put

Sex: Male/Female

R.M. Chand.

Health : Good / Fair / Poor

Height - 171 cm

Weight - 65 Kg.

- Blood group
- Eye vision

Normal / Abnormal

Use of glass - Yes / No

- Hearing

Normal / Abnormal

- Respiratory system & chest measurement:

Inspiration - 91 cm.

Expiration - 87 cm

Respiratory Rate / min -

Remarks if any -

- Cardiovascular system

Pulse rate - 96

Bp -

Heart sounds -

122/78  
Normal

- Abdomen Tenderness : Yes/No ✓  
Liver : Normal / Enlarged  
Spleen : Normal / Enlarged
- Nervous system :  
History of fits : Yes/No ✓  
Epilepsy : Yes/No ✓  
Remarks on mental health :
- Locomotor system : Normal / Abnormal ✓
- Skin condition : Normal / Abnormal ✓  
Remarks on any skin disease noticed -

- Hernias : Absent / Present ✓
- Hydrocele : Absent / Present ✓

• Present complain, if any N/C

- Summary of findings

Heart disease

Hypertension

Diabetes

T.B.

Epilepsy

Poisoning

Dental

Occupational disease, if any

- Recommendation, if any
- For any further investigation

Asst Kumar mub-shly-  
Signature of the Employee

Dr. Deepak Nayak  
General Physician  
Reg No-21264/16  
Signature of the Medical Officer

**ewell**  
AGNOSTIC  
LABORATORY

Name  
ring Doctor  
ple Re

NAD

NAD

NAD



### Greenbelt

**Ferro Alloys Corporation Ltd (Charge Chrome Plant)** has 34.84% green belt coverage as per the Greenbelt assessment by an expert agency. PP is continuously working to achieve the tree density to 2500/Ha by using the existing vacant land and replacement of damaged plants.

Details of plantation are provided below.

Total land coverage by the project : 86.163 HA.  
Greenbelt Cover : 30.01 HA

#### Plantation: (Apr 2024-Mar 2025)

Year of plantation	Species planted	Spacing	Height attained (As on Date)	Total area covered in Ha (Approx)
2024-25	<b>13258</b>	1.5 m	>1 m	5.3

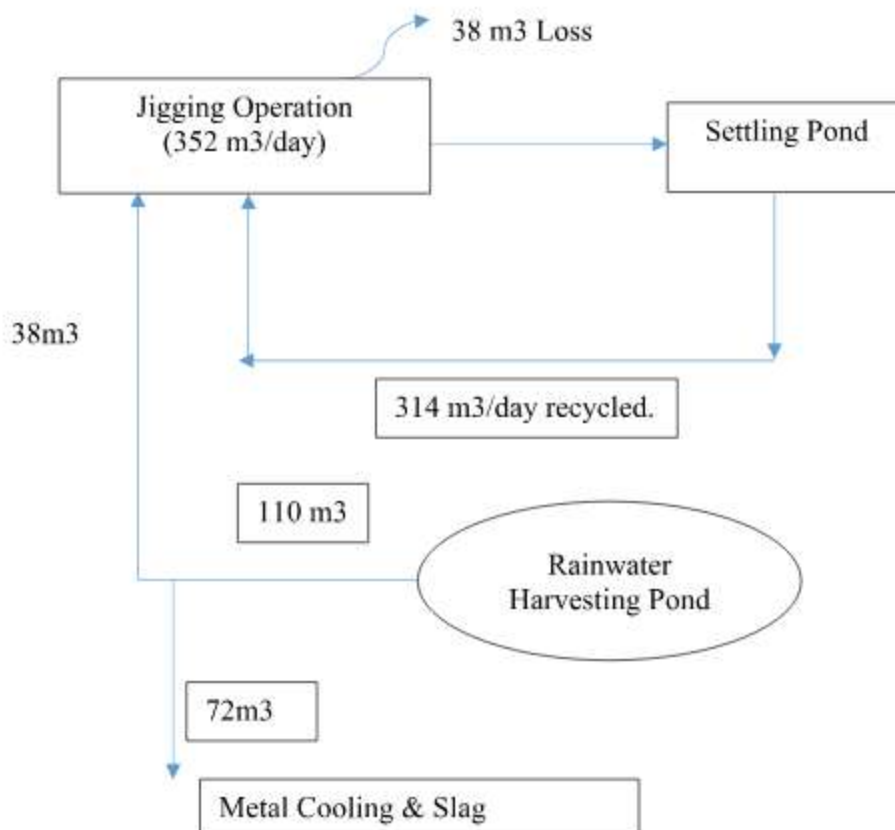
#### Trees Details:

Local Name	Botanical Name	Family
<b>Trees</b>		
Nimba	<i>Azadiracta india</i>	Meliaceae
Radhachura	<i>Peltophurum ferrugineum</i>	Caesalpiniaceae
Karanja	<i>Pongamia pinnata</i>	Fabaceae
Acacia	<i>Acacia auriculiformis</i>	Mimosaceae
Debadaru	<i>Polyalthia longifolia</i>	Annonaceae
Jamun	<i>Syzygium cumini</i>	Myrtaceae
Kadamba	<i>Neolamarckia cadamba</i>	Neolamarckia cadamba
Sishu	<i>Dalbergia sissoo</i>	Fabaceae
Amla	<i>Phyllanthus emblica</i>	Phyllanthaceae
Arjun	<i>Terminalia arjuna</i>	Combretaceae
Debdaru	<i>Polyalthia longifolia</i>	Annonaceae
Banyan	<i>Ficus benghalensis</i>	Moraceae
Bahada	<i>Terminalia bellirica</i>	Combretaceae
Sunari	<i>Cassia fistula</i>	Fabaceae
Peepal	<i>Ficus religiosa</i>	Moraceae
Indian bael	<i>Aegle marmelos</i>	Rutaceae
<b>Shrubs</b>		
Kadali	<i>Musa paradisiaca</i>	Musaceae
Pedipedika	<i>Abutilon persicum</i>	Malvaceae
Dalimba	<i>Punica granatum</i>	Puniaceae

### Water Requirement in Jigging Operation

Process	Water Requirement (m3)	Transit Loss	Evaporation Loss	Total Loss (%) ((c+d)/(a+b))
Jigging	352 (a)	4 (c)	34(d)	9.74%
Jigging Makeup	38 (b)			
Metal Cooling & Granulation	72	-	-	
Total Supply from Rainwater Harvesting Pond	110			

Water Flow Diagram





Ref: FACOR/BHADRAK/MOEF/24-04  
Date: 08.05.2024

TO,  
Deputy Director General of Forest (C),  
Ministry of Env., Forest and Climate Change,  
Integrated Regional Office,  
A/3 Chandrasekharpur,  
Bhubaneswar-751023  
Email: roez.bsr-mef@nic.in

Ref : 1. Environment Clearance letter No. F.No. J-11011/594/2008-IA.II(1) dtd. 31.10.2022  
2. Name of the Project: Expansion of Ferro Alloys Plant High Carbon Ferro Chrome production from 75000TPA to 145000TPA at Randia, District Bhadrak, Orissa by M/s. Ferro Alloys Corporation Ltd.  
Sub : Compliance of the specific condition no. XXII against Environment Clearance letter No.: F.No. J-11011/594/2008-IA.II(1) dtd.31.10.2022, issued to M/s. Ferro Alloys Corporation Ltd.

Dear Sir,

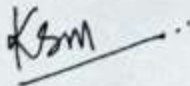
In compliance with the Stipulated Specific Condition No. XXII of the Environment Clearance letter No.. F.No. J-11011/594/2008-IA.II(1) dtd. 31.10.2022 issued by your good office, we are submitting herewith the Compliance status of the installation of CO sensors at the furnace top level with respect to Charge Chrome Plant of M/s Ferro Alloys Corporation Limited, situated at D.P.Nagar, Po-Randia, District-Bhadrak.

Specific Condition No.	Compliance Condition	Status
XXII	The PP shall install CO sensors at the furnace top level and the monitoring report shall be submitted to the IRO, MoEFCC in this regard.	Installation of CO sensor in furnace top level has been completed.

\*\*Enclosed with this letter, please find the necessary documentation as evidence for compliance with the same.

Thanking you,

Yours faithfully,  
For Ferro Alloy Corporation Ltd.,  
Charge Chrome Plant.



Mr. Krutisunder Mohapatra  
Chief HSE Officer, FACOR  
Encl: As above



M/s. Ferro Alloys Corporation Ltd. (A subsidiary of Vedanta Ltd.)

Registered Office:

D.P.Nagar, PO : Randia, Dist.: Bhadrak, Odisha, India - 756 135

T +91-6784 240320/240347, Email: [facor.mines@vedanta.co.in](mailto:facor.mines@vedanta.co.in) / [facor.ccp@vedanta.co.in](mailto:facor.ccp@vedanta.co.in)

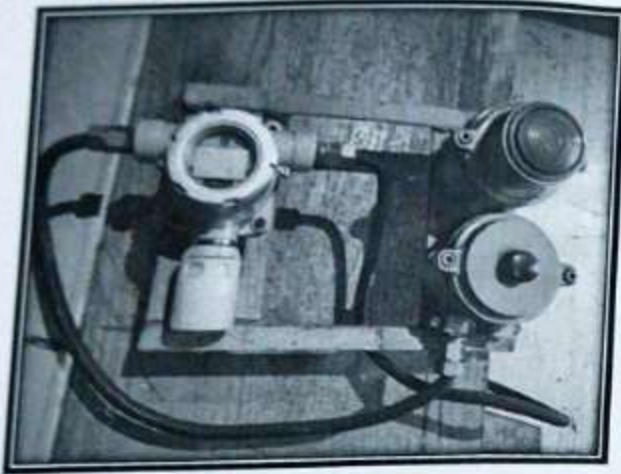
Website: [www.facorgroup.in](http://www.facorgroup.in), CIN: U45201OR1955PLC008400.

Security: Internal (C)

## CO Sensor at Furnace Top Level

### Charge Chrome Plant

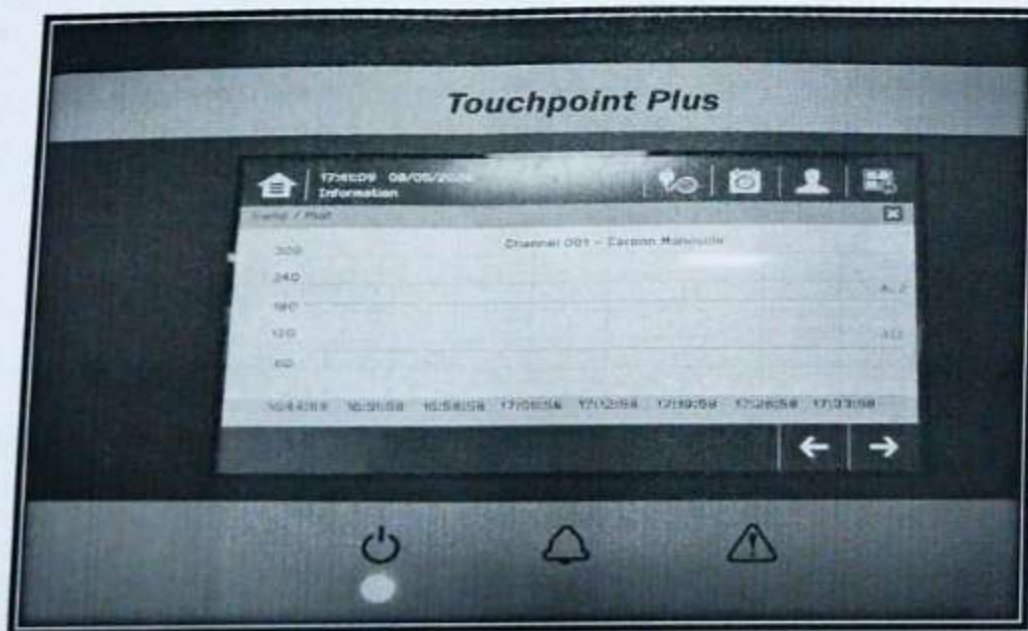
Area: 33 MVA Furnace



CO Sensor installed at 33 MVA furnace top level.



Controller System at 33 MVA Furnace Control Room.



Controller Display with Data Trend from Sensor



**Charge Chrome Plant, M/s Ferro Alloys Corporation Limited.**

Environment Management Plan Compliance				
		Mitigation Measures	Actions Taken	Compliance Status
1	Water Environment	The plant would be designed on the concept of 'zero discharge' of plant effluent	The Plant follows Zero effluent discharge policy. No effluent is being discharged outside the plant.	Complied
2		The water used for furnace & gas cleaning plant operation are completely recycled with proper water treatment.	The cooling water is being recycled through pressure filters.	Complied
3		8235 Nos. of trees are planted & 3500 sq. m. Gardens developed inside the plant for soil & water conservation	6675 nos. of plants have been planted till date. Gardens also have been developed inside the plant premises.	Being Complied
4		The domestic effluents will be treated through STP of adequate size and the treated water shall be used for gardening. Canteen wastewater to soak pit through settling pit.	STP has been installed to treat domestic wastewater and treated water is being used for gardening purpose	Complied
5		The plant concrete drainage network system has been constructed for most of the areas & it is connected to 9 Nos. of water recharging pits (13 wells) to take care of storm water.	Concrete drainage network has been constructed and recharging pits have been constructed to take care of storm water. Photocopy is enclosed as <b>Annexure 1</b>	Complied
6		Developing a settling pond to collect storm water around the premises to prevent it from any contamination and recirculating by pumping system for plantation & water sprinkling for dust suppression. Also, for design and implementation of Roof-Top rainwater harvesting	Rainwater harvesting ponds have been developed to store storm water. The water is being used for plantation and dust suppression. Photocopy is enclosed as <b>Annexure 2</b> .	Complied

M/s. Ferro Alloys Corporation Ltd. (A subsidiary of Vedanta Ltd.)

Registered Office:

B.P. Nagar, PO: Randa, Dist: Bhubaneswar, Odisha, India - 750 135

T: +91-6784 240320/240347, Email: facor.mines@vedanta.co.in / facor.ecp@vedanta.co.in

Website: www.facorgroup.in, CHN: U45201OR1955PLC008400

*(Signature)*  
*(Signature)*

7	Air Environment	Bag filter with designed outlet dust concentration of 50 mg/Nm <sup>3</sup> ;	Outlet dust concentration is within the limit and analysis report has been attached as <b>Annexure 3</b> .	Being complied
8		The event of failure of any pollution control equipment, automatic tripping in the control system, shall be provided	Air pollution control device (Gas cleaning plant) has been provided with interlocking system.	Complied
9		Attempt shall be made to use low sulfur coke to the possible extent	Coke with sulfur content of < 0.7 % (wt.) is used in the process. Total consumption for the year 2023-24 is 36102 MT. Testing report is enclosed as <b>Annexure 4</b>	Complied
10		Flame temperature will be maintained to ensure emission of less NOx	Emission of NOx from GCP bag filters are monitored through external NABL accredited lab. Report of the same has been attached with the <b>Annexure 3</b>	Complied
11		All vehicles and their exhausts would be well maintained and regularly tested for emission concentration	PUC certificate is maintained for all vehicles. Reference copy is enclosed as <b>Annexure 5</b>	Complied
12		Regular preventive maintenance of pollution control equipment;	It is being maintained regularly. Reference copy is enclosed as <b>Annexure 6</b>	Complied
13		Stack emissions shall be regularly monitored by FERRO ALLOYS CORPORATION LTD. / SPCB/external agencies on periodic basis as per statutory requirements.	It is being monitored regularly. Report for the same is enclosed as <b>Annexure 3</b>	Complied
14		Jet Pulse bag filters at all dry material conveying and transfer points	For controlling dust pollution in conveying and transfer points Dedusting unit with bag filter system has been installed. Photocopy is enclosed as <b>Annexure 7</b>	Complied
15		Regular dust suppression with water sprinkler on the haul roads;	Regular water sprinkling is being done through mobile sprinkler. Photocopy is attached for reference as <b>Annexure 7</b>	Being complied
16		Plant roads & approach roads shall be made of bitumen/concrete;	All internal road and connecting road from project site to main highway connected with PQC (Pavement Quality Concrete Road). Photocopy is attached for reference in <b>Annexure 8</b>	Complied
17		Areas between various sections and truck parking areas shall be made of concrete/bitumen/brickwork;	Photocopy attached for reference in <b>Annexure 8</b>	Complied
18		Open areas within the plant premises and along with boundaries of the plant premises shall be covered under greenbelt/plantation	PP have planted native species of trees around the plant boundaries. PP is currently having 34.84% of greenbelt coverage as per Greenbelt assessment by expert agency.	Complied
19		Construction materials such as sand etc. shall be fully covered during transportation to/from the plant site by road.	It is being followed and implemented	Complied
20		Installation of dust suppression system i.e. Dry Fog System near the fugitive dust generation sources in the Metal Recovery Plant.	Water sprinkling system has been installed in the fugitive dust generation points in metal recovery plant. Photographs to be attached	Complied
21		GCP stack emission monitoring	Stack emission monitoring is being carried out on monthly basis. Monitoring Report has been attached as <b>Annexure 3</b>	Complied

M/s. Ferro Alloys Corporation Ltd. (A subsidiary of Vedanta Ltd.)

Registered Office:

D.P. Nagar, PO: Raudia, Dist.: Bhadrak, Odisha, India - 756 135.

T: +91-6784 240320/240347, Email: facor@vedanta.co.in / facor.ccp@vedanta.co.in

Website: www.facorgroup.in, CIN: U45201OR1955PLC008400.



