Ref: FACOR/Bhadrak/HSE/03/2024-25
Dtd: 30.11.2024

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(I) dtd.31.10.2022 , issued to M/s. Ferro Alloys Corporation Ltd., for the period from April 2024 to September-2024.

Dear Sir,

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

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

5	v	The PP shall undertake flood protection measures due to presence of Salandi river as committed.	Plant MSL is much higher than the riverbed. The plant is outside flood prone area as per record of 25 years of floods as confirmed by Salandi Canal Division. Copy is enclosed as **Annexure 4.**
6	vi	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. b. Proper covered vehicle shall be used while transport of materials. c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.	Following steps are taken to control fugitive emission: a. The raw materials like Ferro Chrome Ore and Concentrate are kept in covered shed. Two new shed has been constructed to enhance storage space. Additionally, water sprinkling is being carried out in raw material storage areas to control fugitive emission. b. Vehicles are completely covered during transport of materials. c. Wheel washing system has been provided with complete recirculation system. Photographs of the Ore Sheds, Water Sprinklers & Wheel Washing System are attached as **Annexure 5.**
7	vii	All internal road and connecting road from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to existing and proposed project	All internal road and connecting road from project site to main highway connected with PQC (Pavement Quality Concrete Road) construct as per the IRC guideline to maintain suitable with MSA standard as per the traffic load.
8	viii	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.	Performance of the major pollution control devices are being tested on a monthly basis by external NABL authorized lab. Reports are enclosed with **Annexure 6**. The performance evaluation test shall be conducted after effectively running of the pollution control equipment and the report will be submitted to the Regional Office.
9	ix	Particulate matter emission from stacks shall be less than 30 mg/Nm3.	Particulate emission from stack is under prescribed limit as per latest Consent order no. 7239 IND-I-CON 5461 Dated 04.05.2023.
10	x	PP shall carry out periodically occupational health survey as per the applicable norms.	Periodical occupational health check-ups are being carried out annually. IME/PME report attached as **Annexure 6A.**

11	xi	The 4th hole extraction system shall be provided in the Sub Merged Arc Furnaces	In the Submerged Arc Furnace, the off-gas generation is being sucked by Creating induced draft with the help of three nos. of Induced Draft fans (2 working and one standby) of 2,00,000m3/hr. capacity each through two nos. of duct connected to the roof of the SAF. The off-gas is being cooled in force draft cooler to 120 deg C. Then the off-gas is fed into the air purging type baghouse, where the off-gas is collected at the bottom hopper of the baghouse. Cleared gas is blown out to the environment by a dedicated stack 34 meters above ground.
12	xii	100% of the slag generated through the process shall be utilized.	Being followed. Slag generation and utilization report is enclosed herewith **Annexure 7.**
13	xiii	The water requirement for the proposed project is estimated as 2521 KLD, out of which 1750 KLD of freshwater requirement shall be obtained from Ground water. Necessary permission shall be obtained from the Competent Authority in this regard. PP shall explore the possibility of shifting to alternate source of water to reduce dependency on groundwater	NOC from CGWA for drawl of 1750KLD has been obtained. However, the recycled water from rainwater harvesting pond, STP treated water, SRTP treated water etc. is being reused in various processes to minimize the ground water extraction. NOC copy attached herewith **Annexure 8.**
14	xiv	The proposed project shall be designed as "Zero Liquid Discharge" Plant. ETP shall be installed and there shall be no discharge of effluent from the plant. Domestic effluent shall be treated in Sewage Treatment Plant. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body.	The plant has already been designed as a Zero Liquid Discharge plant. All the runoff water is being treated through SRTP and stored in rainwater harvesting pond. STP has been installed to treat domestic wastewater. No wastewater is being released outside plant premises with or without treatment.
15	xv	The company shall also undertake rain water harvesting measures as per the plan submitted in the EIA/EMP report and reduce water dependence from the outside source.	As rainwater harvesting measures three rainwater harvesting ponds are being used to store and reuse water in various processes to minimize water abstraction. Additionally, five recharge wells are also constructed for ground water recharge during rainy season. Photographs of the Rainwater Harvesting Measures are attached herewith **Annexure 9**

16	xvi	PP shall adopt nearby villages and prepare and implement a robust plan to develop them into model villages in next 10 years.	CSR department is working in nearby six-gram panchayats in thematic areas of health, education, livelihood and community development.
17	xvii	Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.	Briquetting and Jigging unit has already installed and in operational.
18	xviii	A proper action plan must be implemented to dispose of the electronic waste generated in the industry.	E-waste is being disposed to OSPCB authorized Recyclers. Authorization copy of the Recycler (valid during disposal) is enclosed as **Annexure 10**.
19	xix	Three tier Green Belt shall be developed in at least 33% of the project area in a time frame of one year with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.	As per Greenbelt assessment by expert agency, currently greenbelt coverage is 34.84% . Native species have been planted along the periphery of the plant. Efforts are being made continuously to achieve the tree density to 2500/Ha by using the existing vacant land and replacement of damaged plants. Report in this regard shall be submitted to Regional Office of the MOEF & CC. Greenbelt details are enclosed as **Annexure 11.**
20	xx	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface	Greenbelt along with stone patching boundary wall in the periphery of the plant boundaries have been developed to arrest soil erosion and dust pollution control.
21	xxi	The PP shall minimize the evaporation losses in jigging operation to less than 10% using suitable advanced process.	Being followed. Water usage in Jigging operation is attached as **Annexure 12.**
22	xxii	The PP shall install CO sensors at the furnace top level and the monitoring report shall be submitted to the IRO, MOEFCC in this regard.	CO sensors have been installed in furnace top level and report regarding installation has been sent to the IRO, MOEFCC in this regard. Copy attached as **Annexure 13**.
23	xxiii	All the commitments made to the public during the Public Hearing/Public Consultation shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC.	The same is compiled and report has been submitted to Regional Office of MOEF & CC. EMP compliance Copy attached as **Annexure 14**.

