Ref: FACOR/Bhadrak/HSE/02/2025-26
Dtd: 30.05.2025

To

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

Ref : 1. **Environment Clearance letter No**. F.No. J-11011/594/2008-IA-II(IND-I) dtd. 13.09.2024

2. **Name of the Project**: Expansion of Ferro Alloys Plant for High Carbon Ferro Chrome production from 145000 TPA to 445000 TPA and 700000 TPA Pellet & Sintering Plant 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(IND-I) dtd.13.09.2024, 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(IND-I) dtd. 13.09.2024 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

Six Monthly Environmental Compliance Report For the period from October 2024 up to March 2025			
SN	Condition No.	EC Conditions	Remarks
	1	**Specific Conditions**	
1	1.1	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.	Agree to abide
2	1.2	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.	Agreed to comply
3	1.3	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 in existing furnaces. Expansion project will be completely closed furnace and carbon will be utilized for power generation. Power requirement for expansion units (300 KTPA) will be sourced from renewable energy power. GHG emission intensity of reporting period has been attached herewith **Annexure 1**.
4	1.4	There is a rich habitation including Randia Village (0.53 km, NE), Baghurai Village (0.65 km, SSE) etc. along with other sensitive areas within the study area of the project site. Proponent shall take appropriate environmental safeguard measures to minimize the impact on the habitation of the locals. The project proponent needs to strengthen green belt all around the plant area to reduce the dust pollution. The PP shall also include some of these locations in its environmental monitoring program.	We are taking utmost measures to safeguard environmental impact on the habitation of the locals. We have adopted measures to control dust pollution around the plant. Initiatives like Road sweeping machine, wheel washing system, water sprinkling & mist cannon have been incorporated to control dust emission inside and outside village roads. To reduce dust & noise pollution, we have significantly strengthen our greenbelt cover by planting more than 14 thousand tree saplings inside plant premises in this

			monsoon period. We are putting continuous efforts to increase our green cover. We will be including nearby village areas in environmental monitoring program.
5	1.5	Salandi River (0.5 km, E) and Akhaupada High Level Main canal (0.5 km, S) along with several water bodies within the study area of 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 being stored in rainwater harvesting pond and then reused in multipurpose inside the plant. As per plant scheme 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.
6	1.6	The PP shall undertake flood protection measures due to the presence of Salandi river as committed.	Plant MSL is much higherthan 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 **Annexure-2.**
7	1.7	The water requirement of 4750 m3 /day shall be sourced from River Salandi and ground water. PP shall obtain necessary permission from the Competent Authority in this regard. Also, PP shall implement the plan to gradually phase out the use of ground water in a period of 2 years as committed.	Agreed, we will comply with the requirements after obtaining necessary approval from authority.
8	1.8	PP/Consultant shall prepare and implement a stringent plan to minimize the levels of PM2.5 and PM10	To control emissions from furnace and other operation bag filters, dedusting units and dust suppression systems have been installed. To arrest fugitive emission during transportation, truck mounted mist cannon has been deployed for dust suppression inside and outside village roads. We have taken various dust suppression measures like water sprinkling system in material conveyor line, sprinklers at raw material yard, road sweeping machine, mist cannon etc to control dust pollution. Ambient Air Quality reports & fugitive emission reports are attached as **Annexure 3 & 3A.**

9	1.9	Three tier Green Belt shall be developed in at least 33% of the project area as committed, 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. PP shall also develop greenbelt in the form of shelter belt comprising of total of 6 rows of 2x2 m plantation with tall trees & broad leaves with thick canopy along with windshield inside the plant premises to act as green barrier for air pollution & noise levels towards sensitive areas nearby project site. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.	As per Greenbelt assessment by expert agency, the greenbelt coverage is around 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. We have planted around fourteen thousand local species during this monsoon period .
10	1.10	Tree Felling of 936 as reported shall be cut only after consultation and approval of State Forest Department.	Approval has been obtained and enclosed in **Annexure-4**.
11	1.11	The PP is advised to implement the 'Ek Ped Maa Ke Naam' Campaign which was launched on 5th June 2024 on the occasion of the World Environment Day to increase the forest cover across the Country. This plantation drive will be other than Green belt development.	Agreed to comply. Same is being followed.
12	1.12	All the commitments made towards socio-economic development of the nearby villages 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 amounting to Rs.18.32 Crores shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC.	This will be followed as per the plan.
13	1.13	The project proponent shall undertake village adoption program and prepare and implement the action plan to develop them into a model village.	Our CSR team is working in nearby six-gram panchayats in thematic areas of health, education, livelihood and community development. We are following the practices.

14	1.14	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, MoEF&CC.	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. Report attached as **Annexure -5**.
15	1.15	The recommendations of the approved Site-Specific Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.	Wildlife management plan has been submitted to DFO, Bhadrak for necessary approval to proceed further. Receiving copy attached in **Annexure-6**.
16	1.16	PP shall strictly comply with the partially/non complied EC conditions as per the observations of IRO and submit the report to IRO.	Compliance report has been submitted to IRO. Copy enclosed in **Annexure-7**.
17	1.17	PP shall carry out periodically occupational health survey as per the applicable norms.	Periodical occupational health check-ups are being carried out annually. The same will be continued. Copy enclosed in **Annexure-8**.
18	1.18	As committed, fog mist cannon shall be deployed for minimizing the fugitive emissions.	Fog Mist cannon has been deployed to minimize fugitive emissions. Photographs of the same have been attached herewith **Annexure-9.**
19	1.19	The PP shall install CO sensors at the furnace top level and the monitoring report shall be submitted to the IRO, MoEF&CC in this regard.	CO sensors have been installed in furnace top level and report regarding installation has been sent to the IRO, MOEFCC in this regard. Copy attached as **Annexure-10.**
20	1.20	CO sensors with alarm to be installed at strategic locations in the Plant.	7 Nos of CO sensors with alarm system have been installed in the strategic locations of both furnaces.
	1	Statutory Compliance	
21	1.1	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 Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.	Agreed to abide

22	1.2	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.	Agreed to abide
	2	Air Quality Monitoring And Preservation	
23	2.1	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04 Nos. Continuous Ambient Air Quality Station (CAAQMS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules1986 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 recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	We have 5 nos CAAQMS covering both Charge Chrome Plant & Power Plant. CEMS has already installed to monitor process stack emission and all are connected with SPCB & CPCB online server. Calibration has been done annually for these instruments.
24	2.2	The project proponent shall carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.	Being followed and continuing within the plant premises. The same will be extended to outside the plant area.
25	2.3	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.	Being Complied. Copy enclosed in **Annexure-3A**
26	2.4	Sampling facilities at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.	Being Complied with existing stack. Same to be provided for 300 KTPA expansion project.

27	2.5	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. Venturi Scrubbers and bag filters shall be provided for the expansion project.
28	2.6	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 to ensure better maintenance of bags. Copy enclosed in **Annexure-11**.
29	2.7	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	We have deployed mechanical road sweeping machine to clean plant roads. Cleaning facility has been provided in all shop floors.
30	2.8	Ensure covered transportation and conveying of raw material to prevent spillage and dust generation. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	All the raw materials are transporting through vehicle covered with tarpaulin and conveying of ore & other raw material through covered conveyors.
31	2.9	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.
32	2.10	The project proponent shall provide primary and secondary fume extraction system at all heat treatment 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 .
33	2.11	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	Fencing has been provided around raw material storage and regular water sprinkling happening in raw material stock pile as per need.
34	2.12	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	Being followed.
35	2.13	Pollution control system in the plant shall be provided as per the CREP Guidelines of CPCB.	This will be followed during upcoming project commissioning.

36	2.14	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.	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 around the plant premises.
37	2.15	Bag filters shall be cleaned regularly and efficiency of bag filter system shall be monitored at regular intervals.	Being followed for existing system and same will be followed during project.
38	2.16	Water Sprinklers/Water mist system shall be installed near raw material yards, operational units and other strategic locations to control fugitive emissions from the plant.	Water sprinklers has been installed near raw material yards & operational units ie ground hopper to control fugitive emissions from the plant
39	2.17	The particulate matter emissions from the process stacks shall be less than 30 mg/Nm3 and measures shall be undertaken as per the submitted action plan. Efficient Air monitoring equipment shall be installed.	Agreed to comply for expansion project.
40	2.18	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all 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.	a. Truck mounted Mist cannon has been deployed in bulk material storage area (Chrome Ore storage area) to control dust emission during transportation through vehicles. B. Material carrying vehicles are covered with tarpaulin during transportation. c. Wheel washing system has been provided with complete recirculation system.
	3	Air Quality Monitoring and Preservation In Case Of Ferro Alloy Plants	
41	3.1	Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.	Existing furnaces have Briquetting and Jigging plant. For new furnaces (75 MVA*2) sinter unit will be installed in place of briquetting plant.

42	3.2	The PP shall minimize the evaporation losses in jigging operation to less than 10% using suitable advanced process.	Being followed for existing process. The same will not applicable for expansion as there will be no Jigging plant. Copy enclosed in **Annexure-12**.
43	3.3	The 4th hole extraction system shall be provided in the Sub Merged Arc Furnaces and EAF.	4th hole extraction system has been provided for existing semi closed arc furnace. However expansion furnace will be completely closed circuit.
44	3.4	Industry is going to use silica quartz in large quantities and going to produce Silico Manganese and Ferro Silicon alloy steel. Therefore, it is necessary to control silica/quartz exposures at production Departments, not only emission norms as per Indian Factories Act. The permissible limit for silica/quartz should be within 10 mg/m3 for total dust as per Indian Factories Act. Therefore, it is recommended to monitor personal and area exposures for silica quartz dust in the process plants. (in case of Silico Manganese and Ferro Silicon alloy steel)	Not applicable
	4	Water Quality Monitoring and Preservation	
45	4.1	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 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 recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Agreed to comply
46	4.2	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 recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.	Being complied. Reports of groundwater quality is enclosed as **Annexure-13**
47	4.3	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	PP has installed Surface Run-off Treatment Plant (SRTP) to collect all the runoff water during rain and after treatment water is

		check the water pollution due to surface run off.	being stored in rainwater harvesting pond and reuse in process.
48	4.4	Water meters shall be provided at the inlet to all unit processes in the plants.	Complied
49	4.5	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	We are focus on maximizing water recycling through wastewater treatment. We have adopted multiple recycling process of used water ie., Surface Runoff Treatment, Sewage water treatment.
50	4.6	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.	Effluent from New furnaces will be treated through ETP to meet zero liquid discharge.
51	4.7	All stockyards shall have impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains and catch pits to trap the run off material and shall be implemented as per the action plan submitted in EIA/EMP report.	Being followed
52	4.8	Rainwater harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.	Implemented
	5	Noise Monitoring and Prevention	
53	5.1	Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and amendments thereof, and report in this regard shall be submitted to the 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 **Annexure-14**.
54	5.2	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986viz. 75 dB(A) during daytime and 70 dB(A) during nighttime.	Being complied
	6	Energy Conservation Measures	
55	6.1	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, streetlights, parking around project area and maintaining the same regularly;	This will be done during the expansion project work.