22	Noise Environment	Plantation around the plant boundary will create a noise barrier for attenuating noise level.	Greenbelt along with stone patching boundary wall in the periphery of the plant boundaries has been developed to create a noise barrier for attenuating noise level.	Complied
23		Machinery design specifications of all the equipment in the Silico manganese plant will be to operate with noise level shall not exceed 85dBA as per the requirement of OSHA (Occupational Safety and Health Administration).	There is no silico manganese plant. So, this is not applicable.	Not applicable
24		Provision of acoustic enclosures to modulate the noise generated by machines.	Acoustic enclosures have been provided in the heavy noise generating equipment like DG sets, Compressors etc. Photographs enclosed as <b>Annexure 9</b>	Complied
25		Periodical lubrication of the heavy vehicles will help to keep the noise & vibration level at minimum.	It is being maintained.	Complied
26		Provision of Protective device like earmuff/plugs to the workers	Ear plugs have been provided to the workers working in high noise prone area. Reference copy is enclosed as <b>Annexure 10</b>	Complied
27		Post health check-ups of employees & contractual labourers working in the noise prone areas	Health check-ups is being carried out regularly for employees & contractual laborers working in the noise prone areas. PME attached as <b>Annexure 11</b> .	Being complied

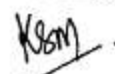
28	Water Resources	Continuous attempt shall be made to optimize/reduce the use of water;	Water Policy has been framed and implemented along with that VSAP (Vedanta Sustainability Assurance Program) is maintained. Regular trainings have been given to the employees to use the water in a sustainable way. Details are enclosed as <b>Annexure 12</b>	Being complied
29		The wastewater generation from cooling tower blow down shall be minimized when COC is maintained at 6.	It is being complied & maintained	Complied
30		The makeup water for the cooling tower will be minimum, thereby facilitating water conservation.	There is minimal water requirement as makeup water in cooling tower. Raw water is treated through treatment unit and used in cooling purpose. To minimize makeup water requirement recirculation water is filtered through pressure filters and again used in cooling purpose.	Complied
31		Continuous attempt shall be made to avoid wastage and leakage of water	Leakage points & wastage areas are regularly identified & rectified. Regular awareness sessions have been conducted to sensitize employees about water conservation. Training program photographs are enclosed with <b>Annexure 13</b>	Complied
32		100% wastewater shall be recycled back after treatment	All wastewater is being treated through treatment unit and recycled in process.	Complied
33		Regular record of water consumption on daily basis shall be maintained	Digital water flowmeter with telemetry system has been installed for this purpose. Reference copy is enclosed as <b>Annexure 14</b>	Complied
34		Toilets and bathrooms shall be provided at site	It has been provided at site. <b>Annexure 14</b>	Complied
35		Water harvesting shall be carried out.	Rainwater water harvesting initiatives has been implemented. 3nos of recharging ponds have been developed to water harvesting purpose. Photographs attached as <b>Annexure 2</b>	Complied



36	Ecology	The species proposed to be planted shall be selected based on the criteria prescribed by CPCB as "Guidelines for Developing Greenbelts"	Native species have been selected for plantation as per guidance of forestry office. Details of the species is enclosed as <b>Annexure 15</b> .	Complied
37		Local species shall be preferred	Plantation of local native species have been preferred. Details of the species is enclosed as <b>Annexure 15</b> .	Complied
38		A qualified horticulturalist shall be deployed for proposed greenbelt development/plantation	A horticulturalist has been deployed for proposed greenbelt development/plantation	Complied
39		Proper fencing shall be carried out around the area where plantation is being carried out	Being followed in the required areas while plantation.	Complied
40		Necessary clearance shall be obtained from the statutory authorities due to the proposed plant on the ecological sensitive areas and proper management plan as suggested in the conservation plan shall be implemented seriously	The plant area is not coming under ecological sensitive area. The plant is established within the predefined industrial area. So, this point is not applicable	Not applicable

41	Solid Waste	Attempt shall be made to utilize the waste to maximum possible extent	100% of High-Volume Low Toxicity of waste is being utilized. Waste Utilization report is attached as <b>Annexure 16.</b>	Complied
42		Proper records of the solid waste to be generated and their usages for different purposes shall be maintained	Solid waste generation & utilization records are maintained. Waste Utilization report is attached as <b>Annexure 16</b>	Complied
43		Area used for storage of solid waste, if required at plant site shall be fenced properly. Continuous water spray shall be made for dust suppression and pucca road shall be constructed up to storage yard	As 100% of High-Volume Low Toxicity of waste is being utilized, so there is no storage area that to be fenced.	Not applicable
44		Dumping of solid waste shall be made in systematic manner and shall be levelled and compacted from time to time with layer of earth. At the end, the site shall be reclaimed by appropriate species of trees	As 100% of High-Volume Low Toxicity of waste is being utilized, so there is no solid waste dump.	Not applicable
45		Suitable drainage system shall be developed for surface runoff water during monsoon and at places settling/catch pits shall be provided to arrest any solid particles before it shall be flowing over to natural drainage system of the area	Drainage systems has been provided to transfer natural drainage water to collection pit for further treatment in SRTP. Photographs enclosed as <b>Annexure 17</b>	Complied
46		Dumping site shall be properly fenced and surrounded by green belt	As 100% of generated slag is being utilized so there is no requirement of fencing	Not applicable
47		Regular ambient air quality for dust and water monitoring shall be carried out around the dumping site	Monitoring of air quality and water quality is being carried out around the plant on regular basis. Report enclosed with <b>Annexure 18</b>	Complied
48		Lubricating waste oil shall be collected separately in drums and shall be sold to authorized external agency for further treatment	Separate drums are used to store lubricating waste oil and it is sold to SPCB authorized agency. Form 10 copy enclosed with <b>Annexure 19</b>	Being Complied

For Ferro Alloys Corporation Limited

  
 Chief HSE Officer  
 Krutisunder Mohapatra

**MS Ferro Alloys Corporation Ltd. (FACOR)**  
**Charge Chrome Plant**

<b>COST OF ENVIRONMENT MANAGEMENT PLAN</b>			<b>EIA Commitment</b>		<b>Compliance</b>	
	<b>Sl. No.</b>	<b>Particulars</b>	<b>Capital Investment (INR in lacs)</b>	<b>Recurring Investment (INR in lacs)</b>	<b>Capital Investment (INR in lacs)</b>	<b>Recurring Investment (INR in lacs)</b>
	1	Air Pollution Control	1950	105	1729	11.46
	2	Water pollution	325	28	233.05	14.9
	3	Noise pollution	55	8	–	0.5
	4	Environmental Monitoring & Management	140	70	179.2	10.39
	5	Occupational health	35	25	5.6	52
	6	Risk Control Measures	30	20	133.1	5.1
	7	Green belt	25	25	14.12	7.38
		<b>Total</b>	<b>2560</b>	<b>281</b>	<b>2294.06</b>	<b>101.73</b>



## Handling of Single-use Plastic in FACOR

The Ministry of Environment, Forest & Climate Change (MoEF & CC) issued a Notification on **12/08/2021** which mandated the **banning of identified single-use plastic items**. Vedanta is also committed to **'Transformation for Good'**, and it is clearly visible through our ESG aims. Our ESG aim-6 aims to incorporate new innovations for a greener business model. At FACOR, various measures have been taken to reduce the use of single-use plastics inside plant premises.

### Types of Plastic Waste Generation

Location	Types of Waste Generated
Security Barrack	Polyethylene Terephthalate (PET), HDPE & LDPE (i.e., Plastic bags, Plastic bottles, etc.)
Project Area	
Canteen	
Wagon Tippler	
Store	Plastic Tag, Bubble Wraps, PET, Raw Material Bags.

### Banned Single-Use Plastics and Alternatives.

Banned Single Use Plastic	Alternatives
Synthetic Fabric	Cotton FABRIC
Plastic Bottles	Steel Bottles
Plastic Cutlery (Spoons, Knife & other Kitchen equipment)	Wooden/ Metal Cutlery
Plastic Bags	Jute/ Cloth Bags
Plastic Containers	Glass Containers
Plastic Plates	Dry Leaf Plates
Plastic Cup/Glasses	Paper Cup/ Glasses
Wrapping & Packing Material (Invitation Card, Cigarette Box)	Carboard Boxes
Plastic Stir Stick	Metal Stir Stick

## Disposal process for waste



## Waste segregation

For the segregation of different types of wastes i.e., biodegradable, non-biodegradable, and metal waste, there are three types of bins coloured green, blue, and black respectively. Bins in sufficient numbers are yet to be placed at the required place to improve the scenario of waste segregation.

However, there are separate colour coding for handling bio-medical waste. The colour coding goes as follows,

Colour	Type of waste
Yellow	Human tissue, solid waste, contaminated with blood and body fluids plaster casts cotton swabs, expired or discarded pharmaceutical waste
White	Needles, syringes with fixed needles from needle tip cutters or burners, scalpels, blades, or any other contaminated sharp object that may cause punctures and cuts. Used, discarded, and contaminated metal sharps
Red	Tubing, bottles, IV tubes and sets, catheters, urine bags, syringes without needles, vacutainers with needles cut, and gloves.
Blue	Broken and discarded and contaminated glass including medicine vials and ampules except those contaminated with cytotoxic wastes

## Storage area

There are designated storage areas for segregated wastes, one at DP Club Back Side at Colony and another at Near J Block at Colony.



Figure 1: Designated site for segregated waste collection



## Training & awareness

Awareness campaigns have been conducted among the employees to sensitize them on not using single-use plastics and the ill effects of using them.



*Figure 3: Awareness campaign at Training hall*



*Figure 2: Conducting awareness campaign on site*



*Figure3: Plastic collection drive*

## Ban on Single use Plastic.

The FACOR administration is going forward to ban all kinds of single-use plastics inside plant premises. This noble decision will surely contribute towards a greener and more sustainable future altogether.



## COLOR CODED DUSTBIN & TRAINING RECORDS MAINTANANCE



## ON-SITE AWARENESS CAMPAIGNS





# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

Annexure-10

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-13861

Date: 06.12.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.12.2024
		Sample Received on	: 16.12.2024
Sample Description	: Fugitive Emission	Sampling Procedure	: IS 5182
		Sampling Location	: 1-Near Raw Material handling Yard 2- Near Daybin Area
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	: 16.11.2024	Test Completed on	: 20.11.2024

SL. No	Location	Test Result	
		Suspended Particulate Matter( $\mu\text{g}/\text{m}^3$ )	Respirable Particulate Matter ( $\mu\text{g}/\text{m}^3$ )
1	Near Agglomeration area	272	95
2	Near MRP Area	243	83
Standard For Crusher /Industrial Area		1200	---

### TERMS AND CONDITION:-

1. The Test result is relevant only to the item tested.
2. This report shall not be reproduced in full or part without written approval of Visiontek consultancy services.(P) Ltd.
3. The laboratory is not responsible for the authenticity of photocopied test report.
4. The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations.
5. The laboratory's responsibility under this report is limited to; proven wilful negligence.

\*\*\* End Report\*\*\*







# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-17534

Date: 05.03.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 20.02.2025
		Sample Received on	: 21.02.2025
Sample Description	: Fugitive Emission	Sampling Procedure	: IS 5182
		Sampling Location	: 1-Near Agglomeration Area 2- Near MRP Area
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	: 21.02.2025	Test Completed on	: 24.02.2025

SL. No	Location	Test Result	
		Suspended Particulate Matter ( $\mu\text{g}/\text{m}^3$ )	Respirable Particulate Matter ( $\mu\text{g}/\text{m}^3$ )
1	Near Agglomeration area	298	98
2	Near MRP Area	263	90
Standard For Crusher /Industrial Area		1200	----

### TERMS AND CONDITION:-

1. The Test result is relevant only to the item tested.
2. This report shall not be reproduced in full or part without written approval of Visiontek consultancy services.(P) Ltd
3. The laboratory is not responsible for the authenticity of photocopied test report.
4. The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations.
5. The laboratory's responsibility under this report is limited to; proven willful negligence.

\*\*\* End Report\*\*\*

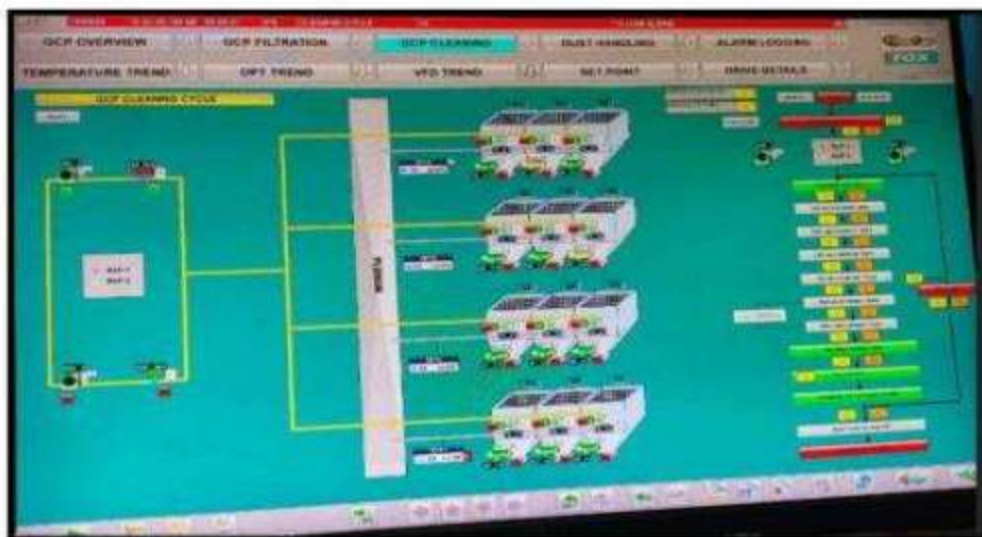




### Leakage detection & mechanized bag cleaning facility details

Leakages being detected by regular visits & site inspections and corrective measures being taken by team.

Auto pulsing system is installed to dislodge dust layers from the bags into the hopper.



Automated GCP Cleaning Process in DCS

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-12146

Date: 06.11.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	31.10.2024
Sample Description	:	Waste Water	Sample Received on	:	01.11.2024
Sample Condition	:	Ice Preservation	Sampling Procedure	:	APHA 1060 B
			Sampling Location	:	WW-: SRTS Outlet
			Sampling done by	:	Ashutosh Mohanty
Test Started on	:	01.11.2024	Test Completed on	:	05.11.2024

### Chemical Testing

#### WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results
					WW4
1.	pH at 25°C	mg/l	APHA4500 H+B	6.5-9.0	7.13
2.	Suspended Solids	mg/l	APHA 2540 D	<100	41.0
3.	Biochemical Oxygen Demand (as BOD at 27°C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	7.8
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	32.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.42
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

#### TERMS AND CONDITION:-

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3. The laboratory is not responsible for the authenticity of photocopied test report.
4. The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations
5. The laboratory's responsibility under this report is limited to; proven willful negligence.

\*\*\* End Report\*\*\*





# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

## TEST REPORT

Test Report No: ENVLAB/24-25/TR- 13859

Date: 06.12.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.11.2024
Sample Description	: Waste Water	Sample Received on	: 16.11.2024
Sample Condition	: Ice Preservation	Sampling Procedure	: APHA 1060 B
		Sampling Location	: WW-: SRTS Outlet
		Sampling done by	: Ashutosh Mohanty
Test Started on	: 16.11.2024	Test Completed on	: 20.11.2024

Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results WW4
1.	pH at 25°C	mg/l	APHA4500 H+B	6.5-9.0	7.10
2.	Suspended Solids	mg/l	APHA 2540 D	<100	44.0
3.	Biochemical Oxygen Demand (as BOD at 27°C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	8.0
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	35.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.40
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

### TERMS AND CONDITION:-

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\*\*\* End Report\*\*\*







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## TEST REPORT

Test Report No: ENVLAB/24-25/TR- 14576

Date: 05.01.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 26.12.2024
Sample Description	: Waste Water	Sample Received on	: 27.12.2024
Sample Condition	: Ice Preservation	Sampling Procedure	: APHA 1060 B
		Sampling Location	: WW-: SRTS Outlet
		Sampling done by	: Ashutosh Mohanty
Test Started on	: 16.11.2024	Test Completed on	: 31.12.2024

### Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results
					WW4
1.	pH at 25°C	mg/l	APHA4500 H+B	6.5-9.0	7.13
2.	Suspended Solids	mg/l	APHA 2540 D	<100	46.0
3.	Biochemical Oxygen Demand (as BOD at 27°C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	8.4
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	38.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.43
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

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## TEST REPORT

Test Report No: ENVLAB/24-25/TR- 15827

Date: 05.02.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 24.01.2025
Sample Description	: Waste Water	Sample Received on	: 25.01.2025
Sample Condition	: Ice Preservation	Sampling Procedure	: APHA 1060 B
		Sampling Location	: WW-: SRTS Outlet
		Sampling done by	: Ashutosh Mohanty
Test Started on	: 25.01.2025	Test Completed on	: 30.01.2025

Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results
					WW4
1.	pH at 25°C	mg/l	APHA4500 H+B	6.5-9.0	7.08
2.	Suspended Solids	mg/l	APHA 2540 D	<100	41.0
3.	Biochemical Oxygen Demand (as BOD at 27°C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	8.0
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	35.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.44
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

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\*\*\* End Report\*\*\*





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## TEST REPORT

Test Report No: ENVLAB/24-25/TR- 17532

Date: 05.03.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	20.02.2025
Sample Description	:	Waste Water	Sample Received on	:	21.02.2025
Sample Condition	:	Ice Preservation	Sampling Procedure	:	APHA 1060 B
			Sampling Location	:	WW-: RWHP Water
			Sampling done by	:	Ashutosh Mohanty
Test Started on	:	21.02.2025	Test Completed on	:	27.02.2025

Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results WW4
1.	pH at 25°C	mg/l	APHA4500 H+B	6.5-9.0	7.12
2.	Suspended Solids	mg/l	APHA 2540 D	<100	38.0
3.	Biochemical Oxygen Demand (as BOD at 27°C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	5.0
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	28.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.32
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

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\*\*\* End Report\*\*\*





## TEST REPORT

Test Report No: ENVLAB/25-26/TR- 00710

Date: 05.04.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	25.03.2025
Sample Description	:	Waste Water	Sample Received on	:	26.03.2025
Sample Condition	:	Ice Preservation	Sampling Procedure	:	APHA 1060 B
			Sampling Location	:	WW-: SRTP OUTLET
			Sampling done by	:	Ashutosh Mohanty
Test Started on	:	26.03.2025	Test Completed on	:	30.03.2025

Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results
					WW4
1.	pH at 25°C	mg/l	APHA4500 H+B	6.5-9.0	7.20
2.	Suspended Solids	mg/l	APHA 2540 D	<100	41.0
3.	Biochemical Oxygen Demand (as BOD at 27°C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	5.6
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	30.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.43
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

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\*\*\* End Report\*\*\*

Reviewed by 

Approved by 



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Annexure-13

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-13860

Date: 06.12.2024

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Ground Water	Date of Sampling	:	15.11.2024
			Sample Received on	:	16.11.2024
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	GW-1	Sampling Location	:	GW-1: Borewell-6
Sample Condition	:	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	16.11.2024	Test Completed on	:	20.11.2024