24	xxiv	The PP shall strengthen the social entrepreneurship opportunities; strengthen Self Help Groups into SMEs; strengthen Health infrastructure in the surrounding nearby villages and the compliance report in this regard needs to be submitted to IRO, MoEFCC.	PP has initiated some opportunities to strengthen SHG like initiating workshop on leadership skill training and conducted health camps nearby villages. PH Compliance report in this regard has been submitted to IRO, MOEF & CC. Report attached as **Annexure 15.**
25	xxv	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 16**.
26	xxvi	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 outside village roads. Refer Annexure 5.
	B.	**General Conditions**	
	I.	**Statutory compliance:**	

27	i	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.	Agree to abide
	II.	**Air quality monitoring and preservation**	
28	i	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as two Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Two continuous emission monitoring systems have been installed in GCP stacks and two numbers of Continuous Ambient Air Quality Station have been installed inside the plant premises. All CEMS & CAAQMS has been interconnected with SPCB online server. The latest calibration certificates & Photos of newly added stations are attached as **Annexure 17**.
29	ii	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories	The fugitive emission inside the plant premises is being monitored quarterly by NABL approved laboratory. Reports are attached as **Annexure 18.**
30	iii	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Two dedusting Units with bag filters have been provided in the dust prone area to control fugitive emission. Additional water sprinkling is being done on a regular basis in the dust generation sources to control fugitive dust emission. To control stack emission Gas Cleaning Plants have been installed. Photographs of the Dedusting units and GCP are enclosed as **Annexure 19**.
31	iv	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	An auto pulsing system has been installed to dislodge from bags into hopper. Bag cleaning procedure is enclosed as **Annexure 20**.
32	v	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and	All the raw material fines collected through pollution control devices are

		vacuum cleaning devices in the process after briquetting/ agglomeration.	being recycled and reused for briquette & pellets making.
33	vi	The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.	All the raw material are transporting through covered vehicle and conveying of ore & other raw material through covered conveyors.
34	vii	The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.	Fume extraction system has been installed to control primary and secondary emission. Flue gas is being filtered in GCP bag filters and filtered gas is released through GCP Stack.
35	viii	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	Ventilation system has been designed as per requirement.
	III.	**Water quality monitoring and preservation**	
36	i	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Effluent quality from Surface runoff treatment plant (SRTP) and Sewage treatment plant (STP) is being monitored on a monthly basis by NABL accredited laboratories. Parameters are under prescribed limit and monthly report is being shared with OSPCB. Reports are attached as **Annexure 21**.
37	ii.	The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.	Ground water monitoring is being carried out by NABL accredited laboratories in piezometers / sampling wells in the plant. Report enclosed in **Annexure-22**.
38	iii.	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Sewage Treatment Plant (STP) of 10KLD capacity has been installed for treatment of domestic wastewater and treated water are being utilized in gardening purpose. Photographs of the STP is attached as **Annexure 23.**
39	iv.	The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st	There is no rolling mills unit available.

		March 2012 (applicable to IF/EAF) as amended from time to time.	
40	v.	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	PP has installed Surface Run-off Treatment Plant (SRTP) to collect all the runoff water during rain and after treatment water is stored in rainwater harvesting pond and reuse in process. Photographs of the SRTP is attached as **Annexure 23.**
41	vi.	Tyre washing facilities shall be provided at the entrance/exit of the plant gates.	Wheel washing system has been provided with complete recirculation system. Refer Annexure 5.
	IV.	**Noise monitoring and prevention**	
42	i.	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Noise quality monitoring is being carried out regularly as per Noise Pollution (Regulation and Control) Rules,2000. Reports are enclosed in **Annexure-24**.
	V.	**Energy Conservation measures**	
43	i.	Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.	PP has taken various energy conservation measures like Solar streetlights have been provided to various villages and convention lights replaced by LED etc.
	VI.	**Waste management**	
44	i.	Used refractories shall be recycled.	PP will ensure to recycle the used refractories when generates.
45	ii.	Kitchen waste shall be composted or converted to biogas for further use.	Kitchen waste is being composted and used in plantation as an organic manure. We have planned for the installation of organic waste converter for composting.
	VII.	**Green Belt**	
46	i.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	A preliminary report has been prepared by the external agency which includes a program for reduction of GHG and carbon sequestration including plantation. We are exploring the possibilities for implementation.

47	ii.	Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.	Carbon Assessment has been done by M/s PWC. Various projects proposed by the consultant related to reduction in carbon footprint are under review. A roadmap has been prepared. Copy is enclosed as **Annexure 25**
	VIII.	**Public hearing and Human health issues**	
48	i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Emergency Preparedness Plan and Disaster Management Plan is available and implemented accordingly.
49	ii.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act	PP has carried out Qualitative & Quantitative analysis for heat stress those are working in high temperature work zone. All the appropriate PPE's are being provided to the workmen. Health Reports attached as Annexure 6.
50	iii.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Periodical occupational health check-up of workers is being conducted annually and records are maintained.
	IX.	**Environment Management**	
51	i	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.	PP is working in nearby six gram panchayats in thematic areas of health, education, livelihood and community development in consultation with village Panchayat and District Administration.

52	ii.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Environment policy duly approved by the Board of Directors and Board resolution in this regard is being submitted herewith. **Annexure 26.**
53	iii.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	A dedicated Environment Cell consisting of qualified personnel has been set up to look after environmental management. Details attached as **Annexure 27.**
	X.	**Miscellaneous**	
54	i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Complied. Copy enclosed along with **Annexure-28**.
55	ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	PP has submitted the copies of the environmental clearances to the relevant local bodies, panchayats, municipal bodies and govt offices within the time. Copy enclosed in **Annexure-28**.
56	iii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Being followed. Screenshot of the website is attached as **Annexure 29.**
57	iv.	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the	PP is monitoring the pollutants for ambient air and stack emission on monthly basis by NABL accredited lab. Copy enclosed in **Annexure 30**. Digital display board has been

		same at a convenient location for disclosure to the public and put on the website of the company.	installed at main entrance point for public view. Monitoring Reports are also displayed on the website of the company as well.
58	v.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the Ministry of Environment, Forest and Climate Change at environment clearance portal.	Being followed
59	vi.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Being followed, Copy enclosed in **Annexure-31**.
60	vii.	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Agree to abide
61	viii.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Agree to abide
62	ix.	The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left-over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.	Compliance Report is enclosed as Annexure 15.
63	x.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Agree to abide