56	6.2	Provide LED lights in their offices and residential areas.	Being complied
	7	Waste Management	
57	7.1	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.	Oil collection pits have been provided at bulk oil storage areas to collect oil spills.
58	7.2	Kitchen waste shall be composted or converted to biogas for further use.	Kitchen waste is being composted and use in plantation as a organic manure.
59	7.3	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and the Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.	Not Applicable
60	7.4	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 https://cpcb.nic.in/technical-guidelines-3/. 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.	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 **Annexure 15**.
61	7.5	A proper action plan must be implemented to dispose of the electronic waste generated in the industry.	Proper SOP is available for e-waste management and dispose to authorize recycler as per OSPCB guideline.
	8	Waste Management In Case of Sinter Plant	

62	8.1	SMS slag after metal recovery in waste recycling facility shall be conditioned and used for roadmaking, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.	Not applicable as currently no sinter plant is available. This will be commissioned during the project work.
63	8.2	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	Not applicable as currently no sinter plant is available. This will be commissioned during the project work.
64	8.3	Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.	Not applicable as currently no sinter plant is available. This will be commissioned during the project work.
	9	Green Belt	
65	9.1	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration by trees.	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.
66	9.2	Project proponent shall submit a study report on Decarbonization 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 measurable and monitorable with defined time frames.	Carbon Assessment has been done by external agency. Various projects proposed by the consultant related to reduction in carbon footprint are under review. Roadmap has been prepared. Copy is enclosed as **Annexure 16.**
67	9.3	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.	Being followed.
	10	Public Hearing and Human Health Issues	
68	10.1	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	The Emergency Preparedness Plan and Disaster Management Plan is available and implemented accordingly. Copy enclosed in **Annexure-17**.

69	10.2	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.	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.
70	10.3	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP. Safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Will be complied during construction period
71	10.4	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Regular Occupational health surveillance of the workers are being carried out.
	11	Environment Management	
72	11.1	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.
73	11.2	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. **Annexure 18.**

74	11.3	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.	Environment Cell consisting of qualified personnel headed by Chief HSE & S officer is already available to look after environmental management. Copy enclosed in **Annexure-19**.
75	11.4	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Integrated Regional Office of the MoEF&CC.	We have initiated the performance evaluation of all PCDs. An evaluation test shall be conducted on all pollution control systems after effectively running the equipment and the report shall be submitted to the Regional Office. However, the efficiency of the pollution control devices is being measured by OSPCB authorized lab.
	12	Miscellaneous	
76	12.1	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.	Being complied. Copy enclosed in **Annexure-20**.
77	12.2	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.	The copies of the Environment clearances has already submitted to the relevant offices as per the provision. Copy enclosed in **Annexure-21**.
78	12.3	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 complied
79	12.4	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.	Being complied

80	12.5	Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be implemented.	Being followed and same will continue
81	12.6	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 complied
82	12.7	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.	PP has submitted the environment statement for FY2024. Copy enclosed in **Annexure-22**
83	12.8	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.	Agreed to comply
84	12.9	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.	Agreed to abide
85	12.10	The recommendations of the approved Site-Specific Wildlife Management Plan (in case of involvement of Schedule-I species) shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.	Site specific Wildlife Management Plan has been prepared and submitted to DFO, Bhadrak for due approval and same will be implemented once the plan gets approved.
86	12.11	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	Environment related expenditure for previous EC has been displayed in company website and same will be done for the expansion EC.

		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.	
87	12.12	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).	Agreed to abide
88	12.13	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act,1986	Agreed to abide
89	12.14	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Agreed to abide
90	12.15	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time-bound manner shall implement these conditions.	Agreed to abide
91	12.16	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.	Agreed to abide
92	12.17	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Agreed 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_2 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_2 eq./ MT)	1.891	1.780	1.789	2.022	2.171	1.696

Annexure-2

OFFICE OF THE SUPERINTENDING ENGINEER, SALANDI CANAL DIVISION, BHADRAK

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

Letter No. 1018 /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,

Superintending Engineer,
Salandi Canal Division
Bhadrak
17/2/24

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.

Superintending Engineer,
Salandi Canal Division
Bhadrak
17/2/24

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 Received on	:	**31.10.2024**
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	:	**31.10.2024**	Test Completed on	:	**05.11.2024**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**54.8**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**27.9**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**16.0**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**19.2**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.68**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.9**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.006**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<3.1**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<0.16**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<3.1 ng/m^3, As <0.16 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.006 $\mu g/m^3$, CO-<0.1 mg/m^3

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***

Reviewed by

Approved by

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 Received on	:	**31.10.2024**
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	:	**31.10.2024**	Test Completed on	:	**05.11.2024**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**60.4**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**30.5**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**15.6**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**18.3**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.19**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.8**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.006**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<3.1**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<0.16**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<3.1 ng/m^3, As <0.16 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.006 $\mu g/m^3$, CO-<0.1 mg/m^3

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

TERMS AND CONDITION:-

1. *The Test result is relevant only to the item tested.*
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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***

Reviewed by

Approved by

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 Received on	:	**31.10.2024**
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	:	**31.10.2024**	Test Completed on	:	**05.11.2024**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**63.5**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**32.1**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**16.5**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**21.2**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.077**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.4**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.006**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<3.1**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<0.16**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<3.1 ng/m^3, As <0.16 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.006 $\mu g/m^3$, CO-<0.1 mg/m^3

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

TERMS AND CONDITION:-

1. *The Test result is relevant only to the item tested.*
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5. *The laboratory's responsibility under this report is limited to; proven willful negligence.*

*** End Report***

Reviewed by

Approved by

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 Received on	:	**31.10.2024**
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	:	**31.10.2024**	Test Completed on	:	**05.11.2024**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**59.2**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**30.6**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**19.2**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**23.1**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.070**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.5**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.006**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<3.1**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<0.16**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<3.1 ng/m^3, As <0.16 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.006 $\mu g/m^3$, CO-<0.1 mg/m^3

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

TERMS AND CONDITION:-

1. *The Test result is relevant only to the item tested.*
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5. *The laboratory's responsibility under this report is limited to; proven willful negligence.*

*** End Report***

Reviewed by

Approved by

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**56.0**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**28.2**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**16.9**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**18.7**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.65**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.8**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

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 willful negligence.*

*** End Report***

Reviewed by

Approved by

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**61.5**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**31.2**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**16.3**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**19.0**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.16**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.9**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

Remarks: *The above Sample test resultsare 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 willful negligence.*

*** End Report***

Reviewed by

Approved by

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**64.8**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**32.9**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**17.3**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**22.5**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.078**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.5**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

Remarks: *The above Sample test resultsare 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 willful negligence.*

*** End Report***

Reviewed by

Approved by

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**61.4**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**31.8**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**19.9**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**24.5**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.074**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.6**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

Remarks: *The above Sample test resultsare 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 willful negligence.*

*** End Report***

Reviewed by

Approved by

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**59.1**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**30.2**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**17.8**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**19.5**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.69**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**7.0**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

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.*
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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***

Reviewed by

Approved by

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**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**64.0**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**32.3**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**17.2**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**20.4**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.19**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.7**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

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

TERMS AND CONDITION:-

1. *The Test result is relevant only to the item tested.*
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5. *The laboratory's responsibility under this report is limited to; proven willful negligence.*

*** End Report***

Reviewed by

Approved by

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**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**66.3**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**33.2**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**18.2**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**24.0**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.081**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.8**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

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

TERMS AND CONDITION:-

1. *The Test result is relevant only to the item tested.*
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5. *The laboratory's responsibility under this report is limited to: proven willful negligence.*

*** End Report***

Reviewed by

Approved by

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**63.9**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**32.5**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**20.8**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**25.6**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.080**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.9**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

Remarks: *The above Sample test resultsare 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 willful negligence.*

*** End Report***

Reviewed by

Approved by

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**63.5**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**32.9**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**19.1**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**21.6**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.74**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**7.2**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

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

*** End Report***

Reviewed by

Approved by

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**66.2**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**33.5**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**18.6**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**21.5**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.22**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.9**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

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

TERMS AND CONDITION:-

1. *The Test result is relevant only to the item tested.*
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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***

Reviewed by

Approved by

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**68.9**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**34.8**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**19.6**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**25.5**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.085**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.5**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

Remarks: *The above Sample test resultsare 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***

Reviewed by

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**66.2**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**33.8**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**21.5**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**26.2**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.085**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**7.2**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

Remarks: *The above Sample test resultsare 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. BBSR

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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 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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**65.0**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**32.5**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**19.8**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**22.3**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.71**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**7.5**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/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***

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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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**67.4**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**33.9**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**19.1**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**22.2**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.24**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.7**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

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

TERMS AND CONDITION:-

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*** End Report***

Reviewed by

Approved by

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**67.5**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**33.9**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**19.8**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**24.7**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.088**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.8**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

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

TERMS AND CONDITION:-

1. *The Test result is relevant only to the item tested.*
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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***

Reviewed by

Approved by

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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**67.2**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**34.1**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**21.2**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**25.9**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.090**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**7.4**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 9 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

Remarks: *The above Sample test resultsare 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 willful negligence.*

*** 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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**64.7**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**32.9**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**20.3**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**23.4**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.74**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**7.7**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 6 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

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***

Reviewed by

Approved by

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 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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**68.9**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**34.6**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**19.8**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**23.0**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.25**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.9**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 6 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

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

TERMS AND CONDITION:-

1. *The Test result is relevant only to the item tested.*
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5. *The laboratory's responsibility under this report is limited to: proven willful negligence.*

*** 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, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	**100**	**68.6**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**34.5**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**20.4**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**25.3**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.094**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.6**
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	**400**	**<20**
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	**1**	**<0.02**
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	**20**	**<2.5**
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	**6**	**<1.0**
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	**5**	**<4**
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	**1**	**<0.5**

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 6 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

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

TERMS AND CONDITION:-

1. *The Test result is relevant only to the item tested.*
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5. *The laboratory's responsibility under this report is limited to; proven willful negligence.*