Sl. No.	Parameter	Unit	TEST METHOD	Standard as per IS -10500:2012 Amended on 2015 & 2018		GW1
				Acceptable Limit	Permissible Limit	
Physical Parameter						
1	Colour	Hazen,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2120 B, C	5	15	<5
2	Odour	—	APHA 23 <sup>rd</sup> Ed,2017 : 2120 B	Agreeable	Agreeable	Agreeable
3	pH at 25 <sup>o</sup> C	—	APHA 23 <sup>rd</sup> Ed,2017 : 4500H <sup>+</sup> B	6.5-8.5	6.5-8.5	7.32
4	Taste	—	APHA 23 <sup>rd</sup> Ed,2017 : 2160 C	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU,Max	APHA 2130 B	1	5	0.9
6	Dissolved Solids	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2540 C	500	2000	385
CHEMICAL PARAMETER						
1	Aluminium as( Al)	mg/l,Max	APHA 3500Al B	0.03	0.2	<0.03
2	Ammonical Nitrogen(NH <sub>3</sub> .N)	mg/l,Max	APHA 4500 NH <sub>3</sub> C	0.5	0.5	<0.5
3	Anionic Detergents (as MBAS)	mg/l,Max	APHA 5540 C	0.2	1.0	ND
4	Barium(Ba)	mg/l,Max	APFA 3111, B	0.7	0.7	<0.5
5	Boron (as B)	mg/l,Max	APHA 4500 B, B	0.5	1.0	<0.1
6	Calcium (as Ca )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 3500Ca B	75	200	44.6
7	Chloramines (as Cl <sub>2</sub> )	mg/l,Max	APHA 4500 -Cl G	4.0	4.0	ND
8	Chloride (as Cl )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 4500Cl <sup>-</sup> B	250	1000	40.0
9	Copper (as Cu)	mg/l,Max	APHA 3111 B, C	0.05	1.5	<0.05
10	Fluoride (as F)	mg/l,Max	APHA 4500 F, C	1.0	1.5	<0.1
11	Residual, free Chlorine	mg/l,Min	APHA 4500 Cl B	0.2	1.0	ND
12	Iron (as Fe)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 3111, B	1.0	1.0	0.24



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13	Magnesium (as Mg)	mg/l,Max	APHA 3500 Mg B	30	100	10.4
14	Manganese (as Mn)	mg/l,Max	APHA 3500Mn B	0.1	0.3	<0.05
15	Mineral Oil	mg/l,Max	APHA 5520 B	0.5	0.5	ND
16	Nitrate (as NO <sub>3</sub> )	mg/l,Max	APHA 4500 NO <sub>3</sub> <sup>-</sup> E	45	45	0.83
17	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH)	mg/l,Max	APHA 5530 B.D	0.001	0.002	<0.001
18	Selenium (as Se)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3500 Se C	0.01	0.01	<0.005
19	Silver( asAg)	mg/l,Max		0.1	0.1	<0.1
20	Sulphate (as SO <sub>4</sub> )	mg/l,Max	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E	200	400	13.6
21	Sulphide (as H <sub>2</sub> S)	mg/l,Max	0.05	0.05	0.05	ND
22	Alkalinity	mg/l,Max	APHA 2320 B	200	600	115
23	Total Hardness (as CaCO <sub>3</sub> )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2340 C	200	600	154
24	Zinc (as Zn)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	5	15	0.21
1	Chromium (as Cr <sup>+6</sup> )	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
2	Cadmium as( Cd)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	0.003	0.003	<0.003
3	Cyanide as (CN <sup>-</sup> )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 4500 CN <sup>-</sup> C,D	0.05	0.05	<0.01
4	Lead as( Pb)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 3111 B	0.1	0.1	<0.1
5	Mercury as (Hg)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	0.001	0.001	<0.001
6	Nickel (Ni)	mg/l,Max	IS 5185 (Part-22)	0.02	0.02	<0.02
7	Arsenic as (As)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3114 B	0.01	0.01	<0.005
8	Polychlorinated biphenyls	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 :6440 B	0.0005	0.0005	ND
9	Polycyclic aromatic hydrocarbons (PAH)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 :6440 B	0.0001	0.0001	ND
10	Total Chromium	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
11	Bromoform	mg/l,Max	APHA 6232	0.1	0.1	ND
12	Dibromochloromethane	mg/l,Max	APHA 6232	0.1	0.1	ND
13	Bromodichloromethane	mg/l,Max	APHA 6232	0.06	0.06	ND
14	Chloroform	mg/l,Max	APHA 6232	0.2	0.2	ND
15	Molybdenum (Mo)	mg/l,Max	IS 3025 (Part 2)	0.07	0.07	<0.07
<b>Bacteriological Parameter</b>						
1	Total Coliform	MPN/100 ml	APHA 23 <sup>rd</sup> Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample		ABSENT





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PESTICIDES					
1	Endosulfan a	µg/l,Max	APHA 23rd edition: 6630 C	0.4	<0.005
2	Endosulfan B	µg/l,Max	APHA 23rd edition: 6630 C	0.4	<0.005
3	Endosulfan sulphate	µg/l,Max	APHA 23rd edition: 6630 C	0.4	<0.005
4	Alachlor	µg/l, Max	APHA 23rd edition: 6630 C	20	<0.01
5	Atrazine	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01
6	Aldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	<0.01
8	Alpha HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.01	<0.01
9	Beta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	<0.01
10	Delta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	<0.01
11	Butachlor	µg/l, Max	APHA 23rd edition: 6630 C	125.0	<0.01
12	Chloropyrifos	µg/l, Max	APHA 23rd edition: 6630 C	30.0	<0.01
13	2,4-Dichlorophenoxyacetic acid	µg/l, Max	APHA 23rd edition: 6630 C	30.0	<0.05
14	p p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
15	p p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
16	p p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
17	o p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
18	o p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
19	o p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
20	Ethion	µg/l, Max	APHA 23rd edition: 6630 C	3.0	<0.01
21	Lindane	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01
22	Isoproturon	µg/l, Max	APHA 23rd edition: 6630 C	9.0	<0.01
23	Malathion	µg/l, Max	APHA 23rd edition: 6630 C	190.0	<0.01
24	Methyl parathion	µg/l, Max	APHA 23rd edition: 6630 C	0.3	<0.01
25	Monocrotophos	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.01
26	Phorate	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01

Reviewed by:

Approved By:



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## TEST REPORT

Test Report No: ENVLAB/24-25/TR-

Date: 05.02.2025

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Ground Water	Date of Sampling	:	24.01.2025
			Sample Received on	:	25.01.2025
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	GW-1	Sampling Location	:	GW-1: Borewell -1
Sample Condition	:	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	25.01.2025	Test Completed on	:	30.01.2025

Sl. No.	Parameter	Unit	TEST METHOD	Standard as per IS -10500:2012 Amended on 2015 & 2018		GW1
				Acceptable Limit	Permissible Limit	
Physical Parameter						
1	Colour	Hazen,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2120 B, C	5	15	<5
2	Odour	--	APHA 23 <sup>rd</sup> Ed,2017 : 2120 B	Agreeable	Agreeable	Agreeable
3	pH at 25 <sup>o</sup> C	--	APHA 23 <sup>rd</sup> Ed,2017 : 4500H <sup>+</sup> B	6.5-8.5	6.5-8.5	7.33
4	Taste	--	APHA 23 <sup>rd</sup> Ed,2017 : 2160 C	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU,Max	APHA 2130 B	1	5	0.7
6	Dissolved Solids	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2540 C	500	2000	359
CHEMICAL PARAMETER						
1	Aluminium as( Al)	mg/l,Max	APHA 3500Al B	0.03	0.2	<0.03
2	Ammonical Nitrogen(NH <sub>3</sub> .N)	mg/l,Max	APHA 4500 NH <sub>3</sub> .C	0.5	0.5	<0.5
3	Anionic Detergents (as MBAS)	mg/l,Max	APHA 5540 C	0.2	1.0	ND
4	Barium(Ba)	mg/l,Max	APFA 3111, B	0.7	0.7	<0.5
5	Boron (as B)	mg/l,Max	APHA 4500 B, B	0.5	1.0	<0.1
6	Calcium (as Ca )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 3500Ca B	75	200	40.6
7	Chloramines (as Cl <sub>2</sub> )	mg/l,Max	APHA 4500 -Cl G	4.0	4.0	ND
8	Chloride (as Cl )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 4500Cl <sup>-</sup> B	250	1000	25.0
9	Copper (as Cu)	mg/l,Max	APHA 3111 B, C	0.05	1.5	<0.05
10	Fluoride (as F)	mg/l,Max	APHA 4500 F, C	1.0	1.5	<0.1
11	Residual, free Chlorine	mg/l,Min	APHA 4500 Cl B	0.2	1.0	ND
12	Iron (as Fe)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 3111, B	1.0	1.0	0.38





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PESTICIDES					
1	Endosulfan a	µg/l,Max	APHA 23rd edition: 6630 C	0.4	<0.005
2	Endosulfan B	µg/l,Max	APHA 23rd edition: 6630 C	0.4	<0.005
3	Endosulfan sulphate	µg/l,Max	APHA 23rd edition: 6630 C	0.4	<0.005
4	Alachlor	µg/l, Max	APHA 23rd edition: 6630 C	20	<0.01
5	Atrazine	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01
6	Aldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	<0.01
8	Alpha HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.01	<0.01
9	Beta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	<0.01
10	Delta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	<0.01
11	Butachlor	µg/l, Max	APHA 23rd edition: 6630 C	125.0	<0.01
12	Chloropyrifos	µg/l, Max	APHA 23rd edition: 6630 C	30.0	<0.01
13	2,4-Dichlorophenoxyacetic acid	µg/l, Max	APHA 23rd edition: 6630 C	30.0	<0.05
14	p p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
15	p p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
16	p p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
17	o p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
18	o p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
19	o p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
20	Ethion	µg/l, Max	APHA 23rd edition: 6630 C	3.0	<0.01
21	Lindane	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01
22	Isoproturon	µg/l, Max	APHA 23rd edition: 6630 C	9.0	<0.01
23	Malathion	µg/l, Max	APHA 23rd edition: 6630 C	190.0	<0.01
24	Methyl parathion	µg/l, Max	APHA 23rd edition: 6630 C	0.3	<0.01
25	Monocrotophos	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.01
26	Phorate	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01

Reviewed by:

Approved By:



13	Magnesium (as Mg)	mg/l,Max	APHA 3500 Mg B	30	100	11.8
14	Manganese (as Mn)	mg/l,Max	APHA 3500Mn B	0.1	0.3	<0.05
15	Mineral Oil	mg/l,Max	APHA 5520 B	0.5	0.5	ND
16	Nitrate (as NO <sub>3</sub> )	mg/l,Max	APHA 4500 NO <sub>3</sub> <sup>-</sup> E	45	45	0.83
17	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH)	mg/l,Max	APHA 5530 B,D	0.001	0.002	<0.001
18	Selenium (as Se)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3500 Se C	0.01	0.01	<0.005
19	Silver( asAg)	mg/l,Max		0.1	0.1	<0.1
20	Sulphate (as SO <sub>4</sub> )	mg/l,Max	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E	200	400	15.8
21	Sulphide (as H <sub>2</sub> S)	mg/l,Max	0.05	0.05	0.05	ND
22	Alkalinity	mg/l,Max	APHA 2320 B	200	600	95
23	Total Hardness (as CaCO <sub>3</sub> )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2340 C	200	600	150
24	Zinc (as Zn)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	5	15	0.27
1	Chromium (as Cr <sup>+6</sup> )	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
2	Cadmium as( Cd)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	0.003	0.003	<0.003
3	Cyanide as (CN <sup>-</sup> )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 4500 CN <sup>-</sup> C,D	0.05	0.05	<0.01
4	Lead as( Pb)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 3111 B	0.1	0.1	<0.1
5	Mercury as (Hg)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	0.001	0.001	<0.001
6	Nickel (Ni)	mg/l,Max	IS 5185 (Part-22)	0.02	0.02	<0.02
7	Arsenic as (As)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3114 B	0.01	0.01	<0.005
8	Polychlorinated biphenyls	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 :6440 B	0.0005	0.0005	ND
9	Polycyclic aromatic hydrocarbons (PAH)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 :6440 B	0.0001	0.0001	ND
10	Total Chromium	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
11	Bromoform	mg/l,Max	APHA 6232	0.1	0.1	ND
12	Dibromochloromethane	mg/l,Max	APHA 6232	0.1	0.1	ND
13	Bromodichloromethane	mg/l,Max	APHA 6232	0.06	0.06	ND
14	Chloroform	mg/l,Max	APHA 6232	0.2	0.2	ND
15	Molybdenum (Mo)	mg/l,Max	IS 3025 (Part 2)	0.07	0.07	<0.07
<b>Bacteriological Parameter</b>						
1	Total Coliform	MPN/100 ml	APHA 23 <sup>rd</sup> Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample		ABSENT



## TEST REPORT

Test Report No: ENVLAB/25-26/TR- 00711

Date: 05.04.2025

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Ground Water	Date of Sampling	:	25.03.2025
			Sample Received on	:	26.03.2025
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	GW-1	Sampling Location	:	GW-1: Borewell-2
Sample Condition	:	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	26.03.2025	Test Completed on	:	31.03.2025

Sl. No.	Parameter	Unit	TEST METHOD	Standard as per IS -10500:2012 Amended on 2015 & 2018		GW1
				Acceptable Limit	Permissible Limit	
Physical Parameter						
1	Colour	Hazen,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2120 B, C	5	15	<5
2	Odour	--	APHA 23 <sup>rd</sup> Ed,2017 : 2120 B	Agreeable	Agreeable	Agreeable
3	pH at 25°C	--	APHA 23 <sup>rd</sup> Ed,2017 : 4500H <sup>+</sup> B	6.5-8.5	6.5-8.5	7.36
4	Taste	--	APHA 23 <sup>rd</sup> Ed,2017 : 2160 C	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU,Max	APHA 2130 B	1	5	1.2
6	Dissolved Solids	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2540 C	500	2000	348
CHEMICAL PARAMETER						
1	Aluminium as( Al)	mg/l,Max	APHA 3500Al B	0.03	0.2	<0.03
2	Ammonical Nitrogen(NH <sub>3</sub> .N)	mg/l,Max	APHA 4500 NH <sub>3</sub> .C	0.5	0.5	<0.5
3	Anionic Detergents (as MBAS)	mg/l,Max	APHA 5540 C	0.2	1.0	ND
4	Barium(Ba)	mg/l,Max	APFA 3111,B	0.7	0.7	<0.5
5	Boron (as B)	mg/l,Max	APHA 4500 B,B	0.5	1.0	<0.1
6	Calcium (as Ca )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 3500Ca B	75	200	39.6
7	Chloramines (as Cl <sub>2</sub> )	mg/l,Max	APHA 4500 -Cl G	4.0	4.0	ND
8	Chloride (as Cl )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 4500Cl <sup>-</sup> B	250	1000	40.0
9	Copper (as Cu)	mg/l,Max	APHA 3111 B,C	0.05	1.5	<0.05
10	Fluoride (as F)	mg/l,Max	APHA 4500 F,C	1.0	1.5	<0.1
11	Residual, free Chlorine	mg/l,Min	APHA 4500 Cl B	0.2	1.0	ND
12	Iron (as Fe)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 3111, B	1.0	1.0	0.36



13	Magnesium (as Mg)	mg/l,Max	APHA 3500 Mg B	30	100	12.4
14	Manganese (as Mn)	mg/l,Max	APHA 3500Mn B	0.1	0.3	<0.05
15	Mineral Oil	mg/l,Max	APHA 5520 B	0.5	0.5	ND
16	Nitrate (as NO <sub>3</sub> )	mg/l,Max	APHA 4500 NO <sub>3</sub> <sup>-</sup> E	45	45	0.75
17	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH)	mg/l,Max	APHA 5530 B,D	0.001	0.002	<0.001
18	Selenium (as Se)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3500 Se C	0.01	0.01	<0.005
19	Silver( asAg)	mg/l,Max		0.1	0.1	<0.1
20	Sulphate (as SO <sub>4</sub> )	mg/l,Max	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E	200	400	10.6
21	Sulphide (as H <sub>2</sub> S)	mg/l,Max	0.05	0.05	0.05	ND
22	Alkalinity	mg/l,Max	APHA 2320 B	200	600	75
23	Total Hardness (as CaCO <sub>3</sub> )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2340 C	200	600	150
24	Zinc (as Zn)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	5	15	0.22
1	Chromium (as Cr <sup>+6</sup> )	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
2	Cadmium as( Cd)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	0.003	0.003	<0.003
3	Cyanide as (CN <sup>-</sup> )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 4500 CN <sup>-</sup> C,D	0.05	0.05	<0.01
4	Lead as( Pb)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 3111 B	0.1	0.1	<0.1
5	Mercury as (Hg)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	0.001	0.001	<0.001
6	Nickel (Ni)	mg/l,Max	IS 5185 (Part-22)	0.02	0.02	<0.02
7	Arsenic as (As)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3114 B	0.01	0.01	<0.005
8	Polychlorinated biphenyls	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 :6440 B	0.0005	0.0005	ND
9	Polyaromatic hydrocarbons (PAH)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 :6440 B	0.0001	0.0001	ND
10	Total Chromium	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
11	Bromoform	mg/l,Max	APHA 6232	0.1	0.1	ND
12	Dibromochloromethane	mg/l,Max	APHA 6232	0.1	0.1	ND
13	Bromodichloromethane	mg/l,Max	APHA 6232	0.06	0.06	ND
14	Chloroform	mg/l,Max	APHA 6232	0.2	0.2	ND
15	Molybdenum (Mo)	mg/l,Max	IS 3025 (Part 2)	0.07	0.07	<0.07
<b>Bacteriological Parameter</b>						
1	Total Coliform	MPN/100 ml	APHA 23 <sup>rd</sup> Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample		ABSENT



PESTICIDES					
1	Endosulfan à	µg/l,Max	APHA 23rd edition: 6630 C	0.4	<0.005
2	Endosulfan B	µg/l,Max	APHA 23rd edition: 6630 C	0.4	<0.005
3	Endosulfan sulphate	µg/l,Max	APHA 23rd edition: 6630 C	0.4	<0.005
4	Alachlor	µg/l, Max	APHA 23rd edition: 6630 C	20	<0.01
5	Atrazine	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01
6	Aldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	<0.01
8	Alpha HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.01	<0.01
9	Beta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	<0.01
10	Delta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	<0.01
11	Butachlor	µg/l, Max	APHA 23rd edition: 6630 C	125.0	<0.01
12	Chloropyrifos	µg/l, Max	APHA 23rd edition: 6630 C	30.0	<0.01
13	2,4-Dichlorophenoxyacetic acid	µg/l, Max	APHA 23rd edition: 6630 C	30.0	<0.05
14	p p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
15	p p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
16	p p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
17	o p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
18	o p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
19	o p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
20	Ethion	µg/l, Max	APHA 23rd edition: 6630 C	3.0	<0.01
21	Lindane	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01
22	Isoproturon	µg/l, Max	APHA 23rd edition: 6630 C	9.0	<0.01
23	Malathion	µg/l, Max	APHA 23rd edition: 6630 C	190.0	<0.01
24	Methyl parathion	µg/l, Max	APHA 23rd edition: 6630 C	0.3	<0.01
25	Monocrotophos	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.01
26	Phorate	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01