64	xi.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Agree to abide

FERRO ALLOYS CORPORATION LTD. BHADRAK

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

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

7	Air Environment	Bag filter with designed outlet dust concentration of 50 mg/Nm3;	Outlet dust concentration is within the limit and analysis report has been attached as **Annexure 3.**	Being complied
8		The event of failure of any pollution control equipment, automatic tripping in the control system, shall be provided	Air pollution control device (Gas cleaning plant) has been provided with interlocking system.	Complied
9		Attempt shall be made to use low sulfur coke to the possible extent	Coke with sulfur content of < 0.7 % (wt.) is used in the process. Total consumption for the year 2023-24 is 36102 MT. Testing report is enclosed as **Annexure 4**	Complied
10		Flame temperature will be maintained to ensure emission of less NOx	Emission of NOx from GCP bag filters are monitored through external NABL accredited lab. Report of the same has been attached with the **Annexure 3**	Complied
11		All vehicles and their exhausts would be well maintained and regularly tested for emission concentration	PUC certificate is maintained for all vehicles. Reference copy is enclosed as **Annexure 5**	Complied
12		Regular preventive maintenance of pollution control equipment;	It is being maintained regularly. Reference copy is enclosed as **Annexure 6**	Complied
13		Stack emissions shall be regularly monitored by FERRO ALLOYS CORPORATION LTD. / SPCB/external agencies on periodic basis as per statutory requirements.	It is being monitored regularly. Report for the same is enclosed as **Annexure 3**	Complied
14		Jet Pulse bag filters at all dry material conveying and transfer points	For controlling dust pollution in conveying and transfer points Dedusting unit with bag filter system has been installed. Photocopy is enclosed as **Annexure 7**	Complied
15		Regular dust suppression with water sprinkler on the haul roads;	Regular water sprinkling is being done through mobile sprinkler. Photocopy is attached for reference as **Annexure 7**	Being complied
16		Plant roads &approach roads shall be made of bitumen/concrete;	All internal road and connecting road from project site to main highway connected with PQC (Pavement Quality Concrete Road). Photocopy is attached for reference in **Annexure 8**	Complied
17		Areas between various sections and truck parking areas shall be made of concrete/bitumen/brickwork;	Photocopy attached for reference in **Annexure 8**	Complied
18		Open areas within the plant premises and along with boundaries of the plant premises shall be covered under greenbelt/plantation	PP have planted native species of trees around the plant boundaries. PP is currently having 34.84% of greenbelt coverage as per Greenbelt assessment by expert agency.	Complied
19		Construction materials such as sand etc. shall be fully covered during transportation to/from the plant site by road.	It is being followed and implemented	Complied
20		Installation of dust suppression system i.e. Dry Fog System near the fugitive dust generation sources in the Metal Recovery Plant.	Water sprinkling system has been installed in the fugitive dust generation points in metal recovery plant. Photographs to be attached	Complied
21		GCP stack emission monitoring	Stack emission monitoring is being carried out on monthly basis. Monitoring Report has been attached as **Annexure 3**	Complied

22	Noise Environment	Plantation around the plant boundary will create a noise barrier for attenuating noise level.	Greenbelt along with stone patching boundary wall in the periphery of the plant boundaries has been developed to create a noise barrier for attenuating noise level.	Complied
23		Machinery design specifications of all the equipment in the Silico manganese plant will be to operate with noiselevelshallnotexceed85dBA as per the requirement of OSHA (Occupational Safety and Health Administration).	There is no silico manganese plant. So, this is not applicable.	Not applicable
24		Provision of acoustic enclosures to modulate the noise generated by machines.	Acoustic enclosures have been provided in the heavy noise generating equipment like DG sets, Compressors etc. Photographs enclosed as **Annexure 9**	Complied
25		Periodical lubrication of the heavy vehicles will help to keep the noise & vibration level at minimum.	It is being maintained.	Complied
26		Provision of Protective device like earmuff/plugs to the workers	Ear plugs have been provided to the workers working in high noise prone area. Reference copy is enclosed as **Annexure 10**	Complied
27		Post health check-ups of employees &contractual labourers working in the noise prone areas	Health check-ups is being carried out regularly for employees &contractual laborers working in the noise prone areas. PME attached as **Annexure 11.**	Being complied

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

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

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

For Ferro Alloys Corporation Limited

Chief HSE Officer

Krutisunder Mohapatra

Annexure 2

Charge Chrome Plant

of M/S Ferro Alloys Corporation Limited

Details of Scope 1 & 2 Emissions & GHG intensity during the period of Apr 2024-Sept 2024.

Industry Name	Parameters	Apr	May	Jun	Jul	Aug	Sep
Ferro Alloys Corporation Limited (Charge Chrome Plant)	Scope 1+2 (tCO_2 eq.)	15406	16439	17580	15278	15995	15095
	Metal production (MT)	8870	8593	10070	9,156	8,672	8,102
	GHG intensity (tCO_2 eq./ MT)	1.73	1.91	1.74	1.66	1.84	1.86

FERRO ALLOYS CORPORATION LTD. BHADRAK

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transforming elements

Annexure 3

FACOR

FACOR / Bhadrak / Legal / 160 / 2022 **Dt. 30.09.2022**

To

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

Ref : 1. Environment Clearance Proposal No. IA/OR/IND/5802/2009.
2. Meeting dtd. 14. 09.2022 and 15.09.2022 of Expert Appraisal Committee of MOEF.
3. Affidavit dtd. 14.09.2022 regarding undertaking for installation of OCEMS & CAAQMS.

Sub : Compliance to the Affidavit dtd. 14.09.2022 submitted to MOEF & CC during EAC meeting dtd. 14.09.2022 regarding undertaking for installation of OCEMS & CAAQMS in the Charge Chrome Plant of M/s Ferro Alloys Corporation Ltd.

Dear Sir,

We have applied expansion for existing Environment Clearance of our Charge Chrome Plant, Randia, Bhadrak of M/s Ferro Alloys Corporation Ltd. vide Proposal No. IA/OR/IND/5802/2009. During meeting dtd. 14. 09.2022 of Expert Appraisal Committee (EAC) of Ministry of Environment, Forest & Climate Change, Government of India, we have submitted Affidavit -cum- Undertaking in Non-Judicial Stamp paper that we will install Online Continuous Emission Monitoring Systems (OCEMS) in our Gas Cleaning Plant (GCP) and Online Ambient Air Quality Monitoring Stations (OAAQMS) in our Charge Chrome Plant by 30th September 2022 without fail.

In compliance to the above Affidavit -cum-Undertaking dtd. 14.09.2022 we do hereby intimate your good office that today i.e dtd. 30.09.2022, we have successfully installed the Online Continuous Emission Monitoring Systems (OCEMS) in our Gas Cleaning Plant (GCP) and Online Ambient Air Quality Monitoring Stations (OAAQMS) near our Administrative Building of our Charge Chrome Plant of M/s Ferro Alloys Corporation Ltd. The latest photographs of the same are enclosed herewith as a proof of installation of OCEMS and OAAQMS.

Further we also do hereby confirm that now all pollutant's Level analyser of OCEMS and OAAQMS have been operating smoothly and real time data are being successfully transferred to the authorised vender's server of M/s Focused Photonics Inc.