*** End Report***

Reviewed by

Approved by

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**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	National Ambient Air Quality Standard, CPCB, 18th Nov. 2009	Analysis Result
1	Particulate matter as PM_{10}	($\mu g/m^3$)	IS 5182 : Part 23: 2006, RA 2017	100	69.5
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	60	35.2
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	80	21.8
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	80	26.3
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	2	0.087
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	180	7.7
7	Ammonia as NH_3	($\mu g/m^3$)	IS 5182 (Part 25): 2018	400	<20
8	Lead as Pb	($\mu g/m^3$)	IS 5182(Part -22):2019	1	<0.02
9	Nickel as Ni	(ng/m^3)	IS 5182(Part -22):2019	20	<2.5
10	Arsenic as As	(ng/m^3)	IS 5182(Part -22):2019	6	<1.0
11	Benzene as C_6H_6	($\mu g/m^3$)	IS 5182 (Part 11):2006	5	<4
12	Benzo-a-pyrine as BaP	(ng/m^3)	IS 5182 (Part 12):2017	1	<0.5

BDL Values: SO_2< 4 $\mu g/m^3$, NO_X< 6 $\mu g/m^3$, O_3<5 $\mu g/m^3$, NH_3<20 $\mu g/m^3$, Ni<2.5 ng/m^3, As <1.0 ng/m^3, C_6H_6<4.0 $\mu g/m^3$, BaP<0.5 ng/m^3, Pb<0.02 $\mu g/m^3$, CO-<0.1 mg/m^3

Remarks: *The above Sample test resultsare 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***

Reviewed by

Approved by

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	:	**16.112024**	Test Completed on	:	**20.11.2024**

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

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 wilful negligence.*

*** End Report***

Reviewed by

Approved by

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 Agglomaration 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($\mu g/m^3$)	Respirable Particulate Matter ($\mu g/m^3$)
1	**Near Agglomeration area**	**298**	**98**
2	**Near MRP Area**	**263**	**90**
Standard For Crusher /Industrial Area		**1200**	**----**

TERMS AND CONDITION:-

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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***

Reviewed by

Approved by

Annexure-4

OFFICE OF THE
DIVISIONAL FOREST OFFICER, BHADRAK WILDLIFE DIVISION,
AT/P.O/P.S.-CHANDBALI, DISTRICT-BHADARAK, PIN-756133
Phone/Fax- 06786-220472, Email-dfo.bhadrakwl@odisha.gov.in

Letter No. 2299 /3F, Dt 06/05 /2024.

To

The Divisional Manager,
O.F.D.C. Ltd, Jajpur Road (C) Division.

Sub: **Permission for removal of trees available on plots within Factory premises of Ferro Alloys Plant at Randia, Bhadrak of Ferro Alloys Corporation Ltd. (FACOR) for expansion of Plant.**

Ref:- This Office Memo No.1809 dated 02.04.2024 & Memo No. 2208 dated 02.05.2024.

Sir,

With reference to the captioned subject and finalisation about the modalities of felling of tree, translocation of tree and raising of two times plantation for felling of tree in minutes of Tri-party co-ordination meeting held on 01.05.2024 at 01.00PM through VC mode, you are allowed to remove 936nos different species of tree from the premises of Ferro Alloys Corporation Ltd. at Randia, Bhadrak.

Further, before working please submit the plantation scheme for planting twice the number of trees to be felled approved by the G.M (Zone) OFDC Ltd and estimate for **936nos** tree felling operation and translocation of **40nos** trees to the Director (Growth Project), M/s-Ferro Alloys Corporation Ltd., Chandrasekharpur, Bhubaneswar under intimation to this office.

Yours faithfully,

6.5.24
Divisional Forest Officer,
Bhadrak (WL) Division.

Memo No. 2300 Dt. 06-05-2024

Copy forwarded to the Director (Growth Project), M/s-Ferro Alloys Corporation Ltd., Chandrasekharpur, Bhubaneswar for information and necessary action with reference to his office letter no.10 dt.01.04.2024 and this office memo no.2208 dated 02.05.2024. He is requested to make required fund provision at their level and deposit the same with the OFDC Ltd. for plantation of tree as per approved scheme submitted by the OFDC Ltd.

6.5.24
Divisional Forest Officer,
Bhadrak (WL) Division.

Memo No. 2301 Dt. 06-05-2024

Copy forwarded to the Range Officer, Bhadrak (WL) Range for information and necessary action with reference to his office memo no.216 dt.20.04.2024 & this office memo no.2208 dated v02.05.2024.

6.5.24
Divisional Forest Officer,
Bhadrak (WL) Division.

Annexure-5

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						

(S.K. Bansal)

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	1. 176 Health Camps conducted in core & periphery gram panchayat providing free doctor consultation and medicine under the CSR budget. 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. 3. FACOR also conducted awareness sessions on Menstrual Hygiene Management and Family Planning and distributed mask as a preventive measure from viral diseases. 4. Nutrition kit support provided to TB patients in Bhadrak.	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, Amla, 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
Social Infrastructure Management (Education & Skill Development)						
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 Aganwadi 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. **SMEs with market linkage:** 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) establised 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
					Grand Total	**220489721**

For Ferro Alloys Corporation Limited

Chief HSE Officer

Krutisunder Mohapatra

vedanta
transforming for good

FACOR

Ref. FACOR/HSE/GP/010/2024-25

Date: 07.05.2024

To,

Divisional Forest Officer (DFO)
Bhadrak Wildlife Division,
Chandbali, Bhadrak, Odisha, 756133

Subject: Expansion of Ferro Alloy Plant for High Carbon Ferro Chrome Production from 1,45,000 TPA (1 x 45 MVA & 1 x 33 MVA SAF) to 4,45,000 TPA (1 x 45 MVA, 1 x 33 MVA & 2 x 75 MVA SAFs), 11,800 TPA MRP along with New Installation of Raw Material Handling Facility and 7,00,000 TPA Pellet & Sintering Plant at Village- Randia, P.S-Bhadrak Rural, District-Bhadrak, Odisha ***Reg., Submission of Site-Specific Wildlife Conservation Plan***

Ref.: 1. ToR letter *vide* file No. J-11011/594/2008-IA-II(IND-I) & ToR Identification No. TO23A1005OR5639689N dated 08.11.2023 issued by MoEFCC, New Delhi.

2. Letter from o/o DFO, WLC, Bhadrak vide letter number 1899/3F, dated 04.04.2024, providing the flora fauna list of 10 KM radius of the project area.

Respected Sir,

With reference to the aforesaid subject and reference matter, we would like to apprise your goodself that M/s. Ferro Alloys Corporation Limited has applied for EC for the above said project at MoEF&CC and ToR letter has been issued by MoEFCC, New Delhi *vide* file No. J-11011/594/2008-IA-II(IND-I) & ToR Identification No. TO23A1005OR5639689N dated 08.11.2023. (Enclosed as ***Annexure 1***)

As per TOR conditions, we have requested to o/o DFO, WLC, Bhadrak, with letter number FACOR/HSE/GP/005/2023-24 dated 29.12.2024 to provide the authenticated list of flora & fauna in the 10 km radius of the project area and we have received the details from your good office *vide* letter number 1899/3F, dated 04.04.2024. (Enclosed as ***Annexure 2***).

In line with the above, we are herewith submitting the Site-Specific Wildlife Conservation Plan, along with budget for implementation of the same to your good office. (Enclosed as ***Annexure 3***)

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 / facor.ccp@vedanta.co.in
Website: www.facorgroup.in, CIN: U45201OR1955PLC008400.

We earnestly request to kindly recommend the same for approval from Principal Chief Conservator of Forests (Wildlife) & Chief Wildlife Warden, Bhubaneswar. In case any additional information or clarifications are required, we shall be pleased to provide to you.

Thanks, and with best regards,

For, **M/s Ferro Alloys Corporation Limited**

(K Kejriwal)

(Karan Kumar Kejriwal)

Power of Attorney Holder &
Authorised Signatory

CC:

1. The Principal Chief Conservator of Forests, (HoFF), Bhubaneswar, Odisha.
2. The Chief Wildlife Warden, Bhubaneswar, Odisha.

Encl.:

Annexure 1. ToR letter *vide* file No. J-11011/594/2008-IA-II(IND-I) dated 08.11.2023.

Annexure 2. List of flora & fauna within 10 KM radius of the project area vide letter number 1899/3F, dated 04.04.2024.

Annexure 3. Site Specific Wildlife Conservation Plan for Schedule-I species found in 10km radius (4 copies)

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 / facor.ccp@vedanta.co.in
Website: www.facorgroup.in, CIN: U45201OR1955PLC008400.

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FACOR

FACOR/HSE/GP/013/2024-25 **Date: 27.05.2024**

To,

The Deputy Director General of Forests (C)
Ministry of Environment, Forest & Climate Change
Integrated Regional Office
A/3, Chandrasekharpur,
Bhubaneswar-751023,
Odisha.

Sub: Action taken report for the observations of IRO visit report vide letter no. 101-499/2022/EPE, dated 24/05/2024 of M/s Ferro Alloys Corporation Limited, located at Village-Randia, District-Bhadrak, Odisha.

Ref: - Letter issued by MoEF & CC vide letter no. 101-499/2022/EPE, dated 24/05/2024.

Respected Sir,

With reference to the above cited subject, we are enclosing herewith our Action Plan for the identified observations given in your above-mentioned report and our sincere commitment to comply all the conditions as deemed fit for your kind perusal, necessitating closure of all your observations to your satisfaction.

This is for your kind information and necessary action please.

Thanking You

Yours Faithfully,
For **M/s Ferro Alloys Corporation Ltd.**

FERRO ALLOYS CORPORATION LTD. BHADRAK

Sanjay Pal
COO & Plant Manager

Encl: As above.

RECEIVED
28 MAY 2024
GOVT. OF INDIA
MoEF & CC Integrated R.O.
Bhubaneswar-751023

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 / facor.ccp@vedanta.co.in
Website: www.facorgroup.in, CIN: U45201OR1955PLC008400.

Annexure-8

VEDANTA No. 348

EGD. NO.-

MOB. NO. [redacted]

DATE OF EXAM... 29/01/25

VALIDITY UPTO... 28/01/26.

PMB/389/25

2569 9522934.

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 : Sushanta Kumar Rout Bharati Jena
- Employment no. : CCP0001642 Sex : Male/Female ✓
- Date of birth/age : 07-Feb-1984.
- Date of employment : 29-Jul-2008.
- Length in service : 17yrs.
- 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 – 96cm.

Expiration – 92cm

Respiratory Rate / min – 16/m.

Remarks if any – (N)

- Cardiovascular system :

Pulse rate – 86

Bp-

Heart sounds- (N) 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

NO

NO

NO

Sushmita Rout

Signature of the Employee

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

Signature of the Medical Officer

REGD. NO.- VEDANTA No...72.