Reviewed by:

Approved By



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ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-12147

Date: 06.11.2024

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Ground Water	Date of Sampling	:	30.10.2024
			Sample Received on	:	31.10.2024
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	GW-1	Sampling Location	:	GW-1: Village Baudpur
Sample Condition	:	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	31.10.2024	Test Completed on	:	05.11.2024

Sl. No.	Parameter	Unit	TEST METHOD	Standard as per IS -10500:2012 Amended on 2015 & 2018		GW1
				Acceptable Limit	Permissible Limit	
Physical Parameter						
1	Colour	Hazen,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2120 B, C	5	15	<5
2	Odour	--	APHA 23 <sup>rd</sup> Ed,2017 : 2120 B	Agreeable	Agreeable	Agreeable
3	pH at 25°C	--	APHA 23 <sup>rd</sup> Ed,2017 : 4500H <sup>+</sup> B	6.5-8.5	6.5-8.5	7.18
4	Taste	--	APHA 23 <sup>rd</sup> Ed,2017 : 2160 C	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU,Max	APHA 2130 B	1	5	0.8
6	Dissolved Solids	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2540 C	500	2000	374
CHEMICAL PARAMETER						
1	Aluminium as( Al)	mg/l,Max	APHA 3500Al B	0.03	0.2	<0.03
2	Ammonical Nitrogen(NH <sub>3</sub> N)	mg/l,Max	APHA 4500 NH <sub>3</sub> C	0.5	0.5	<0.5
3	Anionic Detergents (as MBAS)	mg/l,Max	APHA 5540 C	0.2	1.0	ND
4	Barium(Ba)	mg/l,Max	APFA 3111,B	0.7	0.7	<0.5
5	Boron (as B)	mg/l,Max	APHA 4500 B,B	0.5	1.0	<0.1
6	Calcium (as Ca )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 3500Ca B	75	200	40.8
7	Chloramines (as Cl <sub>2</sub> )	mg/l,Max	APHA 4500 -Cl G	4.0	4.0	ND
8	Chloride (as Cl )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 4500Cl B	250	1000	30.0
9	Copper (as Cu)	mg/l,Max	APHA 3111 B,C	0.05	1.5	<0.05
10	Fluoride (as F)	mg/l,Max	APHA 4500 F,C	1.0	1.5	<0.1
11	Residual, free Chlorine	mg/l,Min	APHA 4500 Cl B	0.2	1.0	ND
12	Iron (as Fe)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 3111, B	1.0	1.0	0.21



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13	Magnesium (as Mg)	mg/l,Max	APHA 3500 Mg B	30	100	16.1
14	Manganese (as Mn)	mg/l,Max	APHA 3500Mn B	0.1	0.3	<0.05
15	Mineral Oil	mg/l,Max	APHA 5520 B	0.5	0.5	ND
16	Nitrate (as NO <sub>3</sub> )	mg/l,Max	APHA 4500 NO <sub>3</sub> <sup>-</sup> E	45	45	0.79
17	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH)	mg/l,Max	APHA 5530 B,D	0.001	0.002	<0.001
18	Selenium (as Se)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3500 Se C	0.01	0.01	<0.005
19	Silver( asAg)	mg/l,Max		0.1	0.1	<0.1
20	Sulphate (as SO <sub>4</sub> )	mg/l,Max	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E	200	400	12.9
21	Sulphide (as H <sub>2</sub> S)	mg/l,Max	0.05	0.05	0.05	ND
22	Alkalinity	mg/l,Max	APHA 2320 B	200	600	125
23	Total Hardness (as CaCO <sub>3</sub> )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 2340 C	200	600	168
24	Zinc (as Zn)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	5	15	0.24
1	Chromium (as Cr <sup>+6</sup> )	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
2	Cadmium as( Cd)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	0.003	0.003	<0.003
3	Cyanide as (CN <sup>-</sup> )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 4500 CN <sup>-</sup> C,D	0.05	0.05	<0.01
4	Lead as( Pb)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	0.1	0.1	<0.1
5	Mercury as (Hg)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	0.001	0.001	<0.001
6	Nickel (Ni)	mg/l,Max	IS 5185 (Part-22)	0.02	0.02	<0.02
7	Arsenic as (As)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3114 B	0.01	0.01	<0.005
8	Polychlorinated biphenyls	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 6440 B	0.0005	0.0005	ND
9	Polyaromatic hydrocarbons (PAH)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 6440 B	0.0001	0.0001	ND
10	Total Chromium	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
11	Bromoform	mg/l,Max	APHA 6232	0.1	0.1	ND
12	Dibromochloromethane	mg/l,Max	APHA 6232	0.1	0.1	ND
13	Bromodichloromethane	mg/l,Max	APHA 6232	0.06	0.06	ND
14	Chloroform	mg/l,Max	APHA 6232	0.2	0.2	ND
15	Molybdenum (Mo)	mg/l,Max	IS 3025 (Part 2)	0.07	0.07	<0.07
<b>Bacteriological Parameter</b>						
1	Total Coliform	MPN/100 ml	APHA 23 <sup>rd</sup> Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample		ABSENT





# Visiontek Consultancy Services Pvt. Ltd.

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PESTICIDES					
1	Endosulfan a	µg/l, Max	APHA 23rd edition: 6630 C	0.4	<0.005
2	Endosulfan B	µg/l, Max	APHA 23rd edition: 6630 C	0.4	<0.005
3	Endosulfan sulphate	µg/l, Max	APHA 23rd edition: 6630 C	0.4	<0.005
4	Alachlor	µg/l, Max	APHA 23rd edition: 6630 C	20	<0.01
5	Atrazine	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01
6	Aldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	<0.01
8	Alpha HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.01	<0.01
9	Beta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	<0.01
10	Delta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	<0.01
11	Butachlor	µg/l, Max	APHA 23rd edition: 6630 C	125.0	<0.01
12	Chloropyrifos	µg/l, Max	APHA 23rd edition: 6630 C	30.0	<0.01
13	2,4-Dichlorophenoxyacetic acid	µg/l, Max	APHA 23rd edition: 6630 C	30.0	<0.05
14	p p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
15	p p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
16	p p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
17	o p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
18	o p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
19	o p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
20	Ethion	µg/l, Max	APHA 23rd edition: 6630 C	3.0	<0.01
21	Lindane	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01
22	Isoproturon	µg/l, Max	APHA 23rd edition: 6630 C	9.0	<0.01
23	Malathion	µg/l, Max	APHA 23rd edition: 6630 C	190.0	<0.01
24	Methyl parathion	µg/l, Max	APHA 23rd edition: 6630 C	0.3	<0.01
25	Monocrotophos	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.01
26	Phorate	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01





# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

## TEST REPORT

Test Report No: ENVLAB/24-25/TR- 14566

Date: 05.01.2025

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Ground Water	Date of Sampling	:	26.12.2024
			Sample Received on	:	27.12.2024
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	GW-1	Sampling Location	:	GW-1: Borewell at Village Randia
Sample Condition	:	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	27.12.2024	Test Completed on	:	31.12.2024

Sl. No.	Parameter	Unit	TEST METHOD	Standard as per IS -10500:2012 Amended on 2015 & 2018		GW1
				Acceptable Limit	Permissible Limit	
Physical Parameter						
1	Colour	Hazen,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2120 B, C	5	15	<5
2	Odour	--	APHA 23 <sup>rd</sup> Ed,2017 :2120 B	Agreeable	Agreeable	Agreeable
3	pH at 25 <sup>o</sup> C	--	APHA 23 <sup>rd</sup> Ed,2017 : 4500H <sup>+</sup> B	6.5-8.5	6.5-8.5	7.28
4	Taste	--	APHA 23 <sup>rd</sup> Ed,2017 : 2160 C	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU,Max	APHA 2130 B	1	5	0.9
6	Dissolved Solids	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2540 C	500	2000	381
CHEMICAL PARAMETER						
1	Aluminium as( Al)	mg/l,Max	APHA 3500Al B	0.03	0.2	<0.03
2	Ammonical Nitrogen(NH <sub>3</sub> ,N)	mg/l,Max	APHA 4500 NH <sub>3</sub> C	0.5	0.5	<0.5
3	Anionic Detergents (as MBAS)	mg/l,Max	APHA 5540 C	0.2	1.0	ND
4	Barium(Ba)	mg/l,Max	APFA 3111, B	0.7	0.7	<0.5
5	Boron (as B)	mg/l,Max	APHA 4500 B, B	0.5	1.0	<0.1
6	Calcium (as Ca )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 3500Ca B	75	200	44.1
7	Chloramines (as Cl <sub>2</sub> )	mg/l,Max	APHA 4500 -Cl G	4.0	4.0	ND
8	Chloride (as Cl )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 4500Cl B	250	1000	35.0
9	Copper (as Cu)	mg/l,Max	APHA 3111 B, C	0.05	1.5	<0.05
10	Fluoride (as F)	mg/l,Max	APHA 4500 F, C	1.0	1.5	<0.1
11	Residual, free Chlorine	mg/l,Min	APHA 4500 Cl B	0.2	1.0	ND
12	Iron (as Fe)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 3111, B	1.0	1.0	0.30



13	Magnesium (as Mg)	mg/l,Max	APHA 3500 Mg B	30	100	10.2
14	Manganese (as Mn)	mg/l,Max	APHA 3500Mn B	0.1	0.3	<0.05
15	Mineral Oil	mg/l,Max	APHA 5520 B	0.5	0.5	ND
16	Nitrate (as NO <sub>3</sub> )	mg/l,Max	APHA 4500 NO <sub>3</sub> <sup>-</sup> E	45	45	0.89
17	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH)	mg/l,Max	APHA 5530 B,D	0.001	0.002	<0.001
18	Selenium (as Se)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3500 Se C	0.01	0.01	<0.005
19	Silver( asAg)	mg/l,Max		0.1	0.1	<0.1
20	Sulphate (as SO <sub>4</sub> )	mg/l,Max	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E	200	400	14.2
21	Sulphide (as H <sub>2</sub> S)	mg/l,Max	0.05	0.05	0.05	ND
22	Alkalinity	mg/l,Max	APHA 2320 B	200	600	105
23	Total Hardness (as CaCO <sub>3</sub> )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 : 2340 C	200	600	142
24	Zinc (as Zn)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	5	15	0.23
1	Chromium (as Cr <sup>+6</sup> )	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
2	Cadmium as( Cd)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	0.003	0.003	<0.003
3	Cyanide as (CN <sup>-</sup> )	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 4500 CN <sup>-</sup> C,D	0.05	0.05	<0.01
4	Lead as( Pb)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 3111 B	0.1	0.1	<0.1
5	Mercury as (Hg)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3111 B	0.001	0.001	<0.001
6	Nickel (Ni)	mg/l,Max	IS 5185 (Part-22)	0.02	0.02	<0.02
7	Arsenic as (As)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017: 3114 B	0.01	0.01	<0.005
8	Polychlorinated biphenyls	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 :6440 B	0.0005	0.0005	ND
9	Polycyclic aromatic hydrocarbons (PAH)	mg/l,Max	APHA 23 <sup>rd</sup> Ed,2017 :6440 B	0.0001	0.0001	ND
10	Total Chromium	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
11	Bromoform	mg/l,Max	APHA 6232	0.1	0.1	ND
12	Dibromochloromethane	mg/l,Max	APHA 6232	0.1	0.1	ND
13	Bromodichloromethane	mg/l,Max	APHA 6232	0.06	0.06	ND
14	Chloroform	mg/l,Max	APHA 6232	0.2	0.2	ND
15	Molybdenum (Mo)	mg/l,Max	IS 3025 (Part 2)	0.07	0.07	<0.07
<b>Bacteriological Parameter</b>						
1	Total Coliform	MPN/100 ml	APHA 23 <sup>rd</sup> Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample		ABSENT





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PESTICIDES					
1	Endosulfan A	µg/l, Max	APHA 23rd edition: 6630 C	0.4	<0.005
2	Endosulfan B	µg/l, Max	APHA 23rd edition: 6630 C	0.4	<0.005
3	Endosulfan sulphate	µg/l, Max	APHA 23rd edition: 6630 C	0.4	<0.005
4	Alachlor	µg/l, Max	APHA 23rd edition: 6630 C	20	<0.01
5	Atrazine	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01
6	Aldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	<0.01
8	Alpha HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.01	<0.01
9	Beta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	<0.01
10	Delta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	<0.01
11	Butachlor	µg/l, Max	APHA 23rd edition: 6630 C	125.0	<0.01
12	Chloropyrifos	µg/l, Max	APHA 23rd edition: 6630 C	30.0	<0.01
13	2,4-Dichlorophenoxyacetic acid	µg/l, Max	APHA 23rd edition: 6630 C	30.0	<0.05
14	p p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
15	p p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
16	p p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
17	o p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
18	o p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
19	o p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.05
20	Ethion	µg/l, Max	APHA 23rd edition: 6630 C	3.0	<0.01
21	Lindane	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01
22	Isoproturon	µg/l, Max	APHA 23rd edition: 6630 C	9.0	<0.01
23	Malathion	µg/l, Max	APHA 23rd edition: 6630 C	190.0	<0.01
24	Methyl parathion	µg/l, Max	APHA 23rd edition: 6630 C	0.3	<0.01
25	Monocrotophos	µg/l, Max	APHA 23rd edition: 6630 C	1.0	<0.01
26	Phorate	µg/l, Max	APHA 23rd edition: 6630 C	2.0	<0.01

Reviewed by:

Approved By:



# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

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Annexure-14

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-12141

Date: 06.11.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak	Date of Sampling	:	30.10.2024
Sample Description	:	NOISE	Sample Received on	:	31.10.2024
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	67.3	61.0
S-2	NEAR ADMINISTRATIVE BUILDING	62.2	45.3
S-3	NEAR AGGLOMERATION PLANT	66.9	62.8
S-4	NEAR AUTO GARAGE	71.1	61.7
S-5	NEAR BRIQUETTE STORAGE AREA	72.8	62.5
S-6	NEAR CENTRAL STORE	66.5	47.9
S-7	NEAR DRYER PLANT	73.0	65.8
S-8	NEAR FACOR COLONY	53.6	44.1
S-9	NEAR FINISHED PRODUCT HANDLING	72.1	62.9
S-10	NEAR GCP	73.2	67.6
S-11	NEAR MAIN GATE	68.9	56.3
S-12	NEAR MATERIAL RECOVERY PLANT	71.4	63.8
S-13	NEAR MRSS SWITCH YARD	66.2	59.7
S-14	NEAR STORAGE AREA	51.8	43.5
S-15	NEAR VEHICLE PARKING AREA	62.6	44.1
S-16	NEAR WATER COOLING TOWER AREA	73.5	66.2
S-17	OHC	60.4	51.4
Limit		75.0	70.0





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## TEST REPORT

Test Report No: ENVLAB/24-25/TR-13849

Date: 06.12.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak	Date of Sampling	:	15.11.2024
Sample Description	:	NOISE	Sample Received on	:	16.11.2024
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	66.9	61.5
S-2	NEAR ADMINISTRATIVE BUILDING	63.0	44.8
S-3	NEAR AGGLOMERATION PLANT	67.2	63.6
S-4	NEAR AUTO GARAGE	71.8	62.0
S-5	NEAR BRIQUETTE STORAGE AREA	72.5	62.1
S-6	NEAR CENTRAL STORE	66.9	48.1
S-7	NEAR DRYER PLANT	73.5	64.9
S-8	NEAR FACOR COLONY	54.2	43.6
S-9	NEAR FINISHED PRODUCT HANDLING	71.9	63.3
S-10	NEAR GCP	72.9	68.2
S-11	NEAR MAIN GATE	69.6	55.9
S-12	NEAR MATERIAL RECOVERY PLANT	70.8	64.0
S-13	NEAR MRSS SWITCH YARD	65.3	58.9
S-14	NEAR STORAGE AREA	52.1	42.7
S-15	NEAR VEHICLE PARKING AREA	63.3	45.1
S-16	NEAR WATER COOLING TOWER AREA	73.9	65.8
S-17	OHC	61.2	50.9
Limit		75.0	70.0







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ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-14568

Date: 05.01.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak	Date of Sampling	:	26.12.2024
Sample Description	:	NOISE	Sample Received on	:	27.12.2024
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	67.3	62.0
S-2	NEAR ADMINISTRATIVE BUILDING	63.8	44.6
S-3	NEAR AGGLOMERATION PLANT	67.0	62.9
S-4	NEAR AUTO GARAGE	71.5	62.6
S-5	NEAR BRIQUETTE STORAGE AREA	72.9	62.8
S-6	NEAR CENTRAL STORE	68.1	47.6
S-7	NEAR DRYER PLANT	73.2	65.1
S-8	NEAR FACOR COLONY	54.9	43.2
S-9	NEAR FINISHED PRODUCT HANDLING	72.2	63.0
S-10	NEAR GCP	73.1	68.6
S-11	NEAR MAIN GATE	69.9	56.1
S-12	NEAR MATERIAL RECOVERY PLANT	71.4	64.7
S-13	NEAR MRSS SWITCH YARD	65.9	58.3
S-14	NEAR STORAGE AREA	52.7	43.0
S-15	NEAR VEHICLE PARKING AREA	63.7	44.9
S-16	NEAR WATER COOLING TOWER AREA	74.1	66.2
S-17	OHC	61.7	51.3
Limit		75.0	70.0





# Visiontek Consultancy Services Pvt. Ltd.

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ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-15823

Date: 05.02.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak	Date of Sampling	:	24.01.2025
Sample Description	:	NOISE	Sample Received on	:	25.01.2025
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	66.8	62.3
S-2	NEAR ADMINISTRATIVE BUILDING	64.1	44.1
S-3	NEAR AGGLOMERATION PLANT	67.5	63.2
S-4	NEAR AUTO GARAGE	72.0	61.8
S-5	NEAR BRIQUETTE STORAGE AREA	72.5	62.2
S-6	NEAR CENTRAL STORE	67.5	47.9
S-7	NEAR DRYER PLANT	73.1	65.4
S-8	NEAR FACOR COLONY	53.8	44.1
S-9	NEAR FINISHED PRODUCT HANDLING	73.1	63.5
S-10	NEAR GCP	72.9	67.9
S-11	NEAR MAIN GATE	69.5	55.3
S-12	NEAR MATERIAL RECOVERY PLANT	71.1	64.2
S-13	NEAR MRSS SWITCH YARD	66.3	58.8
S-14	NEAR STORAGE AREA	53.6	42.7
S-15	NEAR VEHICLE PARKING AREA	64.2	45.1
S-16	NEAR WATER COOLING TOWER AREA	74.4	65.7
S-17	OHC	62.2	52.0
Limit		75.0	70.0





# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-17525

Date: 05.03.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak	Date of Sampling	:	20.02.2025
Sample Description	:	NOISE	Sample Received on	:	21.02.2025
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	66.3	62.8
S-2	NEAR ADMINISTRATIVE BUILDING	65.1	44.9
S-3	NEAR AGGLOMERATION PLANT	68.2	64.1
S-4	NEAR AUTO GARAGE	72.2	62.0
S-5	NEAR BRIQUETTE STORAGE AREA	71.9	62.5
S-6	NEAR CENTRAL STORE	68.5	48.6
S-7	NEAR DRYER PLANT	73.2	66.3
S-8	NEAR FACOR COLONY	54.1	44.4
S-9	NEAR FINISHED PRODUCT HANDLING	72.7	63.9
S-10	NEAR GCP	73.2	68.1
S-11	NEAR MAIN GATE	69.8	55.5
S-12	NEAR MATERIAL RECOVERY PLANT	71.0	64.0
S-13	NEAR MRSS SWITCH YARD	65.9	58.5
S-14	NEAR STORAGE AREA	54.2	43.1
S-15	NEAR VEHICLE PARKING AREA	64.6	45.6
S-16	NEAR WATER COOLING TOWER AREA	74.1	66.2
S-17	OHC	62.5	52.4
Limit		75.0	70.0





## TEST REPORT

Test Report No: ENVLAB/25-26/TR-00702

Date: 05.04.2025

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak	Date of Sampling	:	25.03.2025
Sample Description	:	NOISE	Sample Received on	:	26.03.2025
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	66.7	63.6
S-2	NEAR ADMINISTRATIVE BUILDING	64.8	44.2
S-3	NEAR AGGLOMERATION PLANT	69.0	64.7
S-4	NEAR AUTO GARAGE	71.7	62.3
S-5	NEAR BRIQUETTE STORAGE AREA	73.2	63.1
S-6	NEAR CENTRAL STORE	69.2	49.5
S-7	NEAR DRYER PLANT	73.4	64.2
S-8	NEAR FACOR COLONY	54.4	44.1
S-9	NEAR FINISHED PRODUCT HANDLING	73.4	64.4
S-10	NEAR GCP	73.8	68.6
S-11	NEAR MAIN GATE	70.6	55.6
S-12	NEAR MATERIAL RECOVERY PLANT	71.2	64.3
S-13	NEAR MRSS SWITCH YARD	66.3	59.2
S-14	NEAR STORAGE AREA	54.5	42.7
S-15	NEAR VEHICLE PARKING AREA	65.2	44.8
S-16	NEAR WATER COOLING TOWER AREA	74.4	65.3
S-17	OHC	62.9	52.9
Limit		75.0	70.0



# Decarbonization Program- FACOR (Charge Chrome Plant)



# Background

**FACOR has 3 Units-**

- **Mines-** FACOR has 2 open pit running mines and 1 underground mines in the Odisha state. It contributes ~ 8% of Indian chrome ore production.
- **M/s Facor Power Limited-** A 100 MW coal based thermal Captive Power Plant in Randia, Odisha. Power generated in this plant is used to produce Ferro Chorme in the plant.
- **Charge Chrome Plant-** High Carbon Ferrochrome / Charge Chrome are produced in the plant in Submerged Electric Arc Furnace.

Sl. No.	Primary energy source
1	Coal in boilers (FPL)
2	FO (CCP)
3	HSD (CCP + Mine + FPL)
4	Coke
5	Charge Chrome (CCP)
6	Electricity

Sl. No.	Planned mitigation measures for CO2 reduction	Capacity
1	Installation of Solar (MW)	145



# Production & Key Assumptions- Charge Chrome Plant

SN	FACOR Unit	Product	Current Capacity	Production Achieved (FY 2025)	Proposed Capacity (Post Expansion)
1	Charge Chrome Plant	Ferro Chrome (in MT)	145000	82,748	445000

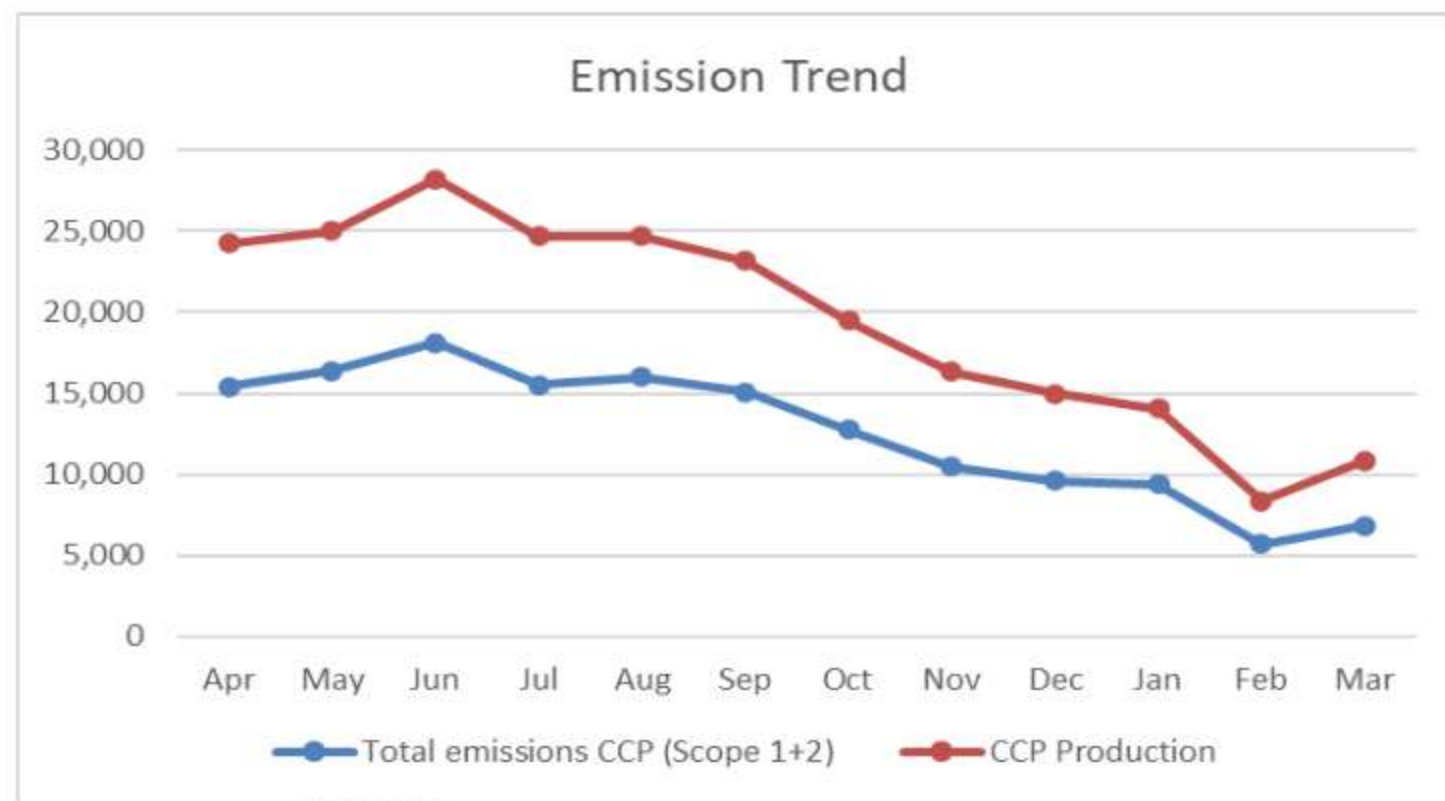
**Key Assumptions:**

- 1. Power from the 100 MW power plant will be used in the existing plant of capacity 145 KTPA & RE power will be sourced for the 300 KTPA expansion unit.

# Current Scenario

Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Total emissions CCP (Scope 1+2)	15,396	16,395	18,103	15,508	15,979	15,080	12,754	10,463	9,603	9,393	5,710	6,826	151,210
CCP Production	8870	8593	10070	9156	8672	8102	6743	5877	5366	4645	2630	4024	82,748
GHG intensity	1.7357	1.9079	1.7977	1.6938	1.8426	1.8613	1.8914	1.7803	1.7896	2.0222	2.171102	1.6963	1.8274

**GHG intensity= 1.82**



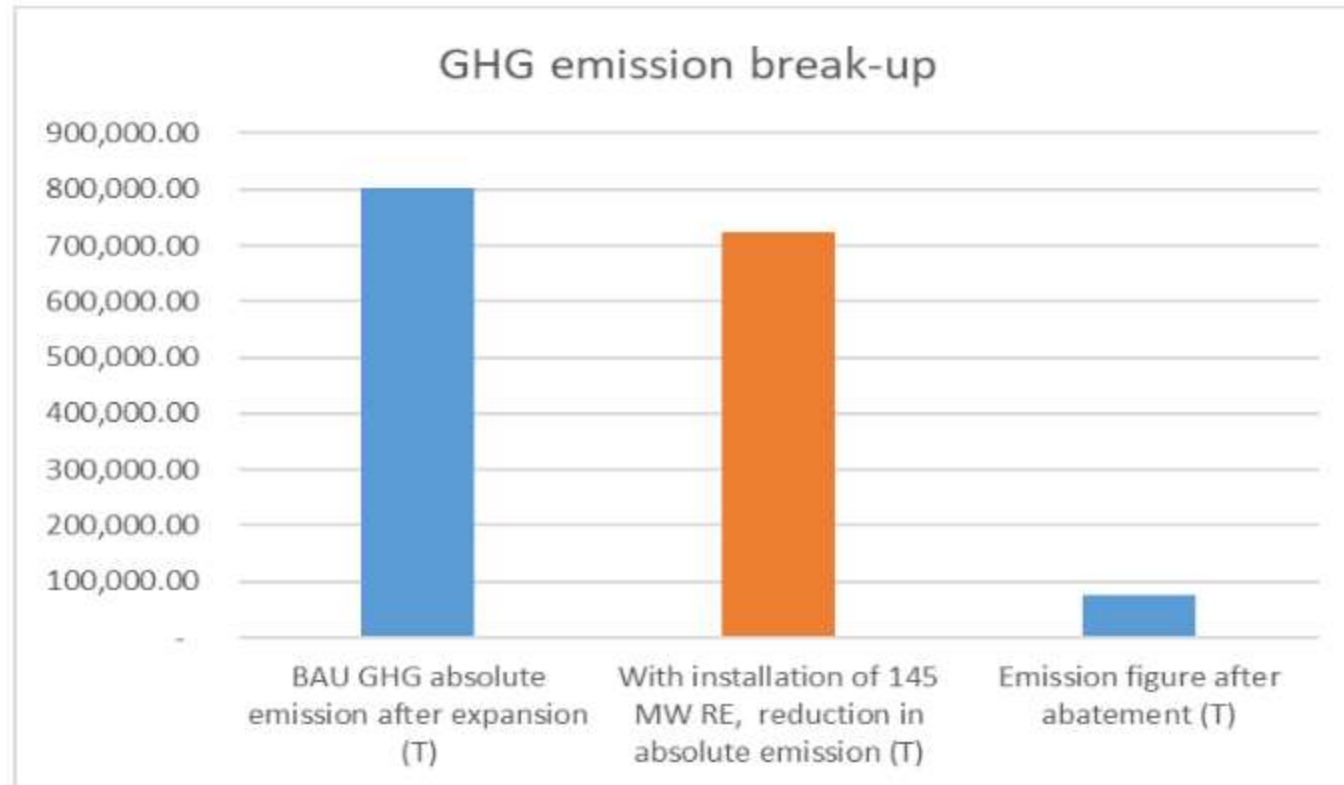
# Way Forward

## Assumption 1

Capacity after expansion(Mt)	445000
Highest power requirement (MW)	213
BAU GHG absolute emission (T)	801,000.00

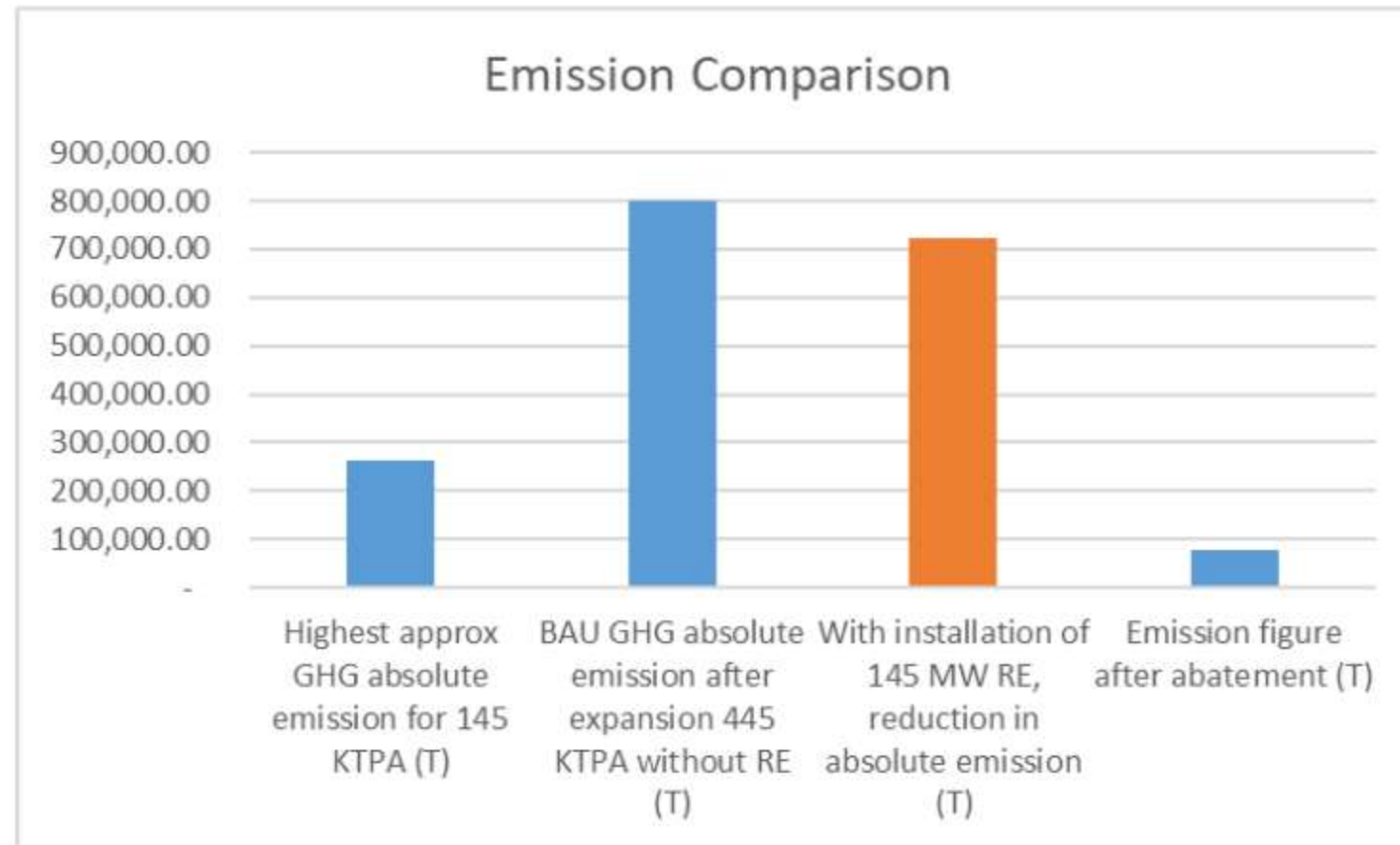
## Assumption-2

BAU GHG absolute emission after expansion (T)	801,000.00
If we install 145 MW RE, reduction in absolute emission (T)	724,469.00
<b>Emission figure after abatement (T)</b>	<b>76,531.00</b>





# Emission Comparison





# THANKS!



<https://www.facorgroup.in/>



Scan & Visit

## Environmental Policy

### **Purpose**

Vedanta Limited ("Vedanta") is committed to achieving excellence in environmental management. Our goal is to minimise environmental impacts of our business across the entire lifecycle by implementing pollution-prevention and natural resource conservation actions either on site or off site.

This policy is forward looking and sets a vision for businesses across the Vedanta group.

### **Scope**

This policy is applicable to all Vedanta Limited companies, including subsidiaries, joint ventures, and acquisitions, managed sites, licensees, outsourcing partners, corporate offices, and research facilities. This policy is also applicable to all Vedanta Limited employees, contractor employees, business partners, suppliers, and others with whom Vedanta does business.

In addition, this policy is applicable throughout the operational lifecycle of the projects and mines, covering stages from exploration and planning to evaluation, operation, and closure. Furthermore, it extends to activities in our upstream and downstream value chain, limited to distribution, logistics, and sale of products and services to the customer.

### **Objectives of the Environmental Policy**

Vedanta will strive to:

- Comply with applicable national, regional, and local environmental regulations and statutory obligations. In the absence (or lack) of appropriate legislation, industry best practices and applicable international standards will be used.
- Develop, implement, and improve environmental management systems, consistent with world-class standards.
- Set targets and objectives to avoid, reduce or mitigate Environmental impacts on people and planet.
- Consistently assess our environmental risks, manage our impacts, take appropriate mitigation and adaptation measures, and communicate our environmental strategy to our stakeholders.
- Incorporate appropriate environmental criteria for all business decisions including the planning, operationalization, and closure of the projects.
- Conduct regular environmental review and due diligence of the projects (including for mergers & acquisitions) to identify, prioritize, assess, and take effective actions for mitigating the potential environmental risks.
- Drive continuous environmental performance improvement by implementing appropriate available practices and technology.
- Conserve natural resources by adopting environment-friendly and energy-efficient technologies through process improvements.
- Apply mitigation hierarchy (avoid, reduce, reuse, recycle, disposal) to environmental impacts and adopt the principles of circular economy.
- Manage impacts related to energy, carbon emissions, waste, nature, air emissions, land-use & biodiversity, and water.
- Raise awareness of internal and external stakeholders including business partners, suppliers, and other stakeholders on adoption of practices in alignment with our policies, thereby fostering a collective commitment to managing environmental impacts.
- Provide appropriate training to all employees and emphasize the importance of minimising risks to environment, while also understanding the impacts of their work activities on the environment.
- Communicate with all our stakeholders on the progress and performance of Environment management.
- Review the performance against the policy on a periodic basis to ensure management of environmental



impacts as per our objectives including the sharing of good practices throughout the organization and stakeholders

### **Responsibility & Review**

This policy is part of the Vedanta Sustainability Framework and each Vedanta business shall implement this policy. The Group CEO will be accountable for controlling and setting the policy, and the Group Executive Committee are responsible for the full implementation of the policy and associated standards. The Board ESG Committee will review this policy annually and recommend appropriate revisions to the Board as may deem necessary.