Trust the Affidavit -cum-Undertaking dtd. 14.09.2022 submitted to MOEF is compiled herewith.

For Ferro Alloys Corporation Limited

Authorized Signatory

Copy to: (1) The Member Secretary, Dr. R. B. Lal, Scientist 'E'/Additional Director, MOEF & CC, Indira Paryavaran Bhawan, Room No.V-304, Jor Bag Road, New Delhi, E-mail: rb.lal@nic.in.

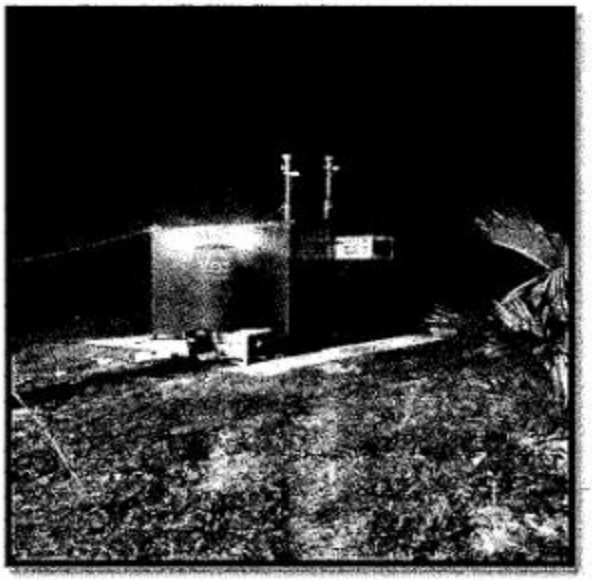
(2) Member Secretary, Odisha Pollution Control Board, A-118, Nilakanta Nagar, Unit –VIII, Bhubaneshwar – 751012. E mail : paribesh1@ospcboard.org

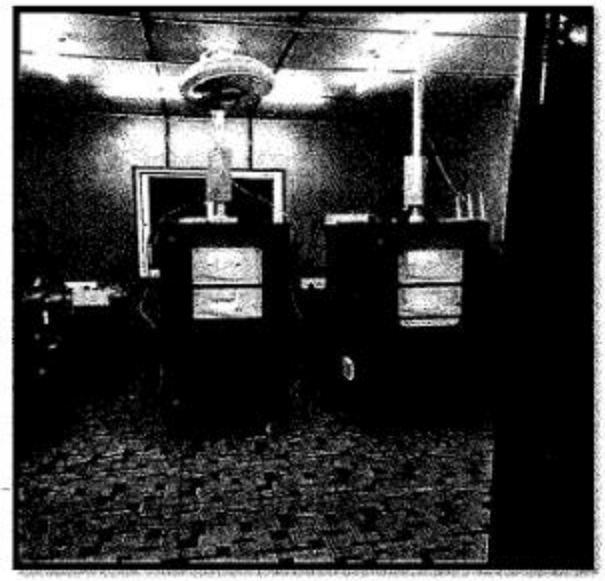
M/s. Ferro Alloys Corporation Ltd. (A subsidiary of Vedanta Ltd.)
Registered Office:
D.P. Nagar, PO: Randia, Dist.: Bhadrak, Odisha, India - 756 135
T +91-6784 240320/240347, Email: facor.mines@vedanta.co.in / facor.ccn@vedanta.co.in
Website: www.facorgroup.in, CIN: U45201OR1955PLC008400.

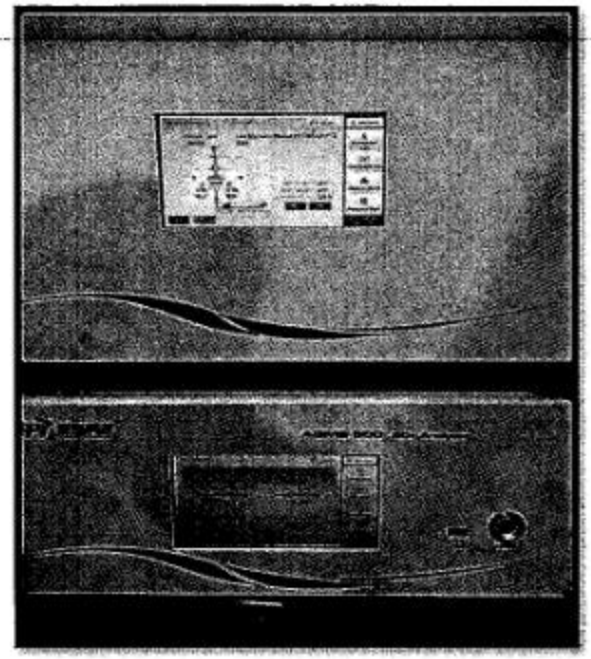
Online Ambient Air Quality Monitoring Station *(OAAQMS)*

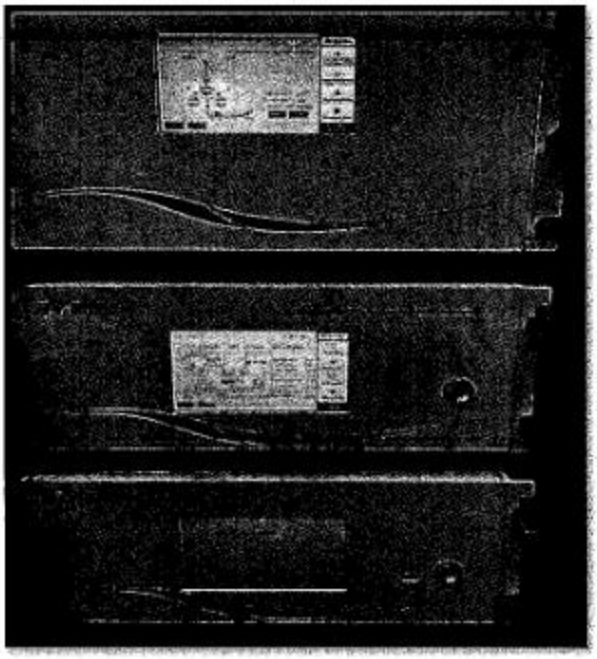
Charge Chrome Plant
of M/s Ferro Alloys Corporation Ltd