MOB. NO. [redacted]

DATE OF EXAM. 28/1/25

VALIDITY UPTO. 27/1/26

FORM NO. 31-A

pmE/ 418/25

2396 2306 7094.

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 Emp
- Employment no. : 710868 Sex : Male/Female
- Date of birth/age : 06-03-1973
- Date of employment : 2-02-2001
- Length in service : 02.02.2002
- Nature of job : Production
- Identification marks : Left black mole & Right cutting
- General Survey :

Health : Good / Fair / Poor

Height - 171. Cm.

Weight - 88. Kg.

- Blood group : 'O' +
- Eye vision : Normal / Abnormal .....

Use of glass – Yes / No

- Hearing : Normal / Abnormal
- Respiratory system & chest measurement :

Inspiration – 88cm.

Expiration – 94cm NAD

Respiratory Rate / min –

Remarks if any – N

- Cardiovascular system :

Pulse rate – 84

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 –

- Hernias : Absent / Present
- Hydrocele : Absent / Present
- Present complain, if any —
- Summary of findings

  Heart disease

  Hypertension

  Diabetes

  T.B.

  Epilepsy

  Poisoning

  Dental

  } NAD

  Occupational disease, if any

- Recommendation, if any

  For any further investigation

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

x Pradeep Kumar

Signature of the Employee

Signature of the Medical Officer

VEDANTA No. 1687

REGD. NO.-

DATE OF EXAM. 30.1.25

MOB. NO. [redacted]

VALIDITY UPTO. 29.1.26

1211 | PME | 25

7991 2104 1751.

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 : Manoj Kumar Jena ✓ B. Jena
- Employment no. : CCP 000 1648. 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" +ve
- Eye vision : Normal / Abnormal .....

Use of glass – ~~Yes~~ / No

- Hearing : Normal / Abnormal
- Respiratory system & chest measurement :

Inspiration – 92 cm WNAD

Expiration – 89 cm

Respiratory Rate / min –

Remarks if any –

- Cardiovascular system :

Pulse rate – 67 136/85

Bp-

Heart sounds- 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
- Summary of findings

  Heart disease

  Hypertension

  Diabetes

  T.B.

  Epilepsy

  Poisoning

  Dental

  Occupational disease, if any

  NAD

- 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

edanta

edical hist

L NO:

Name of E

Age:

REGD. NO.- [redacted]

MOB. NO. [redacted]

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)

R.M. Chand.

- Name of the employee : Mr. Ajit Ku. Mohanty
- Employment no. : cep0001187 Sex : Male/Female
- Date of birth/age : 20/06/1985
- Date of employment : 8. July. 2014
- Length in service : 11 yrs (Tapper)
- Nature of job :
- Identification marks : Keepult
- General Survey :

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 NAP
  Respiratory Rate / min –
  Remarks if any – (N)
- Cardiovascular system :
  Pulse rate – 96
  Bp- 122/78
  Heart sounds- Normal.

- 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 –

- Hernias : Absent / Present
- Hydrocele : Absent / Present
- Present complain, if any NIL
- Summary of findings

  Heart disease

  Hypertension

  Diabetes

  T.B.

  Epilepsy

  Poisoning

  Dental

  Occupational disease, if any

NAD

- Recommendation, if any

  For any further investigation

Ajit Kumar Mukherjee

Signature of the Employee

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

Signature of the Medical Officer

Charge Chrome Plant

of M/S Ferro Alloys Corporation Limited

Truck mounted Mist Cannon with water sprinklers arrangement for road dust suppression.

Multi-Purpose Fire Tender equipped with water sprinklers & Mist cannon

vedanta
transforming for good

Annexure-10

FACOR

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 Chandersekharpur,
Bhubneswar-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(I) 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.

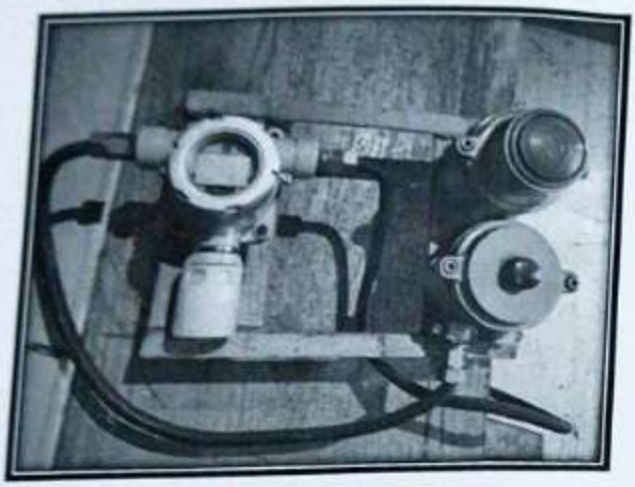
GOVT. OF INDIA
MoEF & CC Integrated R.O
Bhubaneswar-751023
09 MAY 2024
RECEIVED

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

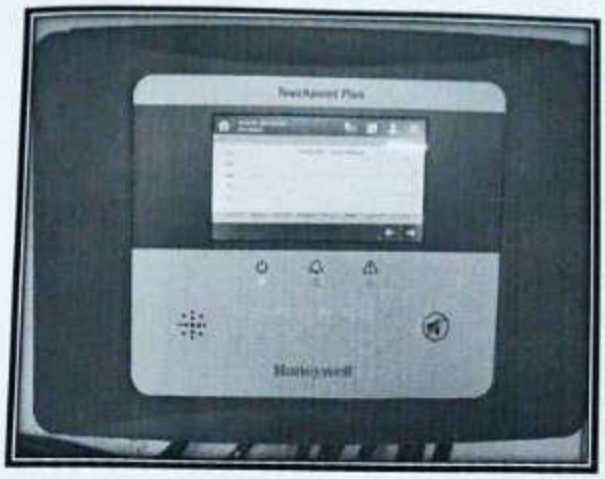
CO Sensor at Furnace Top Level

Charge Chrome Plant

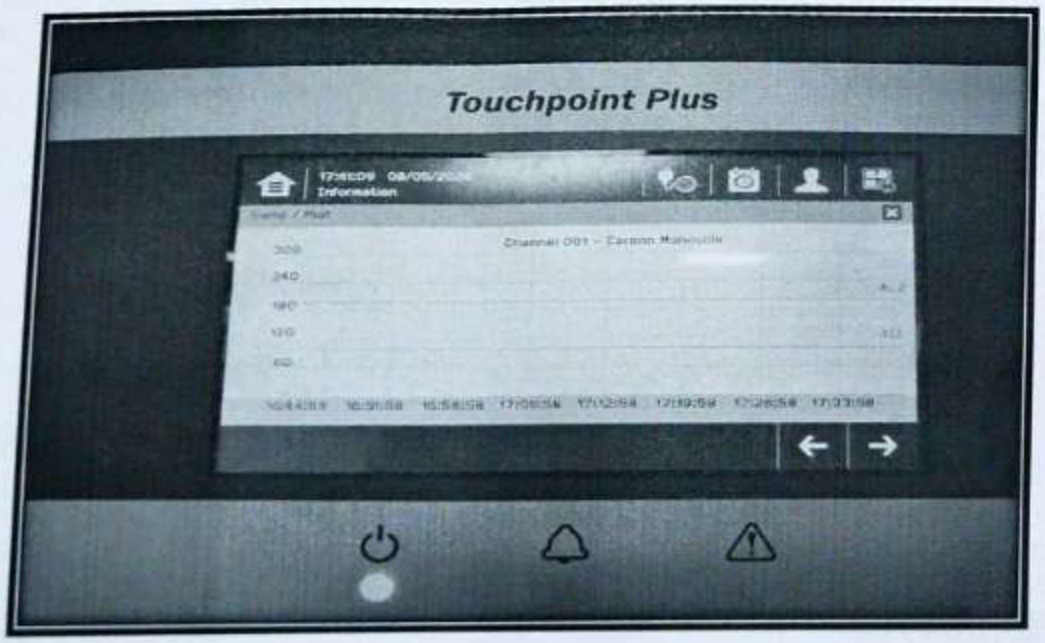
Area: 33 MVA Furnace



CO Sensor installed at 33 MVA furnace top level.



Controller System at 33 MVA Furnace Control Room.

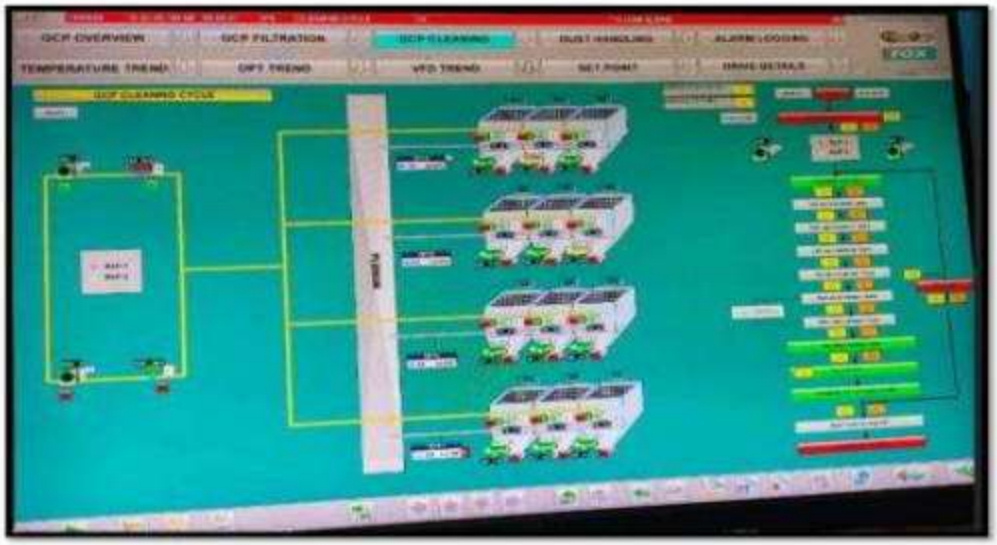


Controller Display with Data Trend from Sensor

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.