Related additional policies: Energy & Climate Change Policy, Biodiversity Policy, Water Policy, Tailing Management Policy

Signed by:



Sunil Duggal

Group CEO, Vedanta

Limited Date: 27<sup>th</sup> July

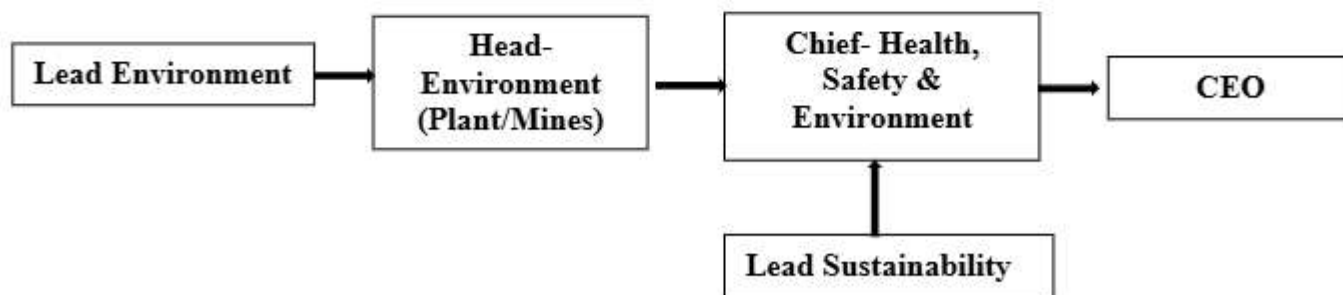
2023

### ENVIRONMENT MANAGEMENT CELL IN M/S FERRO ALLOYS CORPORATION LTD.

#### A. Details of Persons available in the Cell:

Sl. No.	Name of the Persons	Designation	Duty assigned	Mob. No / Email	Qualification
01	Kruti Sundar Mohapatra	Chief- HSE	Health, Safety & Environment	7894405442 krutisunder.mohapatra@vedanta.co.in	MBA in Sustainability
02	Biswabhusan Panigrahi	Head-Environment (Plant)	Env. Management & Pollution control	7735738480 Biswabhusan.Panigrahi@vedanta.co.in	Postgraduate in Environmental Science
03	Susanta Biswal	Head-Geology & Environment (Mines)	Env. Management & Pollution control	9437496738 susanta.biswal@vedanta.co.in	M.Sc., in Geology
04	Somnath Pal	Lead Environment	Env. Management & Pollution control	9064376724 Somnath.Pal@vedanta.co.in	M.Tech., in Environmental Engineering
05	Avik Biswas	Lead Sustainability	ESG Sustainability &	8902791259 Avik.Biswas@vedanta.co.in	Postgraduate Diploma in Forestry Management
06	Nilesh Pratap Singh	Lead Sustainability	ESG Sustainability &	8455002075 nilesh.singh1@vedanta.co.in	Postgraduate Diploma in Sustainability Management

#### B. Reporting system of the Environment Management Cell (Please enclose Organization Chart).







According to the police, impact of the crash was very severe and two bags of the car were deployed. The person sitting on the front seat was possibly thrown out of the car and he survived the accident. His condition is stated to be serious, police informed.

AD

## Rape

Two persons for allegedly raping a woman and a complaint in Kharavela Nagar. She had come from Cuttack to visit a friend and was sitting near Ram Mandir. She was raped and offered her a place to sit away and allegedly gangraped her by two persons, who is also a security guard.

## Appendix - IV (Rule 8(1)) POSSESSION NOTICE (For Immovable Property)

Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act, 2002) of the said Act, calling upon the borrower to pay the amount due from the date of the receipt of the said notice, is hereby given to the Borrower(s) of the property described herein below, in the Security Interest (Enforcement) Rules, 2002 and the public in general are hereby notified that IDBI Bank Limited for the amount due of the Borrower(s) attention is invited to pay the amount due.

Description of the Immovable Property  
All that piece and parcel of immovable properties situated at Mouza: Bargari, Khata No.: 2414/10426, Plot No.: 1, State of Odisha recorded in the name of Garia, East Land of Ashok Garia, West and machinery attached to the earth or  
Authorised Officer, IDBI Bank Limited

## POSSESSION NOTICE (RULE-8(1)) For Immovable Property

SARFAESI Act, 2002  
As and Enforcement of Security Interest Act, 2002 (SARFAESI Act, 2002) of the said Act, hereinafter calling upon the following within 60 days from the date of receipt of the notice given to the Borrower/Guarantors and hereby below in exercise of power conferred on the date mentioned against below and not to deal with the property and any amount stated below with interest, costs and expenses thereon  
of the section-13 of the Act, in respect

	Liabilities due on the specified date as per Notice	Date of Demand/ Possession Notice
consist of S. Khaira, Plot No.: 002, Area: Khata No.: Dec. Plot Somestead, etc. Mohan	₹30,22,213/- as on 09.03.2022 with further interest, incidental expenses and costs thereon	28.03.2022 / 01.11.2022

Authorised Officer, State Bank of India

DEO B-01 Post at ICMR-NITM Belagavi  
For detailed advertisement please visit the <https://icmrnitm.res.in/careers/> and [www.icmr.nic.in](http://www.icmr.nic.in) websites  
Date: 14.10.2022  
Place: Belagavi  
Sd/-  
Director

## The Indian Express 03.11.22 PUBLIC NOTICE

It is hereby informed to the general public that the Ministry of Environment, Forest and Climate Change, Government of India (MOEF & CC) has granted Environment Clearance (E.C) to the Charge Chrome Plant of M/s Ferro Alloys Corporation Ltd. (FACOR) on dtd. 31.10.2022 vide E.C. Identification No. EC22A008OR193113, for expansion of Ferro Alloys Plant for production of High Carbon Ferro Chrome up to 1,45,000 TPA from two furnace i.e. 1 X 45 MVA & 1 X 33 MVA and 11,800 TPA from the Metal Recovery Plant (MRP) situated at village Randia of Bhadrak District of Odisha. This E.C. is also available in the official portal of Ministry of Environment, Forest and Climate Change, Govt. of India i.e. <http://environmentclearance.nic.in>.

Factory Manager  
M/s. Ferro Alloys Corporation Ltd.  
Charge Chrome Plant, Randia, Bhadrak.



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पुणे विश्व  
Ministry of Education  
Akkulam,

No. NCESS/P&G/0115/11/2022

RECR

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proposes the General Mat. List for

2022-23 session. The going app

downloaded from the website www.

Date of online application form at

Last date for submission of online

Date of Downloading Hall ticket

Date of Entrance Examination

Publication of Merit List/Results

The candidate should send Rs

(with enclosed) on or before 14.11

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044-24422211

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Supervisor (S-4 Grade) (On Fixed Term Contract)	(i) Mecha (ii) Electri (iii) Hult & (On Fixed Term Contract) for PwDD. reserved f
Supervisor (S-10 Grade) (On Fixed Term Contract)	Security Out of the reserved

The details like Gene qualification, selection pr in 'Career Section' of <https://jobapply.in/gre> only through ONLINE submission of application. Any Addendum/Corrigi GRSE website.

For more details visit the website

in the attached and 1. available

FACOR / Bhadrak / Legal / 185 / 2022

Dt. 11.11.2022

To

The Deputy Director General of Forests (C)  
Ministry of Environment, Forest & Climate Change  
Integrated Regional Office, A/3, Chandrasekharpur  
Bhubaneswar - 751023,  
Email: roez.bsr-mef@nic.in

Ref: Environment Clearance Identification No.: EC22A008OR193113, dtd. 31.10.2022

Sub: Submission of Compliance report with respect to General conditions no. X(i), (ii) and (vi) of the Environment Clearance issued for expansion of the Charge Chrome Plant of M/s. Ferro Alloys Corporation Ltd. (FACOR) granted vide EC Identification No.: EC22A008OR193113 on dtd. 31.10.2022.

Dear Sir,

In compliance to the General conditions no. X(i), (ii) and (vi) of the Environment Clearance (Page no.11 of the EC issued for expansion of the Charge Chrome Plant of M/s. Ferro Alloys Corporation Ltd. (FACOR) granted vide EC Identification No.: EC22A008OR193113 on dtd. 31.10.2022 we are submitting herewith the compliance status report for your kind perusal and records as under :

**General Condition – Miscellaneous ( Page no.11 of the EC ):**

Condition No. X(i) : "The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently."

**Compliance status of Condition No.X(i) :**

We have published Public Notice in the English daily newspaper "The Indian Express" in English language and in a Odia daily newspaper namely "The Sakala" in vernacular language i.e Odia on dtd. 03.11.2022 regarding approval of Environment Clearance for the expansion project of Charge Chrome Plant of M/s. Ferro Alloys Corporation Ltd. vide EC Identification No.: EC22A008OR193113, dtd. 31.10.2022. The copy of the said Advertisement clips are enclosed herewith as Annexure-1 Series for your kind reference and records.

Further in compliance to the aforesaid condition, we have also uploaded the copy the said EC in our official company website for public. The URL link of the same is appended below for the purpose of public access :

<https://www.facorgroup.in/wp-content/uploads/2022/11/Environment-Clearance-ccp-2022.pdf>.

Condition No. X(ii) : "The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt."



Page 1 of 2

Ferro Alloys Corporation Limited  
Charge Chrome Plant, D.P. Nagar, Randa - 756135, Dist. Bhadrak, Odisha, India.  
Phone : 06784 240320/240347/240272, Fax : 06784 240626.  
E-mail : facor.corporate@vedanta.co.in | Website : www.facorgroup.in  
CIN : U45201OR1955PLC008400

**Compliance status of Condition No. X(ii) :**

We have submitted the copies of the Environment Clearance dtd. 31.10.2022 to the Heads of the local bodies, Panchayats and relevant Government Offices as per the below mentioned table:

Sl No.	Letter No.	Date	Submitted to	Acknowledged on
01	FACOR / Bhadrak / Legal / 172 / 2022	02.11.2022	Collector, Bhadrak	05.11.2022
02	FACOR / Bhadrak / Legal / 173 / 2022	02.11.2022	Sub-Collector, Bhadrak	05.11.2022
03	FACOR / Bhadrak / Legal / 174 / 2022	02.11.2022	Tahasildar, Bhadrak	05.11.2022
04	FACOR / Bhadrak / Legal / 175 / 2022	02.11.2022	Sarapanch, Randia	07.11.2022
05	FACOR / Bhadrak / Legal / 176 / 2022	02.11.2022	Sarapanch, Olanga	07.11.2022
06	FACOR / Bhadrak / Legal / 177 / 2022	02.11.2022	Sarapanch, Rampur	07.11.2022
07	FACOR / Bhadrak / Legal / 178 / 2022	02.11.2022	Sarapanch, Ramkrishnapur	05.11.2022
08	FACOR / Bhadrak / Legal / 179 / 2022	02.11.2022	Sarapanch, Geltua	07.11.2022
09	FACOR / Bhadrak / Legal / 180 / 2022	02.11.2022	Sarapanch, Baudpur	07.11.2022
10	FACOR / Bhadrak / Legal / 181 / 2022	02.11.2022	OSPCB, Bhubaneswar	04.11.2022
11	FACOR / Bhadrak / Legal / 182 / 2022	02.11.2022	DDM, Baripada	04.11.2022

Copy of acknowledgment of the above letters are enclosed herewith as Annexures-2 series for your records please.

**Condition No. X(vi) :** "The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company."

**Compliance status of Condition No. X(vi) :**

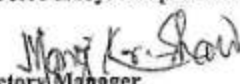
We have submitted the Environment Statement for the financial year 2021-2022 to the office of OSPCB, Bhubaneswar and simultaneously have also uploaded the same in our company website. The URL link of the same is appended below for reference please :

<https://www.facorgroup.in/wp-content/uploads/2022/11/CCP-Environmental-Statement-Apr2021-Mar2022.pdf>

In addition to the above submissions, we do hereby assure your good office that we have already initiated action for compliance of all the Specified Condition as well as General condition of the Environment Clearance dtd. 31.10.2022 issued to M/s. Ferro Alloys Corporation Ltd. Also we will submit compliance status report of the same in the six-monthly compliance report for the period ending from October 2022 to March 2023 within due time.

This is for your kind information and records please.

Thanking you  
Yours faithfully  
For Ferro Alloys Corporation Ltd.

  
Factory Manager  
Charge Chrome Plant

Copy to : Director I.A. Division, Ministry of Environment and Forest, Paryavaran Bhawan, New Delhi.

Page 2 of 2

Ferro Alloys Corporation Limited  
Charge Chrome Plant, D.P. Nagar, Randia - 756135, Dist. Bhadrak, Odisha, India.  
Phone : 06784 240320/240347/240272, Fax : 06784 240626.  
E-mail : [Facor.corporate@vedanta.co.in](mailto:Facor.corporate@vedanta.co.in) | Website : [www.facorgroup.in](http://www.facorgroup.in)  
CIN : [U45201OR1955PLC008400](http://www.facorgroup.in)



## TEST REPORT

Test Report No: ENVLAB/24-25/TR-12134

Date: 06.11.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 30.10.2024
Sample Description	: Ambient Air	Sample Received on	: 31.10.2024
Environment Condition during Sampling	: Atmospheric Temp.: 29 – 33°C Barometric Pressure : 755 mm of Hg	Sampling Procedure	: VCSPL/F-SOP/001, Dt. 04.09.2021
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling Location	: AUTO GARAGE
Test Started on	: 31.10.2024	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550), VOC Sampler
		Sampling done by	: Ashutosh Mohanty
		Test Completed on	: 05.11.2024

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	54.8
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	27.9
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	16.0
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	19.2
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.68
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.9
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.006
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<3.1
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<0.16
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<3.1 ng/m<sup>3</sup>, As <0.16 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.006 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

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

#### TERMS AND CONDITION:-

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- The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations.
- The laboratory's responsibility under this report is limited to: proven willful negligence.

\*\*\* End Report\*\*\*

Reviewed by  


Approved by  




# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-12135

Date: 06.11.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 30.10.2024
Sample Description	: Ambient Air	Sample Received on	: 31.10.2024
Environment Condition during Sampling	: Atmospheric Temp.: 29 – 33°C Barometric Pressure : 755 mm of Hg	Sampling Procedure	: VCSPL/F-SOP/001, Dt. 04.09.2021
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling Location	: MRP
Test Started on	: 31.10.2024	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550), VOC Sampler
		Sampling done by	: Ashutosh Mohanty
		Test Completed on	: 05.11.2024

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	60.4
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	30.5
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	15.6
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	18.3
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.19
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.8
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.006
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<3.1
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<0.16
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub><4 µg/m<sup>3</sup>, NO<sub>x</sub><9 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<3.1 ng/m<sup>3</sup>, As <0.16 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.006 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

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

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- The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations.
- The laboratory's responsibility under this report is limited to: proven willful negligence.

\*\*\* End Report \*\*\*







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## TEST REPORT

Test Report No: ENVLAB/24-25/TR-12136

Date: 06.11.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 30.10.2024
Sample Description	: Ambient Air	Sample Received on	: 31.10.2024
Environment Condition during Sampling	: Atmospheric Temp.: 29 – 33°C Barometric Pressure : 755 mm of Hg	Sampling Procedure	: VCSPL/E-SOP/001, Dt. 04.09.2021
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling Location	: MRSS
Test Started on	: 31.10.2024	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550), VOC Sampler
		Sampling done by	: Ashutosh Mohanty
		Test Completed on	: 05.11.2024

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	63.5
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	32.1
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	16.5
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	21.2
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.077
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.4
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.006
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<3.1
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<0.16
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5
BDL Values: SO <sub>2</sub> < 4 µg/m <sup>3</sup> , NO <sub>x</sub> < 9 µg/m <sup>3</sup> , O <sub>3</sub> <5 µg/m <sup>3</sup> , NH <sub>3</sub> <20 µg/m <sup>3</sup> , Ni<3.1 ng/m <sup>3</sup> , As <0.16 ng/m <sup>3</sup> , C <sub>6</sub> H <sub>6</sub> <4.0 µg/m <sup>3</sup> , BaP<0.5 ng/m <sup>3</sup> , Pb<0.006 µg/m <sup>3</sup> , CO<0.1 mg/m <sup>3</sup>					
Remarks: The above Sample test results are within the prescribed standard for the above mentioned parameters.					

#### TERMS AND CONDITION:-

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- The laboratory's responsibility under this report is limited to: proven willful negligence.

\*\*\* End Report \*\*\*







# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-12137

Date: 06.11.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 30.10.2024
Sample Description	: Ambient Air	Sample Received on	: 31.10.2024
Environment Condition during Sampling	: Atmospheric Temp.: 29 – 33°C Barometric Pressure : 755 mm of Hg	Sampling Procedure	: VCSPL/F-SOP/001, Dt. 04.09.2021
Sample Condition	: Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling Location	: R & C LABORATORY
Test Started on	: 31.10.2024	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550), VOC Sampler
		Sampling done by	: Ashutosh Mohanty
		Test Completed on	: 05.11.2024

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 : Part 23: 2006, RA 2017	100	59.2
2	Particulate matter as PM <sub>2.5</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 24):2019	60	30.6
3	Sulphur Oxides as SO <sub>2</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 2): 2001, RA 2017	80	19.2
4	Nitrogen Oxides as NO <sub>x</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 6): 2006, RA 2017	80	23.1
5	Carbon monoxide as CO	( $\text{mg}/\text{m}^3$ )	IS 5182(Part 10):2019	2	0.070
6	Ozone as O <sub>3</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part-09):2019	180	6.5
7	Ammonia as NH <sub>3</sub>	( $\mu\text{g}/\text{m}^3$ )	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	( $\text{ng}/\text{m}^3$ )	IS 5182(Part -22):2019	20	<3.1
10	Arsenic as As	( $\text{ng}/\text{m}^3$ )	IS 5182(Part -22):2019	6	<0.16
11	Benzene as C <sub>6</sub> H <sub>6</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	( $\text{ng}/\text{m}^3$ )	IS 5182 (Part 12):2017	1	<0.5
BDL Values: SO <sub>2</sub> < 4 $\mu\text{g}/\text{m}^3$ , NO <sub>x</sub> < 9 $\mu\text{g}/\text{m}^3$ , O <sub>3</sub> <5 $\mu\text{g}/\text{m}^3$ , NH <sub>3</sub> <20 $\mu\text{g}/\text{m}^3$ , Ni<3.1 $\text{ng}/\text{m}^3$ , As <0.16 $\text{ng}/\text{m}^3$ , C <sub>6</sub> H <sub>6</sub> <4.0 $\mu\text{g}/\text{m}^3$ , BaP<0.5 $\text{ng}/\text{m}^3$ , Pb<0.006 $\mu\text{g}/\text{m}^3$ , CO<0.1 $\text{mg}/\text{m}^3$					
Remarks: The above Sample test results are within the prescribed standard for the above mentioned parameters.					