Location: Near Administrative building
Date: 30.09.2022







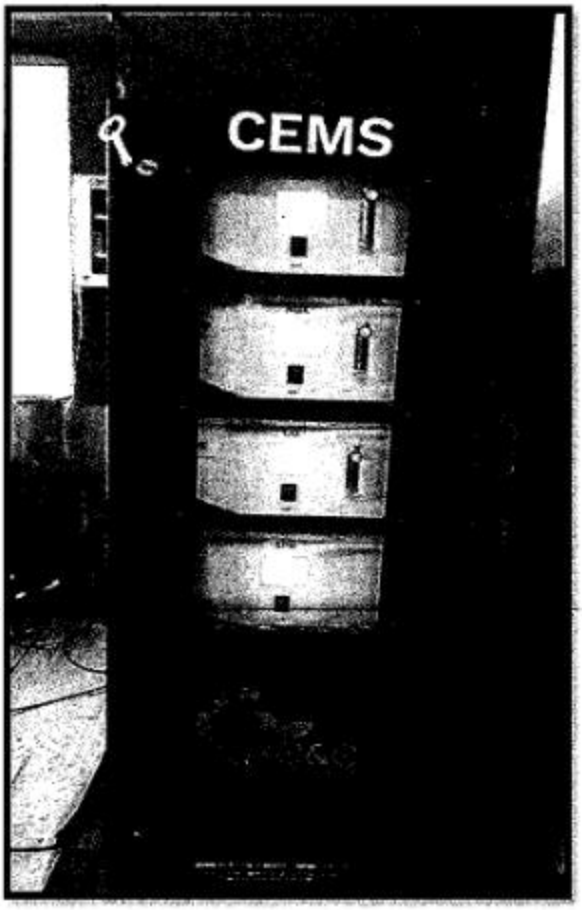


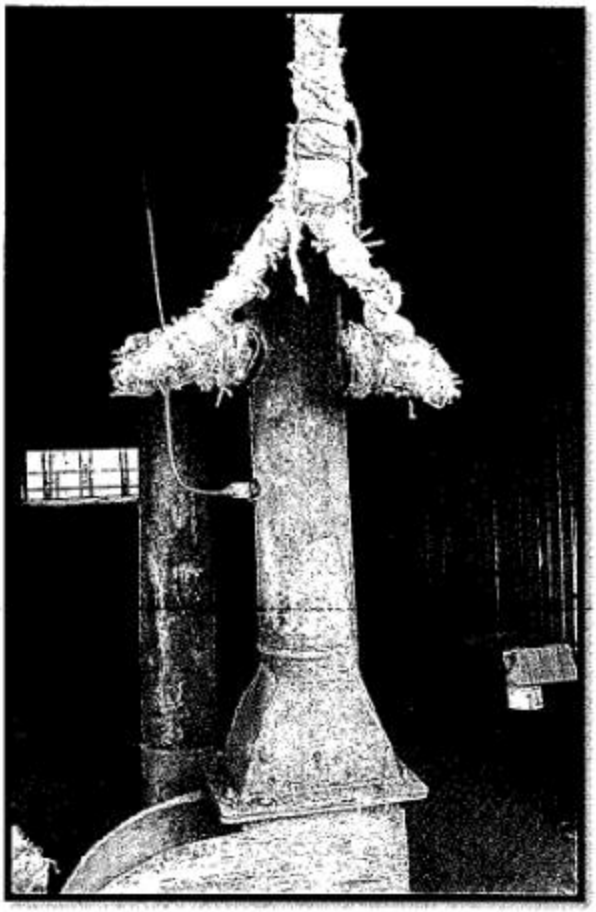
Online Continuous Emission Monitoring Systems (OCEMS)

Charge Chrome Plant
of M/s Ferro Alloys Corporation Ltd

Location: Gas Cleaning Plant (GCP)

Date: 30.09.2022





vedanta
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FACOR

Ref No: FACOR/HSE/EC/22/02
Date: 29/08/2022

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

Sub: Action taken report for the observations of RO visit on dated 24.06.2022 vide letter no 101-449/EPE/1080 of M/s Ferro Alloys Corporation Ltd. at Village-Randia, District-Bhadrak, Odisha

Ref: Letter issued by MoEFCC vide letter number 101-449/EPE/1080 dated 04.06.2022.

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
Sincerely

For M/s Ferro Alloys Corporation Ltd.

Authorized Signatory

Encl: As above.

Action Taken Status Report of M/s Ferro Alloys Corporation Limited (Charge Chrome Plant) Based on the RO Visit Report			
Sl No	**Observations**	**Action Taken Status**	**Commitments with Timeline**
1	Continuous stack emission monitoring system has not been provided. During visit emission was also observed from one of the four emergency stack. Fume extraction system during tapping was found to be inadequate	Continuous stack emission monitoring system **is been ordered for installation along with AAQMS as on 06-08-2022. The copies of which are attached in** Annexure 1 During the visit a schedule outage was taken for the furnace rebuild. After completion of rebuild job, the emission from emergency stack and tapping points **are controlled**.	31.12.2022
2	During visit metal recovery plant was not in operation. Dry fog dust suppression system yet to be provided at the metal recovery plant. Dust extraction system yet to be provided at the material unloading area.	We have installed **18** water sprinkling system for dust suppression in MRP **area**, which has **been** controlling our fugitive emission **to remain** within the stipulated standard. However we will install Dry Fog system in MRP and material unloading area **by December 2022**.	31.12.2022
3	Raw materials were found to be stored in covered shed as well as in open.	We have constructed one additional raw material covered shed of 85m x 15m size which can accommodate around 15420MT raw material and all the raw material storage area are concreted to act as a impervious layer. Photograph is enclosed in Annexure-2.	Already Complied
4	Maximum water use was in the month of July, 2021 for 38567KL, higher than the stipulated in the condition.	With reference to the permission accorded by CGWA vide letter no. 21-4(74)/SER/CGWA/2008-1281, dated 24th October'2008, the project proponent had obtained NOC for **withdrawal** of 1422m3/day ground water, based on which the EC was granted on 2009 and subsequently on 15th April'2014 and 19th September'2017 respectively. The observed quantity for the month of July'21 translate to 1244m3/day of water consumption which is within the **permissible** limit of 1422m3/day.	Justified as given