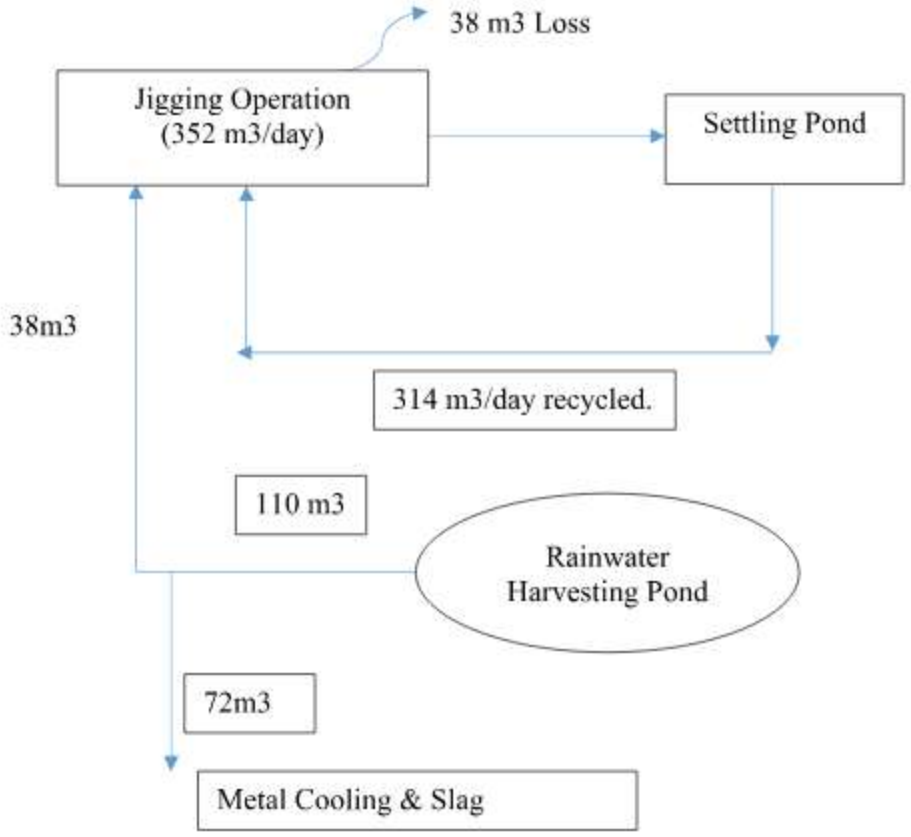


Automated GCP Cleaning Process in DCS

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



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	:	**16.112024**	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 23rd Ed.2017 : 2120 B, C	5	15	<5
2	Odour	--	APHA 23rd Ed.2017 :2120 B	Agreeable	Agreeable	Agreeable
3	pH at 25°C	--	APHA 23rd Ed.2017 : 4500H+ B	6.5-8.5	6.5-8.5	7.32
4	Taste	--	APHA 23rd 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 23rd 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_3-N)	mg/l,Max	APHA 4500 NH_3 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 23rd Ed.2017 : 3500Ca B	75	200	44.6
7	Chloramines (as Cl_2)	mg/l,Max	APHA 4500 -Cl G	4.0	4.0	ND
8	Chloride (as Cl)	mg/l,Max	APHA 23rd Ed.2017 : 4500Cl- 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 23rd Ed.2017 : 3111, B	1.0	1.0	0.24

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_3)	mg/l,Max	APHA 4500 NO_3^- E	45	45	0.83
17	Phenolic Compounds(as C_6H_5OH)	mg/l,Max	APHA 5530 B.D	0.001	0.002	<0.001
18	Selenium (as Se)	mg/l,Max	APHA 23rd 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_4)	mg/l,Max	APHA 4500 SO_4^{2-} E	200	400	13.6
21	Sulphide (as H_2S)	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 $CaCO_3$)	mg/l,Max	APHA 23rd Ed.2017 : 2340 C	200	600	154
24	Zinc (as Zn)	mg/l,Max	APHA 23rd Ed.2017: 3111 B	5	15	0.21
1	Chromium (as Cr^{+6})	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
2	Cadmium as(Cd)	mg/l,Max	APHA 23rd Ed.2017: 3111 B	0.003	0.003	<0.003
3	Cyanide as (CN-)	mg/l,Max	APHA 23rd Ed.2017: 4500 CN^- C.D	0.05	0.05	<0.01
4	Lead as(Pb)	mg/l,Max	APHA 23rd Ed.2017 3111 B	0.1	0.1	<0.1
5	Mercury as (Hg)	mg/l,Max	APHA 23rd 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 23rd Ed.2017: 3114 B	0.01	0.01	<0.005
8	Polychlorinated biphenyls	mg/l,Max	APHA 23rd Ed.2017 :6440 B	0.0005	0.0005	ND
9	Polyaromatic hydrocarbons (PAH)	mg/l,Max	APHA 23rd 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
Bacteriological Parameter						
1	Total Coliform	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample		ABSENT

	PESTICIDES				
1	Endosulfan â	µg/l,Max	APHA 23rd edition: 6630 C	0.4	<0.005
2	Endosulfan ß	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	Chloropyriphos	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

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 23rd Ed,2017 : 2120 B, C	**5**	**15**	<5
2	**Odour**	--	APHA 23rd Ed,2017 :2120 B	**Agreeable**	**Agreeable**	Agreeable
3	**pH at 25°C**	--	APHA 23Rd Ed,2017 : 4500H+ B	**6.5-8.5**	**6.5-8.5**	7.33
4	**Taste**	--	APHA 23rd 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 23rd 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_3.N)**	**mg/l,Max**	APHA 4500 NH_3 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 23rd Ed,2017 : 3500Ca B	**75**	**200**	40.6
7	**Chloramines (as Cl_2)**	**mg/l,Max**	APHA 4500 -Cl G	**4.0**	**4.0**	ND
8	**Chloride (as Cl)**	**mg/l,Max**	APHA 23rd Ed,2017 : 4500Cl- 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 23rd Ed,2017 : 3111, B	**1.0**	**1.0**	0.38

PESTICIDES					
1	Endosulfan à	µg/l,Max	APHA 23rd edition: 6630 C	0.4	<0.005
2	Endosulfan ß	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	Chloropyriphos	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:

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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_3)	mg/l,Max	APHA 4500 NO_3^- E	45	45	0.83
17	Phenolic Compounds(as C_6H_5OH)	mg/l,Max	APHA 5530 B,D	0.001	0.002	<0.001
18	Selenium (as Se)	mg/l,Max	APHA 23rd 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_4)	mg/l,Max	APHA 4500 SO_4^{2-} E	200	400	15.8
21	Sulphide (as H_2S)	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 $CaCO_3$)	mg/l,Max	APHA 23rd Ed,2017 : 2340 C	200	600	150
24	Zinc (as Zn)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	5	15	0.27
1	Chromium (as Cr^{+6})	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
2	Cadmium as(Cd)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.003	0.003	<0.003
3	Cyanide as (CN-)	mg/l,Max	APHA 23rd Ed,2017: 4500 CN^- C,D	0.05	0.05	<0.01
4	Lead as(Pb)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	0.1	<0.1
5	Mercury as (Hg)	mg/l,Max	APHA 23rd 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 23rd Ed,2017: 3114 B	0.01	0.01	<0.005
8	Polychlorinated biphenyls	mg/l,Max	APHA 23rd Ed,2017 :6440 B	0.0005	0.0005	ND
9	Polyaromatic hydrocarbons (PAH)	mg/l,Max	APHA 23rd 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
Bacteriological Parameter						
1	Total Coliform	MPN/100 ml	APHA 23rd 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 23rd Ed,2017 : 2120 B, C	5	15	<5
2	Odour	--	APHA 23rd Ed,2017 :2120 B	Agreeable	Agreeable	Agreeable
3	pH at 25°C	--	APHA 23rd Ed,2017 : 4500H+ B	6.5-8.5	6.5-8.5	7.36
4	Taste	--	APHA 23rd 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 23rd 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_3.N)	mg/l,Max	APHA 4500 NH_3 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 23rd Ed,2017 : 3500Ca B	75	200	39.6
7	Chloramines (as Cl_2)	mg/l,Max	APHA 4500 –Cl G	4.0	4.0	ND
8	Chloride (as Cl)	mg/l,Max	APHA 23rd Ed,2017 : 4500Cl- 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 23rd 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_3)	mg/l,Max	APHA 4500 NO_3^- E	45	45	0.75
17	Phenolic Compounds(as C_6H_5OH)	mg/l,Max	APHA 5530 B,D	0.001	0.002	<0.001
18	Selenium (as Se)	mg/l,Max	APHA 23rd 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_4)	mg/l,Max	APHA 4500 SO_4^{2-} E	200	400	10.6
21	Sulphide (as H_2S)	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 $CaCO_3$)	mg/l,Max	APHA 23rd Ed,2017 ; 2340 C	200	600	150
24	Zinc (as Zn)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	5	15	0.22
1	Chromium (as Cr^{+6})	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
2	Cadmium as(Cd)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.003	0.003	<0.003
3	Cyanide as (CN-)	mg/l,Max	APHA 23rd Ed,2017: 4500 CN^- C,D	0.05	0.05	<0.01
4	Lead as(Pb)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	0.1	<0.1
5	Mercury as (Hg)	mg/l,Max	APHA 23rd 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 23rd Ed,2017: 3114 B	0.01	0.01	<0.005
8	Polychlorinated biphenyls	mg/l,Max	APHA 23rd Ed,2017 :6440 B	0.0005	0.0005	ND
9	Polyaromatic hydrocarbons (PAH)	mg/l,Max	APHA 23rd 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
Bacteriological Parameter						
1	Total Coliform	MPN/100 ml	APHA 23rd 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 ß	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	Chloropyriphos	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

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 23rd Ed,2017 : 2120 B, C	5	15	<5
2	Odour	--	APHA 23rd Ed,2017 :2120 B	Agreeable	Agreeable	Agreeable
3	pH at 25°C	--	APHA 23rd Ed,2017 : 4500H+ B	6.5-8.5	6.5-8.5	7.18
4	Taste	--	APHA 23rd 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 23rd 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_3,N)	mg/l,Max	APHA 4500 NH_3 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 23rd Ed,2017 : 3500Ca B	75	200	40.8
7	Chloramines (as Cl_2)	mg/l,Max	APHA 4500 -Cl G	4.0	4.0	ND
8	Chloride (as Cl)	mg/l,Max	APHA 23rd 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 23rd Ed,2017 : 3111, B	1.0	1.0	0.21

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_3)	mg/l,Max	APHA 4500 NO_3^- E	45	45	0.79
17	Phenolic Compounds(as C_6H_5OH)	mg/l,Max	APHA 5530 B,D	0.001	0.002	<0.001
18	Selenium (as Se)	mg/l,Max	APHA 23rd 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_4)	mg/l,Max	APHA 4500 SO_4^{2-} E	200	400	12.9
21	Sulphide (as H_2S)	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 $CaCO_3$)	mg/l,Max	APHA 23rd Ed,2017: 2340 C	200	600	168
24	Zinc (as Zn)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	5	15	0.24
1	Chromium (as Cr^{+6})	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
2	Cadmium as(Cd)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.003	0.003	<0.003
3	Cyanide as (CN-)	mg/l,Max	APHA 23rd Ed,2017: 4500 CN- C,D	0.05	0.05	<0.01
4	Lead as(Pb)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	0.1	<0.1
5	Mercury as (Hg)	mg/l,Max	APHA 23rd 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 23rd Ed,2017: 3114 B	0.01	0.01	<0.005
8	Polychlorinated biphenyls	mg/l,Max	APHA 23rd Ed,2017 :6440 B	0.0005	0.0005	ND
9	Polyaromatic hydrocarbons (PAH)	mg/l,Max	APHA 23rd 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
Bacteriological Parameter						
1	Total Coliform	MPN/100 ml	APHA 23rd 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 ß	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	Chloropyriphos	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