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The laboratory's responsibility under this report is limited to; proven willful negligence.

\*\*\* End Report \*\*\*





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## TEST REPORT

Test Report No: ENVLAB/24-25/TR-13845

Date: 06.12.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.11.2024
		Sample Received on	: 16.11.2024
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	: 16.11.2024	Test Completed on	: 20.11.2024

### I. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	56.0
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	28.2
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	16.9
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	18.7
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.65
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.8
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrine as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub><4 µg/m<sup>3</sup>, NO<sub>x</sub><9 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As<1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

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

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ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-13846

Date: 06.12.2024

Name of the Industry	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.11.2024
		Sample Received on	: 16.11.2024
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	: 16.11.2024	Test Completed on	: 20.11.2024

### I. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	61.5
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	31.2
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	16.3
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	19.0
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.16
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.9
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As <1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

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

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\*\*\* End Report\*\*\*





## TEST REPORT

Test Report No: ENVLAB/24-25/TR-13847

Date: 06.12.2024

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.11.2024
		Sample Received on	: 16.11.2024
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	: 16.11.2024	Test Completed on	: 20.11.2024

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	64.8
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	32.9
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	17.3
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	22.5
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.078
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.5
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrine as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As <1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

**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/24-25/TR-13848

Date: 06.12.2024

Name of the Industry	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 15.11.2024
		Sample Received on	: 16.11.2024
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	: 16.11.2024	Test Completed on	: 20.11.2024

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	61.4
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	31.8
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	19.9
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	24.5
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.074
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.6
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrine as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As <1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

**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/24-25/TR-14562

Date: 05.01.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 26.12.2024
		Sample Received on	: 27.12.2024
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	: 27.12.2024	Test Completed on	: 31.12.2024

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 : Part 23: 2006, RA 2017	100	59.1
2	Particulate matter as PM <sub>2.5</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 24):2019	60	30.2
3	Sulphur Oxides as SO <sub>2</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 2): 2001, RA 2017	80	17.8
4	Nitrogen Oxides as NO <sub>x</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 6): 2006, RA 2017	80	19.5
5	Carbon monoxide as CO	( $\text{mg}/\text{m}^3$ )	IS 5182(Part 10):2019	2	0.69
6	Ozone as O <sub>3</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part-09):2019	180	7.0
7	Ammonia as NH <sub>3</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	( $\mu\text{g}/\text{m}^3$ )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	( $\text{ng}/\text{m}^3$ )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	( $\text{ng}/\text{m}^3$ )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	( $\text{ng}/\text{m}^3$ )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4  $\mu\text{g}/\text{m}^3$ , NO<sub>x</sub>< 9  $\mu\text{g}/\text{m}^3$ , O<sub>3</sub><5  $\mu\text{g}/\text{m}^3$ , NH<sub>3</sub><20  $\mu\text{g}/\text{m}^3$ , Ni<2.5  $\text{ng}/\text{m}^3$ , As <1.0  $\text{ng}/\text{m}^3$ , C<sub>6</sub>H<sub>6</sub><4.0  $\mu\text{g}/\text{m}^3$ , BaP<0.5  $\text{ng}/\text{m}^3$ , Pb<0.02  $\mu\text{g}/\text{m}^3$ , CO<0.1  $\text{mg}/\text{m}^3$

**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 \*\*\*







# Visiontek Consultancy Services Pvt. Ltd.

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ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-14563

Date: 05.01.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 26.12.2024
		Sample Received on	: 27.12.2024
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	: 27.12.2024	Test Completed on	: 31.12.2024

### I. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	64.0
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	32.3
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	17.2
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	20.4
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.19
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.7
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrine as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As <1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

**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\*\*\*



## TEST REPORT

Test Report No: ENVLAB/24-25/TR-14564

Date: 05.01.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 26.12.2024
		Sample Received on	: 27.12.2024
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	: 27.12.2024	Test Completed on	: 31.12.2024

### I. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	66.3
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	33.2
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	18.2
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	24.0
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.081
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.8
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrine as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5
<b>BDL Values:</b> SO <sub>2</sub> < 4 µg/m <sup>3</sup> , NO <sub>x</sub> < 9 µg/m <sup>3</sup> , O <sub>3</sub> <5 µg/m <sup>3</sup> , NH <sub>3</sub> <20 µg/m <sup>3</sup> , Ni<2.5 ng/m <sup>3</sup> , As <1.0 ng/m <sup>3</sup> , C <sub>6</sub> H <sub>6</sub> <4.0 µg/m <sup>3</sup> , BaP<0.5 ng/m <sup>3</sup> , Pb<0.02 µg/m <sup>3</sup> , CO<0.1 mg/m <sup>3</sup>					
<b>Remarks:</b> The above Sample test results are within the prescribed standard for the above mentioned parameters.					

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Reviewed by 

Approved by 





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## TEST REPORT

Test Report No: ENVLAB/24-25/TR-14565

Date: 05.01.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 26.12.2024
		Sample Received on	: 27.12.2024
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	: 27.12.2024	Test Completed on	: 31.12.2024

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 : Part 23: 2006, RA 2017	100	63.9
2	Particulate matter as PM <sub>2.5</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 24):2019	60	32.5
3	Sulphur Oxides as SO <sub>2</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 2): 2001, RA 2017	80	20.8
4	Nitrogen Oxides as NO <sub>x</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 6): 2006, RA 2017	80	25.6
5	Carbon monoxide as CO	( $\text{mg}/\text{m}^3$ )	IS 5182(Part 10):2019	2	0.080
6	Ozone as O <sub>3</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part-09):2019	180	6.9
7	Ammonia as NH <sub>3</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	( $\mu\text{g}/\text{m}^3$ )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	( $\text{ng}/\text{m}^3$ )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	( $\text{ng}/\text{m}^3$ )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrine as BaP	( $\text{ng}/\text{m}^3$ )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4  $\mu\text{g}/\text{m}^3$ , NO<sub>x</sub>< 9  $\mu\text{g}/\text{m}^3$ , O<sub>3</sub><5  $\mu\text{g}/\text{m}^3$ , NH<sub>3</sub><20  $\mu\text{g}/\text{m}^3$ , Ni<2.5  $\text{ng}/\text{m}^3$ , As <1.0  $\text{ng}/\text{m}^3$ , C<sub>6</sub>H<sub>6</sub><4.0  $\mu\text{g}/\text{m}^3$ , BaP<0.5  $\text{ng}/\text{m}^3$ , Pb<0.02  $\mu\text{g}/\text{m}^3$ , CO<0.1  $\text{mg}/\text{m}^3$

**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/24-25/TR-15819

Date: 05.02.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 24.01.2025
		Sample Received on	: 25.01.2025
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	: 25.01.2025	Test Completed on	: 30.01.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 : Part 23: 2006, RA 2017	100	63.5
2	Particulate matter as PM <sub>2.5</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 24):2019	60	32.9
3	Sulphur Oxides as SO <sub>2</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 2): 2001, RA 2017	80	19.1
4	Nitrogen Oxides as NO <sub>x</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 6): 2006, RA 2017	80	21.6
5	Carbon monoxide as CO	( $\text{mg}/\text{m}^3$ )	IS 5182(Part 10):2019	2	0.74
6	Ozone as O <sub>3</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part-09):2019	180	7.2
7	Ammonia as NH <sub>3</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	( $\mu\text{g}/\text{m}^3$ )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	( $\text{ng}/\text{m}^3$ )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	( $\text{ng}/\text{m}^3$ )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	( $\text{ng}/\text{m}^3$ )	IS 5182 (Part 12):2017	1	<0.5
<b>BDL Values:</b> SO <sub>2</sub> < 4 $\mu\text{g}/\text{m}^3$ , NO <sub>x</sub> < 9 $\mu\text{g}/\text{m}^3$ , O <sub>3</sub> <5 $\mu\text{g}/\text{m}^3$ , NH <sub>3</sub> <20 $\mu\text{g}/\text{m}^3$ , Ni<2.5 $\text{ng}/\text{m}^3$ , As <1.0 $\text{ng}/\text{m}^3$ , C <sub>6</sub> H <sub>6</sub> <4.0 $\mu\text{g}/\text{m}^3$ , BaP<0.5 $\text{ng}/\text{m}^3$ , Pb<0.02 $\mu\text{g}/\text{m}^3$ , CO<0.1 $\text{mg}/\text{m}^3$					
<b>Remarks:</b> 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/24-25/TR-15820

Date: 05.02.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 24.01.2025
		Sample Received on	: 25.01.2025
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	: 25.01.2025	Test Completed on	: 30.01.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	66.2
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	33.5
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	18.6
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	21.5
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.22
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.9
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5
<b>BDL Values:</b> SO <sub>2</sub> < 4 µg/m <sup>3</sup> , NO <sub>x</sub> < 9 µg/m <sup>3</sup> , O <sub>3</sub> <5 µg/m <sup>3</sup> , NH <sub>3</sub> <20 µg/m <sup>3</sup> , Ni<2.5 ng/m <sup>3</sup> , As <1.0 ng/m <sup>3</sup> , C <sub>6</sub> H <sub>6</sub> <4.0 µg/m <sup>3</sup> , BaP<0.5 ng/m <sup>3</sup> , Pb<0.02 µg/m <sup>3</sup> , CO<0.1 mg/m <sup>3</sup>					
<b>Remarks:</b> 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/24-25/TR-15821

Date: 05.02.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 24.01.2025
		Sample Received on	: 25.01.2025
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	: 25.01.2025	Test Completed on	: 30.01.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 : Part 23: 2006, RA 2017	100	68.9
2	Particulate matter as PM <sub>2.5</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 24):2019	60	34.8
3	Sulphur Oxides as SO <sub>2</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 2): 2001, RA 2017	80	19.6
4	Nitrogen Oxides as NO <sub>x</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 6): 2006, RA 2017	80	25.5
5	Carbon monoxide as CO	( $\text{mg}/\text{m}^3$ )	IS 5182(Part 10):2019	2	0.085
6	Ozone as O <sub>3</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part-09):2019	180	6.5
7	Ammonia as NH <sub>3</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	( $\mu\text{g}/\text{m}^3$ )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	( $\text{ng}/\text{m}^3$ )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	( $\text{ng}/\text{m}^3$ )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	( $\mu\text{g}/\text{m}^3$ )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	( $\text{ng}/\text{m}^3$ )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4  $\mu\text{g}/\text{m}^3$ , NO<sub>x</sub>< 9  $\mu\text{g}/\text{m}^3$ , O<sub>3</sub><5  $\mu\text{g}/\text{m}^3$ , NH<sub>3</sub><20  $\mu\text{g}/\text{m}^3$ , Ni<2.5  $\text{ng}/\text{m}^3$ , As <1.0  $\text{ng}/\text{m}^3$ , C<sub>6</sub>H<sub>6</sub><4.0  $\mu\text{g}/\text{m}^3$ , BaP<0.5  $\text{ng}/\text{m}^3$ , Pb<0.02  $\mu\text{g}/\text{m}^3$ , CO<0.1  $\text{mg}/\text{m}^3$

**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/24-25/TR-15822

Date: 05.02.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 24.01.2025
		Sample Received on	: 25.01.2025
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	: 25.01.2025	Test Completed on	: 30.01.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	66.2
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	33.8
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	21.5
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	26.2
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.085
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	7.2
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As <1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

**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/24-25/TR-17521

Date: 05.03.2025

Name of the Industry	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 20.02.2025
		Sample Received on	: 21.02.2025
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 Scaled and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 21.02.2025	Test Completed on	: 25.02.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 15 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	65.0
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	32.5
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	19.8
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	22.3
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.71
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	7.5
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As<1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

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

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- The laboratory's responsibility under this report is limited to: proven willful negligence.

\*\*\* End Report\*\*\*







# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-17522

Date: 05.03.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 20.02.2025
		Sample Received on	: 21.02.2025
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	: 21.02.2025	Test Completed on	: 25.02.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	67.4
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	33.9
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	19.1
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	22.2
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.24
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.7
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As <1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

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

#### TERMS AND CONDITION:-

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4. The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations.
5. The laboratory's responsibility under this report is limited to; proven willful negligence.

\*\*\* End Report\*\*\*





## TEST REPORT

Test Report No: ENVLAB/24-25/TR-17523

Date: 05.03.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 20.02.2025
		Sample Received on	: 21.02.2025
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	: 21.02.2025	Test Completed on	: 25.02.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	67.5
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	33.9
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	19.8
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	24.7
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.088
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.8
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5
<b>BDL Values:</b> SO <sub>2</sub> < 4 µg/m <sup>3</sup> , NO <sub>x</sub> < 9 µg/m <sup>3</sup> , O <sub>3</sub> <5 µg/m <sup>3</sup> , NH <sub>3</sub> <20 µg/m <sup>3</sup> , Ni<2.5 ng/m <sup>3</sup> , As <1.0 ng/m <sup>3</sup> , C <sub>6</sub> H <sub>6</sub> <4.0 µg/m <sup>3</sup> , BaP<0.5 ng/m <sup>3</sup> , Pb<0.02 µg/m <sup>3</sup> , CO<0.1 mg/m <sup>3</sup>					
<b>Remarks:</b> The above Sample test results are within the prescribed standard for the above mentioned parameters.					

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\*\*\* End Report\*\*\*





# Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

## TEST REPORT

Test Report No: ENVLAB/24-25/TR-17524

Date: 05.03.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 20.02.2025
		Sample Received on	: 21.02.2025
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	: 21.02.2025	Test Completed on	: 25.02.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	67.2
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	34.1
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	21.2
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	25.9
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.090
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	7.4
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrine as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 9 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As <1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

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

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\*\*\* End Report\*\*\*

Reviewed by



Approved by





## TEST REPORT

Test Report No: ENVLAB/25-26/TR-00698

Date: 05.04.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 25.03.2025
		Sample Received on	: 26.03.2025
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	: 26.03.2025	Test Completed on	: 30.03.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	64.7
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	32.9
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	20.3
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	23.4
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.74
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	7.7
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 6 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As <1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

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

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\*\*\* End Report \*\*\*





## TEST REPORT

Test Report No: ENVLAB/25-26/TR-00699

Date: 05.04.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 25.03.2025
		Sample Received on	: 26.03.2025
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 Scaled and gaseous Sample Solution Refrigerated	Sampling done by	: Ashutosh Mohanty
Test Started on	: 26.03.2025	Test Completed on	: 30.03.2025

### I. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	68.9
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	34.6
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	19.8
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	23.0
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.25
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.9
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5
<b>BDL Values:</b> SO <sub>2</sub> < 4 µg/m <sup>3</sup> , NO <sub>x</sub> < 6 µg/m <sup>3</sup> , O <sub>3</sub> <5 µg/m <sup>3</sup> , NH <sub>3</sub> <20 µg/m <sup>3</sup> , Ni<2.5 ng/m <sup>3</sup> , As <1.0 ng/m <sup>3</sup> , C <sub>6</sub> H <sub>6</sub> <4.0 µg/m <sup>3</sup> , BaP<0.5 ng/m <sup>3</sup> , Pb<0.02 µg/m <sup>3</sup> , CO<0.1 mg/m <sup>3</sup>					
<b>Remarks:</b> The above Sample test results are within the prescribed standard for the above mentioned parameters.					

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\*\*\* End Report\*\*\*

Reviewed by  


Approved by  


## TEST REPORT

Test Report No: ENVLAB/25-26/TR-00700

Date: 05.04.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 25.03.2025
		Sample Received on	: 26.03.2025
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	: 26.03.2025	Test Completed on	: 30.03.2025

### 1. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	68.6
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	34.5
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	20.4
4	Nitrogen Oxides as NOx	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	25.3
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.094
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	6.6
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrine as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5
<b>BDL Values:</b> SO <sub>2</sub> < 4 µg/m <sup>3</sup> , NO <sub>x</sub> < 6 µg/m <sup>3</sup> , O <sub>3</sub> <5 µg/m <sup>3</sup> , NH <sub>3</sub> <20 µg/m <sup>3</sup> , Ni<2.5 ng/m <sup>3</sup> , As <1.0 ng/m <sup>3</sup> , C <sub>6</sub> H <sub>6</sub> <4.0 µg/m <sup>3</sup> , BaP<0.5 ng/m <sup>3</sup> , Pb<0.02 µg/m <sup>3</sup> , CO<0.1 mg/m <sup>3</sup>					
<b>Remarks:</b> The above Sample test results are within the prescribed standard for the above mentioned parameters.					

#### TERMS AND CONDITION:-

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\*\*\* End Report\*\*\*





## TEST REPORT

Test Report No: ENVLAB/25-26/TR-00701

Date: 05.04.2025

Name of the Industry	: Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	: 25.03.2025
		Sample Received on	: 26.03.2025
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	: 26.03.2025	Test Completed on	: 30.03.2025

### I. Chemical Testing

#### A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	Analysis Result
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	IS 5182 : Part 23: 2006, RA 2017	100	69.5
2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 24):2019	60	35.2
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 2): 2001, RA 2017	80	21.8
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 6): 2006, RA 2017	80	26.3
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	IS 5182(Part 10):2019	2	0.087
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part-09):2019	180	7.7
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m <sup>3</sup> )	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	IS 5182 (Part 12):2017	1	<0.5

**BDL Values:** SO<sub>2</sub>< 4 µg/m<sup>3</sup>, NO<sub>x</sub>< 6 µg/m<sup>3</sup>, O<sub>3</sub><5 µg/m<sup>3</sup>, NH<sub>3</sub><20 µg/m<sup>3</sup>, Ni<2.5 ng/m<sup>3</sup>, As <1.0 ng/m<sup>3</sup>, C<sub>6</sub>H<sub>6</sub><4.0 µg/m<sup>3</sup>, BaP<0.5 ng/m<sup>3</sup>, Pb<0.02 µg/m<sup>3</sup>, CO<0.1 mg/m<sup>3</sup>

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

#### TERMS AND CONDITION:-

- The Test result is relevant only to the item tested.
- This report shall not be reproduced in full or part without written approval of Visiontek consultancy services (P) Ltd
- The laboratory is not responsible for the authenticity of photocopied test report.
- The test item will not be retained for more than 15 days from the date of issue of test report except in case as required by applicable regulations.
- The laboratory's responsibility under this report is limited to: proven willful negligence.