5	Secured landfills have not been constructed as per the condition of EC	After recovery of the metal slag tailings are being stored in the slag storage yard. After due TCLP test 100% of the slag is been utilized in various construction, road making & low lying area development inside & outside the premises as per the authorization from OSPCB. Copy enclosed in Annexure-3. Therefore there is no need of a SLF for the slag to be stored as hazardous material.	Justified as given
6	As per the report submitted by the PP total 37,730 seedling have been planted in an area of 21.3 Ha. (52.63 acre). PP furnished an undertaking to achieve 33% greenbelt by 31st July, 2023	During filing of application for Environment Clearance, the earlier submitted data regarding Green Belt area of our Charge Chrome Plant of M/s. Ferro Alloys Corporation Ltd. located at Randia of Bhadrak District was collected from the old records maintained and available with the ex-promoters of FACOR. After completion of CIRP process and approval of Resolution Plan vide order dtd. 30.01.2020 of Hon'ble Court of NCLT Cuttack Bench, the new Board has been constituted on 21.09.2020. To implement the provision of the approved Resolution Plan and to comply all statutory requirements, the present management has recently conducted the Drone DGPS Survey of the total plant area from the authorized and empanelled agency of Orissa Space Application Centre (ORSAC). Now according to the latest Drone DGPS Survey report, the total Green belt area of the plant is around 67.918 Acre which is 33.05 % out of the total plant area of 205.50 Acre. Latest DGPS Survey Map is enclosed herewith for your reference and records in **Annexure - 4**. Apart from the above, we have started regular plantation drive in our plant site and also have targeted to plant around 30,000 saplings by the end of September 2022 to intensify the plantation program as well as to fill out the Gaps.	**Complied**

		GAPs have been covered with greenbelt in admin building, canteen, agglomeration plant, MRP area, boundary side, colony area, internal roadside etc. Photograph of which is attached in **Annexure- 5**.	
7	Utilization of solid waste, installation of continuous stack monitoring and setting up of online ambient air quality monitoring station, to study the possibility of slag transportation back to the abandoned mines, etc. are yet to be implemented satisfactorily	We are utilizing 100% of the slag as alternative construction material as well as land filling for which authorization has been obtained from OSPCB. As per clause no.1 above, we are committing to complete the installation of online CEMS by 31st December '2022, for which PO has already been placed as on 6-08-2022.	31.12.2022
8	During visit some construction work has been observed in the premises. It has been reported that the date of land development work for expansion as 29th April, 2017. As per the document furnished piling work at the location of furnace has been initiated during 2017. On perusal of the accorded Environmental clearance and amendment issued to the project it was observed that the validity of the environmental clearance dated 04.05.2009 was extended till 03.05.2019 vide letter dated 13.01.2017. As per the EC accorded production capacity of one furnace is 65,000 TPA. Production detail reported for the year 2019-20, 2020-21 and 2021-22 as 72766 MT, 68331.01 MT and 74995.58 MT respectively.	The observations and respective document verifications during RO visit indicates that the observed constructions were done during the validity of EC period i.e, as on 03/05/2019. For the then proposed expansion project. The production quantity has always been maintained within the permissible limit as per CTO in line with accorded EC.	Justified as given

	PP furnished no increase pollution load certificate from NIT Rourkela for change in production from 65000TPA to 75000TPA. PP also furnished a copy of the acknowledgement slip for Expansion of Production of HC Ferro Chrome from 75000 TPA to 80000 TPA plus 6300 TPA from Metal Recovery Plant for which certificate has not been issued by SPCB with a direction to submit the copy of acknowledgement in support of no increase in pollution load certificate application in Paribesh portal for 65000TPA to 75000TPA. CTO has been accorded by OSPCB vide letter No.4949 dated 29.03.2022 for Charge chrome/High Carbon Ferro Chrome of 750000 metric tonne/annum (Arc furnace of 45 MVA) and charge chrome (metal recovery plant of 6300 metric tonne/annum). The specification/direction issued by SPCB in this matter should be strictly adhered to.		
9	Copy of EIA/EMP of the project to be submitted to the Regional Office	Copy of EIA/EMP of the project is already submitted for your kind reference.	17.08.2022

10	The date of financial closure and final approval of the project may be communicated to this office.	M/s. Ferro Alloys Corporation Limited (FACOR) was under Corporate Insolvency Resolution Process (CIRP) under the Insolvency and Bankruptcy Code, 2016. Hon'ble National Company Law Tribunal, Cuttack Bench, *vide* its order dated 30.01.2020 has approved the Resolution Plan of Vedanta Group. Pursuant to the said order of NCLT Cuttack, the Board of Directors of the Company has been newly constituted on dt.21.09.2020 to implement the approved Resolution Plan. Hence the date of financial closure and final approval of the project by the authority of the Project Proponent was on 21.09.2020. The closure document is attached for your perusal. This boad resolution is attached in **Annexure- 6**	The Financial closure of the proposed expansion shall be submitted after due implementation of the project.

Place: Randia, Bhadrak

Date: 29th August 2022

Encl: As above.

Thanking You
Sincerely

For M/s Ferro Alloys Corporation Ltd.

Authorized Signatory

Annexure 4

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

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

Raw Material Stocking under Shed:

Raw Material Shed (Old)

Raw Material Shed (New)

Raw Material Shed (New)

Dust Suppression System

Truck Mounted Mist Cannon & sprinkers:

Wheel Washing System:

Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Accredited by : NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade

- Infrastructure Engineering
- Water Resource Management
- Environmental & Social Study
- Surface & Sub-Surface Investigation
- Quality Control & Project Management
- Renewable Energy
- Agricultural Development
- Information Technology
- Public Health Engineering
- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

Laboratory Services
Environment Lab
Food Lab
Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

TEST REPORT

Test Report No: ENVLAB/24-25/TR-01983 *Date:06.05.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**29.04.2024**
			Sample Received on	:	**30.04.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-1: Dedusting System**
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**30.04.2024**	Test Completed on	:	**04.05.2024**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	**Temperature**	^0K	--	**356**
2	**Velocity**	**m/sec**	--	**8.8**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**52.9**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**34.1**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**35.6**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.029**
7	**Carbon dioxide as (CO_2)**	**%**	--	**6.7**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.61**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**1561**

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-01984 *Date: 06.05.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**29.04.2024**
			Sample Received on	:	**30.04.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-2: DRYER STACK**
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**30.04.2024**	Test Completed on	:	**04.05.2024**

2. Chemical Testing

B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	**Temperature**	^{0}K	--	**354**
2	**Velocity**	**m/sec**	--	**7.7**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**72.8**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**30.4**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**34.7**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.075**
7	**Carbon dioxide as (CO_2)**	**%**	--	**7.0**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.82**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**1374**

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-01985 *Date: 06.05.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**29.04.2024**
			Sample Received on	:	**30.04.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-3: GCP STACK (45 MVA)**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**30.04.2024**	Test Completed on	:	**04.05.2024**

3. Chemical Testing

C. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	**Temperature**	^{0}K	--	**375**
2	**Velocity**	**m/sec**	--	**8.3**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**80.9**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**30.7**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**35.4**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.075**
7	**Carbon dioxide as (CO_2)**	**%**	--	**8.5**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.061**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**55227**