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 23rd Ed,2017 : 2120 B, C	5	15	<5
2	Odour	--	APHA 23rd Ed,2017 :2120 B	Agreeable	Agreeable	Agreeable
3	pH at 25°C	--	APHA 23Rrd Ed,2017 : 4500H+ B	6.5-8.5	6.5-8.5	7.28
4	Taste	--	APHA 23rd 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 23rd 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_3,N)	mg/l,Max	APHA 4500 NH_3 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 23rd Ed,2017 : 3500Ca B	75	200	44.1
7	Chloramines (as Cl_2)	mg/l,Max	APHA 4500 -Cl G	4.0	4.0	ND
8	Chloride (as Cl)	mg/l,Max	APHA 23rd 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 23rd 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_3)	mg/l,Max	APHA 4500 NO_3^- E	45	45	0.89
17	Phenolic Compounds(as C_6H_5OH)	mg/l,Max	APHA 5530 B,D	0.001	0.002	<0.001
18	Selenium (as Se)	mg/l,Max	APHA 23rd 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_4)	mg/l,Max	APHA 4500 SO_4^{2-} E	200	400	14.2
21	Sulphide (as H_2S)	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 $CaCO_3$)	mg/l,Max	APHA 23rd Ed,2017 : 2340 C	200	600	142
24	Zinc (as Zn)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	5	15	0.23
1	Chromium (as Cr^{+6})	mg/l,Max	APHA 3500Cr B	0.05	0.05	<0.05
2	Cadmium as(Cd)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.003	0.003	<0.003
3	Cyanide as (CN-)	mg/l,Max	APHA 23rd Ed,2017: 4500 CN^- C,D	0.05	0.05	<0.01
4	Lead as(Pb)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	0.1	<0.1
5	Mercury as (Hg)	mg/l,Max	APHA 23rd 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 23rd Ed,2017: 3114 B	0.01	0.01	<0.005
8	Polychlorinated biphenyls	mg/l,Max	APHA 23rd Ed,2017 :6440 B	0.0005	0.0005	ND
9	Polyaromatic hydrocarbons (PAH)	mg/l,Max	APHA 23rd 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
Bacteriological Parameter						
1	Total Coliform	MPN/100 ml	APHA 23rd 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 ß	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	Chloropyriphos	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:

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 Received on	:	**31.10.2024**
Sample Description	:	**NOISE**	Sampling Procedure	:	IS 9989: 2020
Sampling done by :	:	**Ashutosh Mohanty**			

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

Reviewed by:

Approved by:

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 Received on	:	**16.11.2024**
Sample Description	:	**NOISE**	Sampling Procedure	:	IS 9989: 2020
Sampling done by :	:	**Ashutosh Mohanty**			

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

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Reviewed by:

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by:

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 Received on	:	**27.12.2024**
Sample Description	:	**NOISE**	Sampling Procedure	:	IS 9989: 2020
Sampling done by :	:	**Ashutosh Mohanty**			

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

Reviewed by:

Approved by:

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 Received on	:	**25.01.2025**
Sample Description	:	**NOISE**	Sampling Procedure	:	IS 9989: 2020
Sampling done by :	:	**Ashutosh Mohanty**			

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. BBSR

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Approved by

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 Received on	:	**21.02.2025**
Sample Description	:	**NOISE**	Sampling Procedure	:	IS 9989: 2020
Sampling done by :	:	**Ashutosh Mohanty**			

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

Reviewed by:

Approved by:

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 Received on	:	**26.03.2025**
Sample Description	:	**NOISE**	Sampling Procedure	:	IS 9989: 2020
Sampling done by :	:	**Ashutosh Mohanty**			

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**

Reviewed by:

Approved by:

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 shard 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 AWARNESS CAMPAIGNS

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

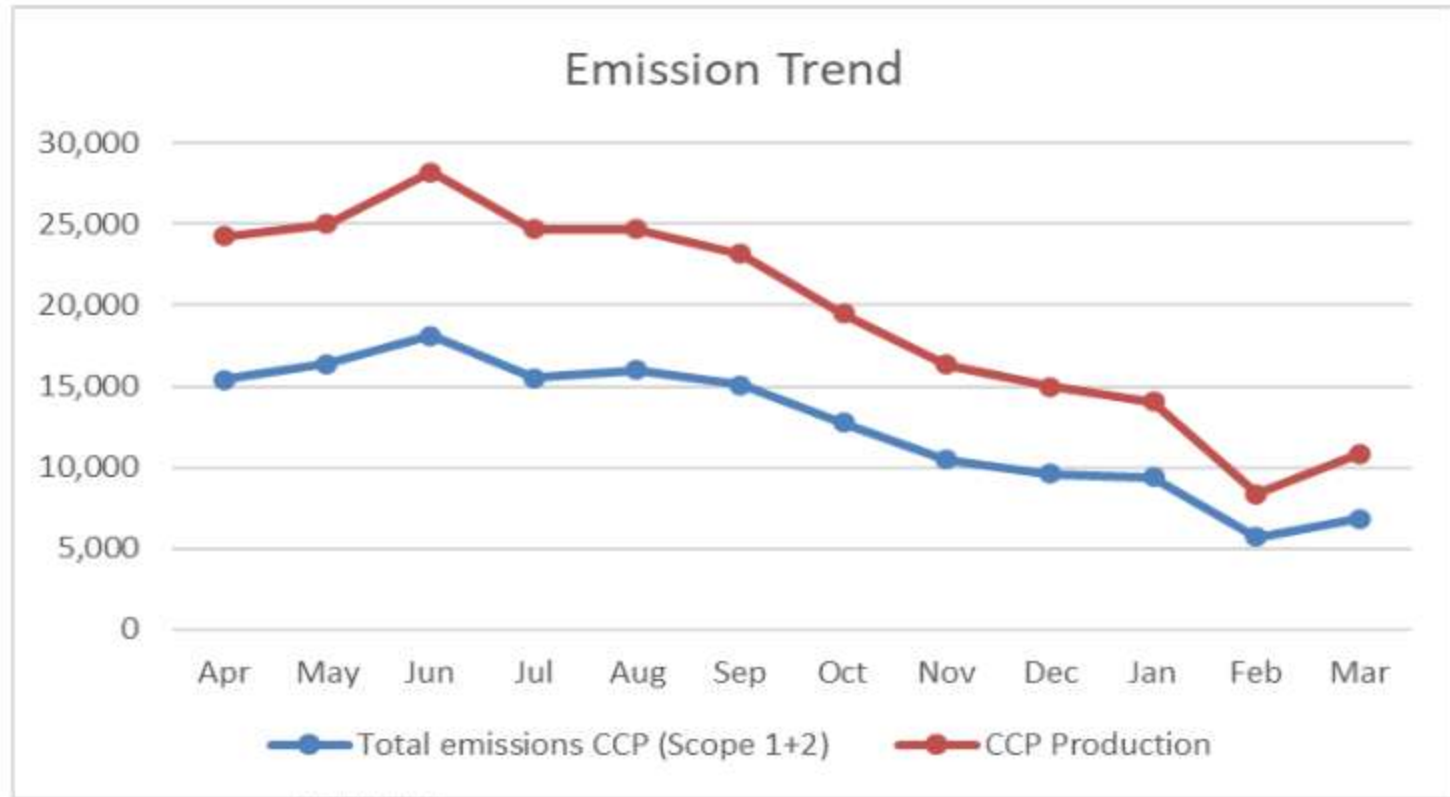
Key Assumptions:

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

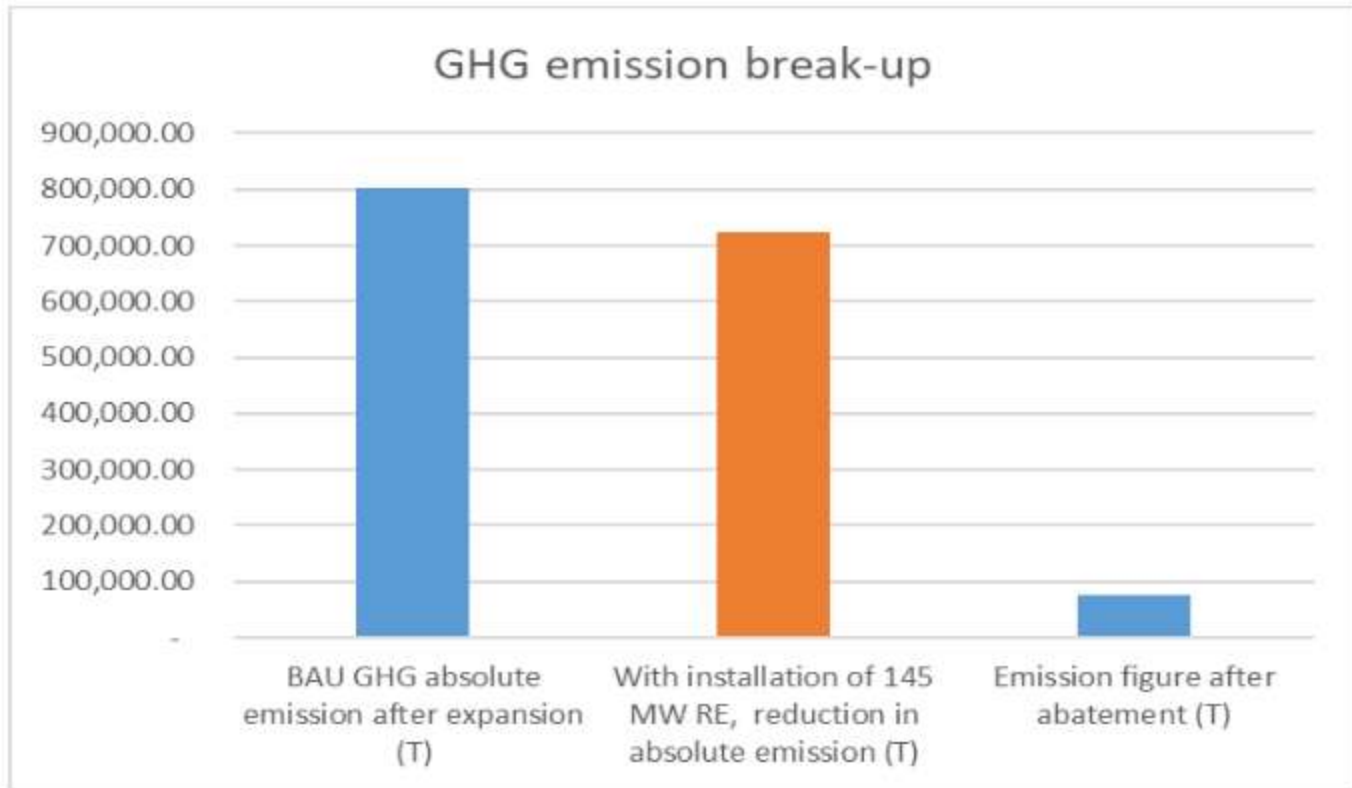
GHG intensity= 1.82



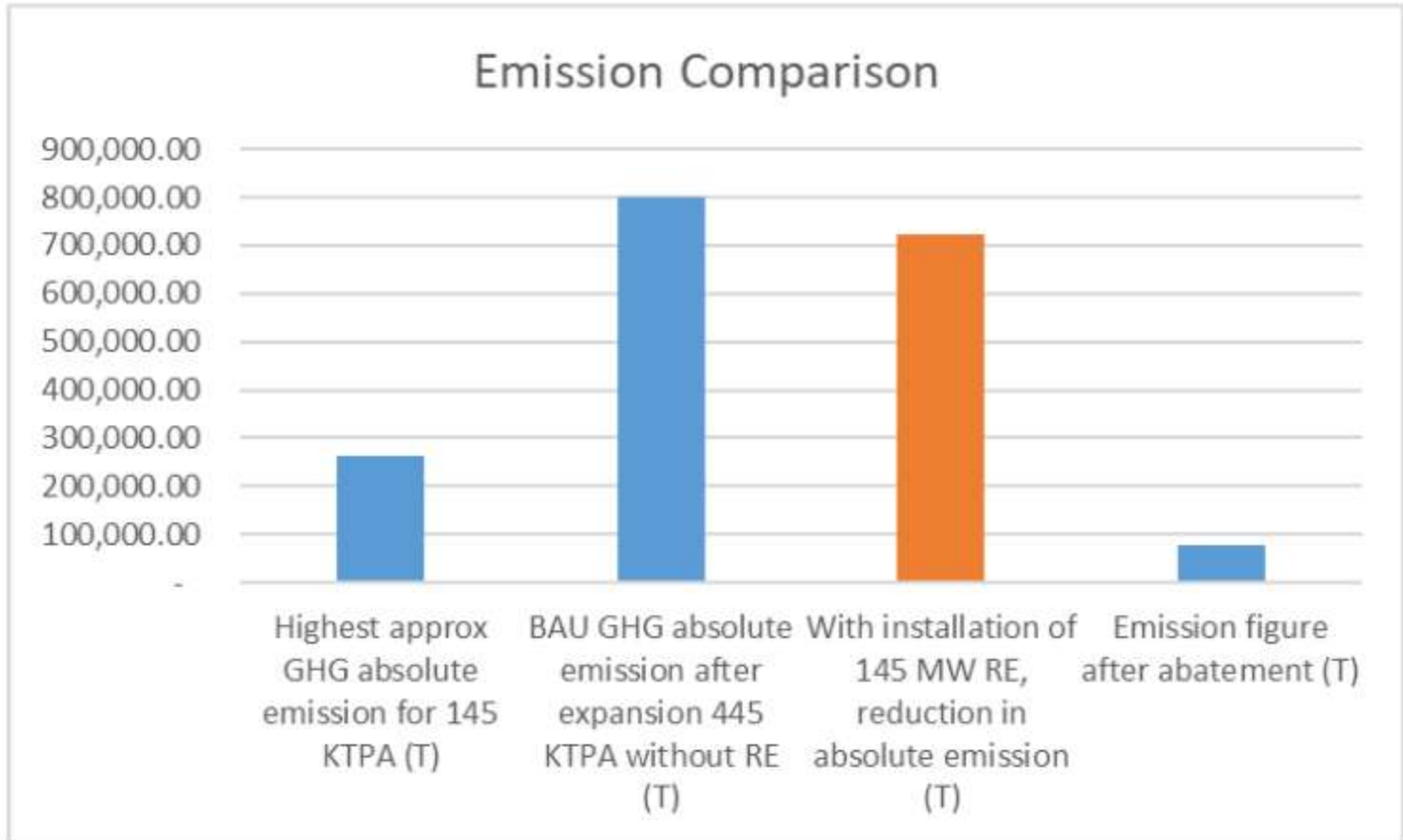
Way Forward

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
Emission figure after abatement (T)	**76,531.00**



Emission Comparison



THANKS!

https://www.facorgroup.in/

Scan & Visit

EMERGENCY RESPONSE SITE SPECIFIC PLAN OF CHARGE CHROME PLANT & POWER PLANT

INDEX

LEADERS VOICE

SCHEMATIC DIAGRAM OF COMMUNICATION SYSTEM

EMERGENCY COMMAND STRUCTURE FOR CCP

Amendment of Emergency Command Structure:

Date: 26.06.2024

Works Main Controller (WMC)

1. Sanjay Pal, Chief Operating Officer: 9928015751

Alternate

2. Gyanendra Nath, Technical Director Operations: 9099929901

Site Incident Controller (SIC)

1. Subhendu Barik, Head Operation: 7381097394

Alternate

2. Soumya Ranjan Sahoo, Manager, Production: 7978049190

Co-Ordinator

1. Krutisunder Mohapatra (Chief HSE): 7894405442
2. Sanjeeb Patra (Safety Officer): 7735738480
3. Amiya Ranjan Das (Dy. Head CSR): 9437340469

Auxiliary Team Leader (ATL)
(HR / Personnel)

1. Suniti Kumar Dhal (CHRO): 9556345050

Alternate

2. Sanjaya Kumar Pradhan, Dy Head IR & BPM: 9981440811

Members:

1. Manas Mohan Mohapatra (IR):8455085408
2. Bhakta Parida (Admin.): 7978997040
3. Saubhagya Ranjan Sahoo (HSE): 9937251412
4. Bijay Behera (Admin.): 7978760915
5. Amulya Pattjoshi (Admin): 9437775161

Combat Team Leader (CTL)
(Operation)

1. Smruti Ranjan Lenka (Lead. Furnace): 7008237514

Alternate

2. Barun Ojha (Production In-charge-Agglo): 9778046295

Members:

1. Dibyasakti Bhuyan (Electrical): 7735736429
2. Debakanta Biswal (Elect):7735736428
3. Basista Bej (Mech): 9556844730
4. Rakesh Dhal (Mech.): 7735736433
5. Amaresh Mishra (Shift In charge. Furnace): 9430436724

Rescue Team Leader (RTL)
(Medical, Fire & Security)

1. Jayant Kumar Das (Dy. CSO): 7900214111

Alternate

2. Bijaya Rout (ASO): 7008651825

Members:

1. Indiverker (Security):7024113321
2. Pabitra Jena (Civil): 7504990148
3. Sk M.Rahman (HSE):9437031486
4. Anuj Kumar (HSE): 7903077468
5. Manas Ranjan Swain (OHC): 7008757641

Sanjay Pal
Factory Manager (CCP)

EMERGENCY COMMAND STRUCTURE OF FPL

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 andstakeholders including the sharing of good practices throughout the organization

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

LimitedDate: 27th July

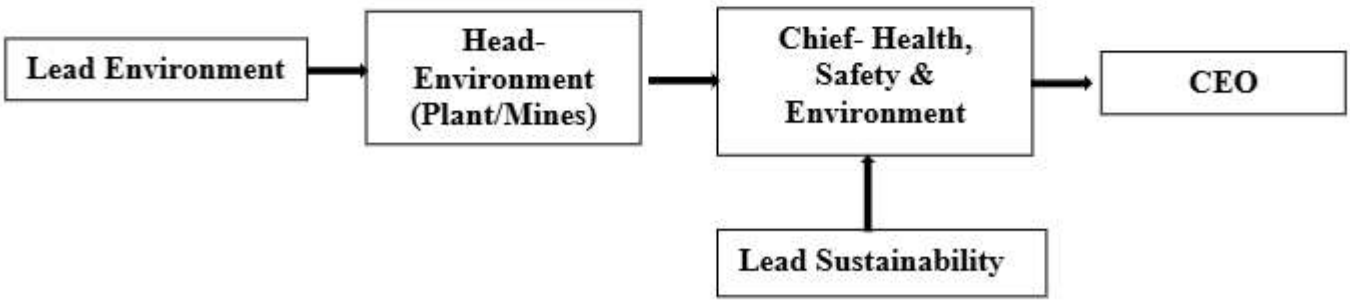
2023

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).



ଭାରତୀୟ ନେଭି ସଞ୍ଚାଳନ ଯେପରି ଶୀଘ୍ର ଆରୋଗ୍ୟ ହରିନ୍ଦନ ଅସୁସ୍ଥତାବଶତଃ ଲାଭ କରିବେ ସେଥିପାଇଁ ଧ୍ୟାନ ଭୁବନେଶ୍ୱରର ଏକ ଘରୋଇ ଦେବାକୁ ସେମାନଙ୍କୁ ପରାମର୍ଶ ହସ୍ପିଟାଲରେ ଚିକିତ୍ସିତ ହେଉଛନ୍ତି। ଦେଇଛନ୍ତି। ଏହି ସାକ୍ଷାତ ମୁଖ୍ୟମନ୍ତ୍ରୀ ମୋହନ ଚରଣ ସମୟରେ ହରିନ୍ଦନଙ୍କ ପୁତ୍ର ମାଝୀ ମଙ୍ଗଳବାର ଗାଙ୍କୁ ଓଥା ରାଜ୍ୟ ଆଇନ, ପୂର୍ତ୍ତ ଓ ହସ୍ପିଟାଲରେ ସାକ୍ଷାତ କରି ଆଶୁ ଅବକାରୀ ମନ୍ତ୍ରୀ ପୃଥ୍ୱୀରାଜ ଆରୋଗ୍ୟ କାମନା କରିଛନ୍ତି। ହରିନ୍ଦନ ଉପସ୍ଥିତ ଥିଲେ।

ଆଜି ରତ୍ନଭଣ୍ଡାର ନିରୀକ୍ଷଣ କରିବ ଏଏସ୍‌ଆଇ | ଖୋଲିପାରେ ଗୁପ୍ତ ସୁଡ଼ଙ୍ଗ, କୋଠରି ରହସ୍ୟ

ପୁରୀ, ୧୭।୯ (ଅଭିଜିତ୍ କୁମାର ମହାନ୍ତି)