\*\*\* End Report\*\*\*

Reviewed by  
  
BESR

Approved by  
  
BBSR



Ref. No: FACOR/HSE/ES/24-1

Date: 28.09.2024

To,

**The Member Secretary,  
State Pollution Control Board,  
Paribesh Bhawan, A/118,  
Nilakantha Nagar, Unit-VIII,  
Bhubaneswar.**

**Sub: Submission of Environment Statement for the year 2023-24 by M/s Ferro Alloys Corporation Limited (Charge Chrome Plant), Randia, Bhadrak.**

Sir,

With reference to the above cited subject, please find enclosed copy of Environmental Statement for the financial year ending 31<sup>st</sup> March, 2024 in **Form-V** by M/s Ferro Alloys Corporation Limited (Charge Chrome Plant) for your kind perusal.

Thanking you,

Yours faithfully,  
For **Ferro Alloys Corporation Limited**  
**Charge Chrome Plant**



**Sanjay Pal**  
**Factory Manager**

Copy to: The Regional Officer, SPCB, Balasore.

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**M/s. Ferro Alloys Corporation Ltd.** (A subsidiary of Vedanta Ltd.)

**Registered Office:**

D.P.Nagar, PO : Randia, Dist.: Bhadrak, Odisha, India - 756 135

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Website: [www.facorgroup.in](http://www.facorgroup.in), CIN: U45201OR1955PLC008400.

## FORM V

(See Rule 14)

Environmental Statement for the Financial Year Ending 31<sup>st</sup> March 2024.

### PART – A

- i. **Name and address of the owner/occupier of the industry operation process** :
- Shri Sanjay Pal, Factory Manager,  
M/s. Ferro Alloys Corporation Ltd.,  
Charge Chrome Plant, Randia-756135,  
Dist. Bhadrak, Orissa.
- ii. **Industry category Primary** : Large
- iii. **Production Capacity-Units** :
- High Carbon Ferro Chrome production of 1,45,000 TPA (from 1 X 45 MVA & 1 X 33 MVA SAF) and 11,800 TPA from MRP by M/s Ferro Alloys Corporation Ltd., located at Village-Randia, District-Bhadrak, Odisha
- iv. **Year of Establishment** - 7<sup>th</sup> March, 1983.
- v. **Date of the last environmental statement submitted** – 29.09.2023.

### PART – B

#### Water and Raw Material Consumption

##### 1. Water Consumption:

Process – 435 m<sup>3</sup>/day  
Cooling – 202 m<sup>3</sup>/day  
Domestic – 431 m<sup>3</sup>/day

Name of Products	Process Water Consumption Per Unit of Product Output	
	During the Previous Financial Year 2022-23	During the Current Financial Year 2023-24
High Carbon Ferro Chrome	1.278 m <sup>3</sup> /MT (Cooling)	0.93 m <sup>3</sup> /MT (Cooling)
	3.16 m <sup>3</sup> /MT (Process + Cooling)	2.93 m <sup>3</sup> /MT (Process + Cooling)

## 2. Raw Material Consumption

Name of Raw Materials	Name of Products	Consumption of Raw Material Per Unit of Output (MT)	
		During the Previous Financial Year 2022-23	During the Current Financial Year 2023-2024
Chrome Ore	Charge	2.28 MT	2.365 MT
	Chrome/ High Carbon Ferro Chrome		
Coke		0.581 kg	0.553 kg
Quartzite		0.011 MT	0.011 MT
Bauxite		0.11 MT	0.021 MT
Electrode Paste		12.54 Kg	12.4 Kg
Hydrated Lime		0.068 MT	0.0657 MT

## PART – C

### Pollution Discharge to Environment/ Unit of Output (Parameter as Specified in the Consent Issued)

#### 1. Water:

##### A. Blowdown Wastewater Quality:

Sl. No	Parameter	Unit	Standard as per CTO	Cooling Tower 1 Results	Cooling Tower 2 Results	MRP Pond
1	pH at 25°C	mg/l	6.5-9.0	7.3	8.8	7.63
2	Suspended Solids	mg/l	<100	25	35	60
3	Biochemical Oxygen Demand (as BOD at 27°C For 3 days)	mg/l	<30	3.0	6.0	8.0
4	Chemical Oxygen Demand as COD	mg/l	<250	13.0	22.0	28.0
5	Ammonical nitrogen (as NH <sub>4</sub> -N)	mg/l	5	0.72	1.3	1.54
6	Total Nitrogen	mg/l	10	1.88	6.1	4.1
7	Oil & Grease	mg/l	--	2.0	2.8	2.0
8	Fecal Coliform	MPN/ 100 ml	<1000	38	40	<0.01



**B. Treated Sewage Water quality:**

SLNo.	Parameters	Unit	Standard (Inland Surface water) Part-A	Analysis Results
1	Total Suspended Solids	mg/l, max	100	25
2	pH at 25°C	-	6.5-9.0	7.27
3	Biochemical Oxygen Demand (as BOD) , 3 Days at 27°C	mg/l, max	30	20
4	Fecal Coliform (as TC)	MPN/100ml	1000	83

**C. Surface Runoff Treated Water Quality:**

Sl. no.	Parameters	Unit	Standard (Inland Surface water) Part-A	Analysis Results
1	pH at 25°C	-	6.5-9.0	7.19
2	Total Suspended Solids (TSS)	mg/l, max	100	31.0
3	Biochemical Oxygen Demand (as BOD), 3 Days at 27°C	mg/l, max	30	7.0
4	COD	mg/l, max	250	30.0
5	Oil & Grease	mg/l, max	10	ND
6	Iron	mg/l, max	3	0.28
7	Hexavalent Chromium	mg/l, max	0.1	<0.01

**2. Air**

Sl. No	Parameters	Unit	National Ambient Air Quality Standard, CPCB, 18 <sup>th</sup> Nov. 2009	R&C Lab.	MRSS	Auto garage	MRP
1	Particulate matter as PM <sub>10</sub>	(µg/m <sup>3</sup> )	100	61.4	67.7	55.4	60.7

2	Particulate matter as PM <sub>2.5</sub>	(µg/m <sup>3</sup> )	60	31.2	34.2	28.2	30.5
3	Sulphur Oxides as SO <sub>2</sub>	(µg/m <sup>3</sup> )	80	23.1	14.8	14.2	14.1
4	Nitrogen Oxides as NO <sub>x</sub>	(µg/m <sup>3</sup> )	80	24.9	20.6	18.8	19.8
5	Carbon monoxide as CO	(mg/m <sup>3</sup> )	2	0.070	0.081	0.75	0.11
6	Ozone as O <sub>3</sub>	(µg/m <sup>3</sup> )	180	6.9	6.6	6.5	7.1
7	Ammonia as NH <sub>3</sub>	(µg/m <sup>3</sup> )	400	<20	<20	<20	<20
8	Lead as Pb	(µg/m <sup>3</sup> )	1	<0.006	<0.006	<0.006	<0.006
9	Nickel as Ni	(ng/m <sup>3</sup> )	20	<3.1	<3.1	<3.1	<3.1
10	Arsenic as As	(ng/m <sup>3</sup> )	6	<0.16	<0.16	<0.16	<0.16
11	Benzene as C <sub>6</sub> H <sub>6</sub>	(µg/m <sup>3</sup> )	5	<4	<4	<4	<4
12	Benzo-a-pyrene as BaP	(ng/m <sup>3</sup> )	1	<0.5	<0.5	<0.5	<0.5

## PART – D

### Hazardous Waste

(As Specified Under Hazardous Waste (Management and Handling) Rule, 2016)

Hazardous Wastes	Total Quantity (kg)	
	During the Previous Financial Year 2022-23	During the Current Financial Year 2023-24
a) Used oil	1940	1700
b) Exhaust Air Residue (utilized as raw material in the furnace area after making pellets/ Briquettes)	1085628	964910
c) Empty Barrels	0	1540

## PART – E

### Solid Wastes

Solid Waste	Total Quantity	
	During the Previous Financial Year 2022-23	During the Current Financial Year 2023-24
(a) From Process	65,811 MT (Slag)	83,753 MT (Slag)
(b) From Pollution Control Facility	-	-
(c) 1) Quantity Recycle and Re-Utilized within the Unit	Part of Jigging Slag used for Civil Construction Work	Part of Jigging Slag used for Civil Construction Work inside the plant premises
2) Solid	-	-
3) Disposed	Used for filling low lying areas within plant premises	Sold to outside agency for road construction and low lying area development

## PART – F

**Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.**

- The granulated slag generated from the process is used for filling low lying areas in plant premises.
- Slag generated from the Metal Recovery Plant also used for filling low lying areas, slag is being sold to outside agency for road construction and low-lying area development and some portion of the jigging slag also used for civil construction work i.e. road making, floor concreting etc.
- Flue dust generated from the Gas Cleaning Plant is re-used as raw material in the furnace after making pallets/briquettes.
- Waste batteries are sold to authorised dealer/recycler under battery Rule 2001, and Returns submitted to State Pollution Control Board.
- Solid waste like Waste Cotton, Empty Bottles, Jerry Canes, Rejected Spares and Steel Scrapes etc. are stored in proper manner, so that it shall not pose any threat to Environment. Moreover, some of those items have scrap values and disposed off with price realization.
- The solid waste like Wastepaper, Biological Waste, Domestic Waste and Canteen Waste etc. are allowed to decompose in waste bins. The same is used as manure after decomposition.



## PART – G

### Impact of the pollution statement measures taken on conservation of natural resources and on the cost of production.

- The water used in MRP is re-circulated and make up water is supplied from the rainwater harvesting pond. The water from the rainwater harvesting pond also used for granulation plant, metal cooling, dust suppression and green belt development, thereby saving consumption of fresh water.
- The flue dust collected from the Gas Cleaning Plant and Dryer stacks are reused as raw material in the process.
- By using jigging slag in civil construction work, company saves cost of stone chips.
- The solid waste like waste batteries, E- Waste, steel scraps, empty barrels, jerry canes etc. are disposed off with price realization.
- Biodegradable waste like waste paper, biological waste, domestic waste and canteen waste are used as manure for gardening after decomposition.
- FACOR is an ISO 9001, 14001 & 45001 certified company, committed for improvement in quality, environment, occupational health & safety management.
- Furnace cooling water is re-circulated in a close circuit and make up water is added in to it.

## PART – H

### Additional measures / investment proposal for environmental protection Including abatement of pollution

#### Expenditure for Environmental Protection FY 2023-24

i)	Installation of CAAQMS, Digital Display Board with data transmission to SPCB server	:	66,08,000/-
ii)	Installation of CEMS with data transmission to SPCB/CPCB server	:	53,10,000/-
iii)	Installation of CO censor in furnace top level	:	24,19,000/-
iv)	Installation of Wheel Washing System	:	4,50,000/-
v)	Operational & Maintenance of Mechanical Road Sweeping Machine	:	2,74,350/-
vi)	Greenbelt development & engagement of worker for plantation maintenance work & housekeeping	:	80,23,320/-
vii)	Engagement of Water Tanker for dust suppression	:	2,63,864/-
viii)	Wastewater Treatment Plant Operation & Maintenance	:	6,68,772/-
ix)	GCP maintenance cost	:	1,86,900/-

### **Investment Proposal for Environmental Protection FY 2024-25**

- Operational & Maintenance of Road sweeping machine O&M – Rs. 10,97,400/-
- Deployment of Truck mounted Mist cannon– Rs. 21,45,240/
- AMC of CAAQMS & CEMS with Data Connectivity – Rs. 8,12,725/-
- Greenbelt development & maintenance – Rs. 400000 /-

### **PART – I**

#### **Any other particulars for improving the quality of the environment.**

- FACOR is a certified company of Quality Management System (ISO-9001: 2015), Environmental Management System (ISO-14001: 2015), Occupational Health & ISO 45001:2018 and Energy Management System (ISO-50001:2018).
- FACOR being an ISO 14001-2015 Company, engaged a dedicated team of members in Environmental Management System for strictly implementing and maintaining the Environment Policy framed by Vedanta Management.



## PH Compliance Details

### Charge Chrome Plant of M/s Ferro Alloys Corporation Ltd

SN	Point Raised by Locals/Public	Project Proponent Response	Physical Targets	Actions Taken	Compliance Status	Expenditure Investment Cost (INR)
Environmental Issues						
1	Environmental Protection	Various pollution control measures have been taken towards protection of environment in order to achieve the company's philosophy on Zero harm, zero waste and zero discharge. In this regard we have recently installed. Surface Run-off Treatment Plant (SRTP),	1. Surface Runoff Treatment Plant (SRTP)	SRTP has been installed to ensure Zero discharge from the plant.	Complied	17169000
			2. Sewage Treatment Plant (STP)	Sewage Treatment Plant (STP) has been installed to treat domestic wastewater. Treated water is being used for gardening purpose.	Complied	4106400
			3. Rainwater harvesting	PP has constructed 5 recharge wells and 3 rainwater harvesting pond.	Complied	-
			4. Upgradation of existing Gas Cleaning Plant (GCP) & Installation of new Gas Cleaning Plant (GCP)	Upgradation of existing GCP has been completed. New GCP has been installed.	Complied	155364115
			5. Water channel for ETP & RWH	PP has already been designed as a Zero Liquid Discharge plant. All the runoff water has been treated through SRTP and stored in rainwater harvesting pond. STP has been installed to treat domestic wastewater.	Complied	-
			6. Dust Extraction System (DES) will be installed to control air pollution. Installation of Online CEMS & CAAQMS	Dedusting Systems have been installed to control air pollution. Online CAAQMS have been installed to monitor air quality. CEMS installation is in final stage & will be completed by 30.05.2024.	Complied	29023000
Healthcare Issues						

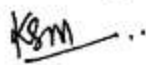


2	Local people demanded for regular health check-ups at village level	We will focus on peripheral development activities by working in the key thematic areas of quality education, health & livelihood. Under health priority will be given to Women and Child health. We have already facilitated our dispensary and ambulance for the benefit of the community and continue to do so.	200 health camps in six Gram Panchayats will be conducted on yearly basis	<p>1. 176 Health Camps conducted in core &amp; periphery gram panchayat providing free doctor consultation and medicine under the CSR budget.</p> <p>2. Awareness sessions has been conducted on Dengue, Malaria, Tuberculosis, and other disease to spread awareness among the commoners to bring them closer to government health schemes.</p> <p>3. FACOR also conducted awareness sessions on Menstrual Hygiene Management and Family Planning and distributed mask as a preventive measure from viral diseases.</p> <p>4. Nutrition kit support provided to TB patients in Bhadrak.</p>	Complied	2498711.35
3	Local Dispensaries are in bad shape without manpower and equipment and hence needs support by the industry.	Local Dispensaries are in bad shape without manpower and equipment and hence needs support by the industry	Basic equipment for two dispensaries will be supplied in Barpada village and Baghurai village	01 no 120 litter RO Water Purifier, 02 nos. Air purifier, and 10 nos. Steel Bench support has been provided to Barpada CHC for improving the overall condition of local CHCs under CSR budget.	Complied	259171.00
Plantation Program						

4	Adequate greenbelt should be developed	We have developed adequate greenbelt of various species in & around the plant and also started plantation in local villages in sync with the villagers.	1. Material Handling Area, Waste dump, Internal Roadsides & Boundary Areas; 9000 trees of Neem, Chakunda, Akasia, Amra, Debadaru types 2. Within Randia Village; 420 trees of Bela & Debadaru Plants 3. Within Koronta Village; 390 trees of Karanja & Mango trees 4. Within Saramanga Village; 340 trees of Chakunda & Mango trees 5. Additional 4000 fruit bearing trees will be distributed to local individuals of five Panchayats under social forestry program	A. 5875 Nos have been planted inside the plant premises. B. 300 trees planted with steel cage in the six gram panchayat of Bhadrak under CSR budget. C. 500 saplings distributed among community members under CSR budget.	Complied	2142515.00
<b>Social Infrastructure Management (Education &amp; Skill Development)</b>						
5	Promoting Primary /Secondary educations for nearby villages	PP shall facilitate Pre Schools at five nearby villages by repairing the classrooms and equipping classrooms as well.	100 numbers of Anganwadi centres for improving Pre-school facility for children in nearby Gram Panchayats	1. Tiles and paint work completed in 19 Anganwadis, Bio-waste dustbin provided to 21 Anganwadi centers, and table chair provided to 23 Anganwadis under CSR budget. 2. Mini Science lab has been installed in 02 government schools to promote STEM learning among the school students under CSR budget. 3. 120 litter RO Water purifier provided to 04 government schools to improve overall school condition under CSR budget.	Complied	1468838.06

6	Some assistance to local SHGs for livelihood Support	1. Capacity Building Training of SHG members 2. SHG meet 3. Micro enterprise promotion 4. Marketing Support 5. Technical know-how support to SHGs	Each year PP would be partnering with local SHGs for their skill enhancement. 250 women entrepreneurs would be supported. <b>SMEs with market linkage:</b> Promotion of Local Craft like, Bamboo Craft Making, Pisciculture, Small Trades such as Chappal making, Agarwati etc. Agri based interventions	1. 02 microenterprise (Donapattal and Agarbatti) established and supported with raw materials, training and market linkage under CSR budget. 2. Training provided to SHG women in bamboo craft including support of materials, and tools required under CSR budget. 3. Support of raw materials, and tools to 05 established SHG microenterprise under CSR budget. 4. Capacity leadership training given to SHG members under CSR budget.	Complied	2990548.09
7	Local Youths need to enhance their skill level	On the job training shall be imparted to chosen local people for their employability and skill enhancement either directly or through Business Partners.	120 Local Youths will be given basic Skill Training every year for four years based on their basic educational qualification chosen from surrounding six number of Panchayats	As of date a total of 108 nos. of apprentices are trained under the skill development campaign of the company. NAPS- 12, NATS- 64 80 community women given training in tailoring trade to enhance their income generation capacity under CSR budget.	Complied	5467422.00
<b>Grand Total</b>						<b>220489721</b>

For Ferro Alloys Corporation Limited



Chief HSE Officer

Krutisunder Mohapatra