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

TERMS AND CONDITION:-

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-01986 *Date: 06.05.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**29.04.2024**
			Sample Received on	:	**30.04.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-4: GCP STACK (33 MVA)**
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**30.04.2024**	Test Completed on	:	**04.05.2024**

4. Chemical Testing

D. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-4
1	**Temperature**	^{0}K	--	**375**
2	**Velocity**	**m/sec**	--	**8.2**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**41.6**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**29.2**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**32.4**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.072**
7	**Carbon dioxide as (CO_2)**	**%**	--	**7.5**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.045**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**164479**

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-04212 *Date: 06.06.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**24.05.2024**
			Sample Received on	:	**25.05.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-1: Dedusting System**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**25.05.2024**	Test Completed on	:	**30.05.2024**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	**Temperature**	^0K	--	358
2	**Velocity**	m/sec	--	9.1
3	**Particulate Matter as PM**	mg/Nm^3	100	55.3
4	**Sulphur Dioxide as SO_2**	mg/Nm^3	--	32.8
5	**Oxides of Nitrogen as NO_X**	mg/Nm^3	--	36.7
6	**Carbon Monoxide as CO**	mg/m^3	--	0.025
7	**Carbon dioxide as (CO_2)**	%	--	6.9
8	**Mercury (as Hg)**	mg/Nm^3	--	0.57
9	**Quantity of Gas flow**	Nm3/hr	--	1603

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

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*** End Report***

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-04213 *Date: 06.06.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**24.05.2024**
			Sample Received on	:	**25.05.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-2: DRYER STACK**
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**25.05.2024**	Test Completed on	:	**30.05.2024**

2. Chemical Testing

B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	**Temperature**	^0K	--	355
2	**Velocity**	m/sec	--	8.0
3	**Particulate Matter as PM**	mg/Nm^3	100	70.6
4	**Sulphur Dioxide as SO_2**	mg/Nm^3	--	32.5
5	**Oxides of Nitrogen as NO_X**	mg/Nm^3	--	36.4
6	**Carbon Monoxide as CO**	mg/m^3	--	0.078
7	**Carbon dioxide as (CO_2)**	%	--	7.2
8	**Mercury (as Hg)**	mg/Nm^3	--	0.88
9	**Quantity of Gas flow**	Nm3/hr	--	1421

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

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-04214 *Date: 06.06.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**24.05.2024**
			Sample Received on	:	**25.05.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-3: GCP STACK (45 MVA)**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**25.05.2024**	Test Completed on	:	**30.05.2024**

3. Chemical Testing

C. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	**Temperature**	**^0K**	–	**377**
2	**Velocity**	**m/sec**	–	**8.5**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**82.1**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	–	**33.6**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	–	**36.8**
6	**Carbon Monoxide as CO**	**mg/m^3**	–	**0.071**
7	**Carbon dioxide as (CO_2)**	**%**	–	**8.8**
8	**Mercury (as Hg)**	**mg/Nm^3**	–	**0.069**
9	**Quantity of Gas flow**	**Nm3/hr**	–	**56869**

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

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-04215 *Date: 06.06.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**24.05.2024**
			Sample Received on	:	**25.05.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-4: GCP STACK (33 MVA)**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**25.05.2024**	Test Completed on	:	**30.05.2024**

4. Chemical Testing

D. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-4
1	**Temperature**	**^{0}K**	--	**378**
2	**Velocity**	**m/sec**	--	**8.9**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**42.8**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**28.6**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**30.9**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.070**
7	**Carbon dioxide as (CO_2)**	**%**	--	**7.2**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.051**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**174732**

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

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TEST REPORT

Test Report No: ENVLAB/23-24/TR-04216 *Date: 06.06.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**24.05.2024**
			Sample Received on	:	**25.05.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-5: DG STACK/02**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**25.05.2024**	Test Completed on	:	**30.05.2024**

5. Chemical Testing

E. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-5
1	**Temperature**	^0K	--	390
2	**Velocity**	m/sec	--	6.9
3	**Particulate Matter as PM**	mg/Nm^3	100	44.1
4	**Sulphur Dioxide as SO_2**	mg/Nm^3	--	22.3
5	**Oxides of Nitrogen as NO_X**	mg/Nm^3	--	35.7
6	**Carbon Monoxide as CO**	mg/m^3	--	0.078
7	**Carbon dioxide as (CO_2)**	%	--	7.1
8	**Mercury (as Hg)**	mg/Nm^3	--	0.033
9	**Quantity of Gas flow**	Nm3/hr	--	93.1

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

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-05582 *Date: 06.07.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**21.06.2024**
			Sample Received on	:	**22.06.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-1: Dedusting System**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**22.06.2024**	Test Completed on	:	**25.06.2024**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	**Temperature**	^0K	--	355
2	**Velocity**	m/sec	--	9.28
3	**Particulate Matter as PM**	mg/Nm^3	100	57.6
4	**Sulphur Dioxide as SO_2**	mg/Nm^3	--	33.9
5	**Oxides of Nitrogen as NO_X**	mg/Nm^3	--	38.2
6	**Carbon Monoxide as CO**	mg/m^3	--	0.028
7	**Carbon dioxide as (CO_2)**	%	--	6.6
8	**Mercury (as Hg)**	mg/Nm^3	--	0.55
9	**Quantity of Gas flow**	Nm3/hr	--	1651

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

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-05583 *Date: 06.07.2024*

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	21.06.2024
			Sample Received on	:	22.06.2024
Sample Description	:	Source Emission	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-2: DRYER STACK
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	22.06.2024	Test Completed on	:	25.06.2024

2. Chemical Testing

B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	Temperature	^0K	--	353
2	Velocity	m/sec	--	8.4
3	Particulate Matter as PM	mg/Nm^3	100	71.8
4	Sulphur Dioxide as SO_2	mg/Nm^3	--	31.8
5	Oxides of Nitrogen as NO_X	mg/Nm^3	--	35.7
6	Carbon Monoxide as CO	mg/m^3	--	0.075
7	Carbon dioxide as (CO_2)	%	--	7.0
8	Mercury (as Hg)	mg/Nm^3	--	0.89
9	Quantity of Gas flow	Nm3/hr	--	1502

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

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-05584 *Date: 06.07.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**21.06.2024**
			Sample Received on	:	**22.06.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-3: GCP STACK (45 MVA)**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**22.06.2024**	Test Completed on	:	**25.06.2024**