ଭାରତୀୟ ପ୍ରତ୍ନତାତ୍ତ୍ୱିକ ସର୍ବେକ୍ଷଣ ସଂସ୍ଥା (ଏଏସ୍‌ଆଇ) ପକ୍ଷରୁ ବୁଧବାର ଶ୍ରୀମନ୍ଦିର ରତ୍ନଭଣ୍ଡାରର ପ୍ରାରମ୍ଭିକ ନିରୀକ୍ଷଣ କରାଯିବ। ରାଜ୍ୟ ସରକାରଙ୍କ ଅନୁମୋଦନ ପରେ ଏଏସ୍‌ଆଇର ଅତିରିକ୍ତ ମହାନିର୍ଦ୍ଦେଶକଙ୍କ ନେତୃତ୍ୱରେ ଏହି ପ୍ରାରମ୍ଭିକ ନିରୀକ୍ଷଣ ଓ ବୈଜ୍ଞାନିକ ଯାଞ୍ଚ ହେବ। ଏଥିଲାଗି ଉଭୟ ଶ୍ରୀମନ୍ଦିର ପ୍ରଶାସନ ଏବଂ ଏଏସ୍‌ଆଇ ପକ୍ଷରୁ ସମସ୍ତ ପ୍ରସ୍ତୁତି ଓ ପ୍ରକ୍ରିୟା ସରିଛି। ପୂର୍ବରୁ ରାଜ୍ୟ ସରକାରଙ୍କ ଅନୁମୋଦିତ ମାର୍ଗଦର୍ଶିକା (ଏସ୍‌ଓପି) ଅନୁସାରେ କାହାର ଓ ଭିତର ରତ୍ନଭଣ୍ଡାରରୁ ସମସ୍ତ ଅଳଙ୍କାର ଆସ୍ଥାୟୀ ଖୁଙ୍ଗୁଡ଼ାକୁ ସ୍ଥାନାନ୍ତର ହୋଇସାରିଛି। ସେହିପରି ଛାତି ଥାଲମିରା ଓ ସିଂହଦୁଆରୁ ସ୍ଥାନାନ୍ତର କରାଯାଇସାରିଛି। ଏହାପରେ ଏଏସ୍‌ଆଇ ସଂରକ୍ଷଣ ଓ ମରାମତି କାର୍ଯ୍ୟ ସୁରୁ କରିବ। ଏଏସ୍‌ଆଇ ଅତିରିକ୍ତ ମହାନିର୍ଦ୍ଦେଶକଙ୍କ ନେତୃତ୍ୱରେ ଏହି ପ୍ରାରମ୍ଭିକ ନିରୀକ୍ଷଣ ଓ ବୈଜ୍ଞାନିକ ଯାଞ୍ଚ ହେବ। ଏଥିଲାଗି ଉଭୟ ଶ୍ରୀମନ୍ଦିର ପ୍ରଶାସନ ଏବଂ ଏଏସ୍‌ଆଇ ପକ୍ଷରୁ ସମସ୍ତ ପ୍ରସ୍ତୁତି ଓ ପ୍ରକ୍ରିୟା ସରିଛି। ପୂର୍ବରୁ ରାଜ୍ୟ ସରକାରଙ୍କ ଅନୁମୋଦିତ ଏହାଦ୍ୱାରା ଯେପରି ଶ୍ରୀମନ୍ଦିର ଉପରେ ଦୈନିସି ପ୍ରତିକୂଳ ପ୍ରଭାବ ନ ପଡ଼ିବ ସେଥିପ୍ରତି ଧ୍ୟାନ ଦେବାକୁ ଏଏସ୍‌ଆଇକୁ ମଧ୍ୟ ସୁଝାଯାଇଥିଲା। ମୂର୍ଚ୍ଛନା ଅତ୍ୟାଧୁନିକ ତଥା ବୈଜ୍ଞାନିକ ଯାଞ୍ଚ ପରେ ଏଏସ୍‌ଆଇ ରତ୍ନଭଣ୍ଡାରର ସଂରକ୍ଷଣ ଓ ମରାମତି କାର୍ଯ୍ୟ ଆରମ୍ଭ କରିବ। ଏହାପରେ ଏଏସ୍‌ଆଇକୁ ସଂରକ୍ଷଣ ଓ ମରାମତି କାର୍ଯ୍ୟ ସମ୍ପନ୍ନ ହେବା ପାଇଁ ଶ୍ରୀମନ୍ଦିର ପ୍ରଶାସନ ଅନୁରୋଧ କରିଥିଲା। ତେବେ ମରାମତି ପୂର୍ବରୁ ଅତ୍ୟାଧୁନିକ ଯନ୍ତ୍ରକୌଶଳ ବ୍ୟବହାର କରି ସର୍ଭେ କରାଯିବାକୁ ଶ୍ରୀମନ୍ଦିର ପ୍ରଶାସନ ପକ୍ଷରୁ ଅନୁରୋଧ କରାଯାଇଥିଲା। ଏଜାତୀୟ ଯେପରି ଶ୍ରୀମନ୍ଦିର ପ୍ରଶାସନ ଓ ଏଏସ୍‌ଆଇ ପକ୍ଷରୁ ସମସ୍ତ ପ୍ରସ୍ତୁତି ଓ ପ୍ରକ୍ରିୟା ସରିଛି। ପୂର୍ବରୁ ରାଜ୍ୟ ସରକାରଙ୍କ ଅନୁମୋଦିତ ଏହାଦ୍ୱାରା ଯେପରି ଶ୍ରୀମନ୍ଦିର

ଗୀତିନାଟ୍ୟ ନିର୍ଦ୍ଦେଶକ ନାରାୟଣ ସିଂଙ୍କ ପରଲୋକ

କଟକ, ୧୭।୯ (କାର୍ତ୍ତିକ ସାହୁ)

ବିଶିଷ୍ଟ ଅଭିନେତା, ନାଟ୍ୟ ନିର୍ଦ୍ଦେଶକ ତଥା ହାରମୋନିଟର ଅବସରପ୍ରାପ୍ତ କର୍ମଚାରୀ ନାରାୟଣ ସିଂ(୭୮)ଙ୍କର ମଙ୍ଗଳବାର ପ୍ରତ୍ୟୁଷରୁ ପରଲୋକ ହୋଇଯାଇଛି। ସେ କିଛିଦିନ ଧରି କର୍କଟ ରୋଗରେ ପୀଡ଼ିତ ଥାଇ

ADVERTISEMENT IN ODIA NEWS PAPER- DHARITRI

DATE OF PUBLISH- 18.09.2024

ADVERTISEMENT IN ENGLISH NEWS PAPER- THE NEW INDIAN EXPRESS

DATE OF PUBLISH- 18.09.2024

Intimation to the Stakeholders Regarding the grant of EC			
EC Identification Number		EC24A1005OR5164847N	
Date of grant of EC		13-Sep-24	
Project Description		Expansion of Ferro Alloy Plant for High Carbon Ferro Chrome Production from 1,45,000 TPA (1 x 45 MVA & 1 x 33 MVA SAF) to 4,45,000 TPA (1 x 45 MVA, 1 x 33 MVA & 2 x 75 MVA SAFs), 11,800 TPA MRP along with the new Installation of Raw Material Handling Facility and 7,00,000 TPA Pellet & Sintering Plant at Village- Randia, P.S-Bhadrak Rural, District-Bhadrak, Odisha by M/s. Ferro Alloys Corporation Limited.	
SN	Letter Number	Date	Authority / Office
1	FACOR/HSE/GP/024/2024-25	3-Oct-24	MS, OSPCB, BBSR
2	FACOR/HSE/GP/025/2024-25	3-Oct-24	RO, OSPCB, Balasore
3	FACOR/HSE/GP/026/2024-25	3-Oct-24	Director, Factory & Boiler,BBSR
4	FACOR/HSE/GP/027/2024-25	3-Oct-24	District Collector,Bhadrak
5	FACOR/HSE/GP/028/2024-25	3-Oct-24	Tahasildar,Bhadrak
6	FACOR/HSE/GP/029/2024-25	3-Oct-24	Sarpanch, Randia
7	FACOR/HSE/GP/030/2024-25	3-Oct-24	Sarpanch, Olonga
8	FACOR/HSE/GP/031/2024-25	3-Oct-24	Sarpanch, Rampur
9	FACOR/HSE/GP/032/2024-25	3-Oct-24	Sarpanch, Ramkrishnapur
10	FACOR/HSE/GP/033/2024-25	3-Oct-24	Sarpanch, Geltua
11	FACOR/HSE/GP/034/2024-25	3-Oct-24	Sarpanch, Baudpur

vedanta
transforming for good

FACOR

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 31st 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.

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 / facor.ccp@vedanta.co.in
Website: www.facorgroup.in, CIN: U45201OR1955PLC008400.

FORM V

(See Rule 14)

Environmental Statement for the Financial Year Ending 31st 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** - 7th 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^3/day**
Cooling – 202 **m^3/day**
Domestic – 431 **m^3/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^3/MT (Cooling) 3.16 m^3/MT (Process + Cooling)	0.93 m3/MT (Cooling) 2.93 m^3/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 Chrome/ High Carbon Ferro Chrome	2.28 MT	2.365 MT
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 25^0C	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 27^0C 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_4-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^{0}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^{0}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, 18th Nov. 2009**	**R&C Lab.**	**MRSS**	**Auto garage**	**MRP**
1	Particulate matter as PM_{10}	($\mu g/m^3$)	100	61.4	67.7	55.4	60.7

2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	60	31.2	34.2	28.2	30.5
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	80	23.1	14.8	14.2	14.1
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	80	24.9	20.6	18.8	19.8
5	Carbon monoxide as CO	(mg/m^3)	2	0.070	0.081	0.75	0.11
6	Ozone as O_3	($\mu g/m^3$)	180	6.9	6.6	6.5	7.1
7	Ammonia as NH_3	($\mu g/m^3$)	400	<20	<20	<20	<20
8	Lead as Pb	($\mu g/m^3$)	1	<0.006	<0.006	<0.006	<0.006
9	Nickel as Ni	(ng/m^3)	20	<3.1	<3.1	<3.1	<3.1
10	Arsenic as As	(ng/m^3)	6	<0.16	<0.16	<0.16	<0.16
11	Benzene as C_6H_6	($\mu g/m^3$)	5	<4	<4	<4	<4
12	Benzo-a-pyrine as BaP	(ng/m^3)	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.

FERRO ALLOYS CORPORATION LTD. BHADRAK