3. Chemical Testing

C. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	**Temperature**	^0K	–	374
2	**Velocity**	m/sec	–	8.8
3	**Particulate Matter as PM**	mg/Nm^3	100	80.4
4	**Sulphur Dioxide as SO_2**	mg/Nm^3	–	32.9
5	**Oxides of Nitrogen as NO_X**	mg/Nm^3	–	38.1
6	**Carbon Monoxide as CO**	mg/m^3	–	0.073
7	**Carbon dioxide as (CO_2)**	%	–	8.5
8	**Mercury (as Hg)**	mg/Nm^3	–	0.066
9	**Quantity of Gas flow**	Nm3/hr	–	58429

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

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*** End Report***

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-05585 *Date:06.07.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**21.06.2024**
			Sample Received on	:	**22.06.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	ST-4: GCP STACK (33 MVA)
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**22.06.2024**	Test Completed on	:	**25.06.2024**

4. Chemical Testing

D. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-4
1	**Temperature**	^{0}K	--	376
2	**Velocity**	m/sec	--	8.8
3	**Particulate Matter as PM**	mg/Nm^3	100	40.9
4	**Sulphur Dioxide as SO_2**	mg/Nm^3	--	28.9
5	**Oxides of Nitrogen as NO_X**	mg/Nm^3	--	32.6
6	**Carbon Monoxide as CO**	mg/m^3	--	0.073
7	**Carbon dioxide as (CO_2)**	%	--	7.5
8	**Mercury (as Hg)**	mg/Nm^3	--	0.054
9	**Quantity of Gas flow**	Nm3/hr	--	173927

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

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-08275 *Date: 05.08.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-1: Dedusting System**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.07.2024**	Test Completed on	:	**27.07.2024**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	**Temperature**	**^0K**	--	**352**
2	**Velocity**	**m/sec**	--	**9.46**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**58.2**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**31.6**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**39.4**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.029**
7	**Carbon dioxide as (CO_2)**	**%**	--	**6.2**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.53**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**1692**

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

TERMS AND CONDITION:-

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-08276 *Date: 05.08.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-2: DRYER STACK**
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.07.2024**	Test Completed on	:	**27.07.2024**

2. Chemical Testing

B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	Temperature	^0K	--	351
2	Velocity	m/sec	--	8.9
3	Particulate Matter as PM	mg/Nm^3	100	69.3
4	Sulphur Dioxide as SO_2	mg/Nm^3	--	32.5
5	Oxides of Nitrogen as NO_X	mg/Nm^3	--	37.6
6	Carbon Monoxide as CO	mg/m^3	--	0.072
7	Carbon dioxide as (CO_2)	%	--	6.8
8	Mercury (as Hg)	mg/Nm^3	--	0.78
9	Quantity of Gas flow	Nm3/hr	--	1597

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

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VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

TEST REPORT

Test Report No: ENVLAB/24-25/TR-08277 *Date: 05.08.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-3: GCP STACK (45 MVA)**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.07.2024**	Test Completed on	:	**27.07.2024**

3. Chemical Testing

C. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	**Temperature**	**^0K**	--	**372**
2	**Velocity**	**m/sec**	--	**7.9**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**76.4**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**33.3**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**36.7**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.078**
7	**Carbon dioxide as (CO_2)**	**%**	--	**8.1**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.071**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**53493**

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**

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

TEST REPORT

Test Report No: ENVLAB/24-25/TR-08278 *Date: 05.08.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-4: GCP STACK (33 MVA)**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.07.2024**	Test Completed on	:	**27.07.2024**

4. Chemical Testing

D. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-4
1	Temperature	^0K	--	375
2	Velocity	m/sec	--	8.9
3	Particulate Matter as PM	mg/Nm^3	100	42.6
4	Sulphur Dioxide as SO_2	mg/Nm^3	--	29.5
5	Oxides of Nitrogen as NO_X	mg/Nm^3	--	31.8
6	Carbon Monoxide as CO	mg/m^3	--	0.077
7	Carbon dioxide as (CO_2)	%	--	7.2
8	Mercury (as Hg)	mg/Nm^3	--	0.058
9	Quantity of Gas flow	Nm3/hr	--	175887

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

TERMS AND CONDITION:-

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

*** End Report***

Reviewed by

Approved by

TEST REPORT

Test Report No: ENVLAB/24-25/TR-09369 *Date: 05.09.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.08.2024**
			Sample Received on	:	**24.08.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-1: Dedusting System**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.08.2024**	Test Completed on	:	**27.08.2024**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	**Temperature**	^0K	--	**353**
2	**Velocity**	m/sec	--	**9.12**
3	**Particulate Matter as PM**	mg/Nm^3	100	**57.7**
4	**Sulphur Dioxide as SO_2**	mg/Nm^3	--	**30.5**
5	**Oxides of Nitrogen as NO_X**	mg/Nm^3	--	**36.3**
6	**Carbon Monoxide as CO**	mg/m^3	--	**0.025**
7	**Carbon dioxide as (CO_2)**	%	--	**6.6**
8	**Mercury (as Hg)**	mg/Nm^3	--	**0.51**
9	**Quantity of Gas flow**	Nm3/hr	--	**1629**

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

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

TEST REPORT

Test Report No: ENVLAB/24-25/TR-09370 *Date: 05.09.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.08.2024**
			Sample Received on	:	**24.08.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-2: DRYER STACK**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.08.2024**	Test Completed on	:	**27.08.2024**

2. Chemical Testing

B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	**Temperature**	^0K	--	**353**
2	**Velocity**	**m/sec**	--	**8.4**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**65.2**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**33.1**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**36.5**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.077**
7	**Carbon dioxide as (CO_2)**	**%**	--	**6.6**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.72**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**1501**

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

TERMS AND CONDITION:-

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

*** End Report***

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

TEST REPORT

Test Report No: ENVLAB/24-25/TR-09371 *Date: 05.09.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.08.2024**
			Sample Received on	:	**24.08.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-3: GCP STACK (45 MVA)**
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.08.2024**	Test Completed on	:	**27.08.2024**

3. Chemical Testing

C. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	**Temperature**	^0K	--	**375**
2	**Velocity**	**m/sec**	--	**7.7**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**74.8**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**30.8**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**35.6**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.072**
7	**Carbon dioxide as (CO_2)**	**%**	--	**7.8**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.074**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**51796**

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

TERMS AND CONDITION:-

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

*** End Report***

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by

TEST REPORT

Test Report No: ENVLAB/24-25/TR-09372 *Date: 05.09.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.08.2024**
			Sample Received on	:	**24.08.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-4: GCP STACK (33 MVA)**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.08.2024**	Test Completed on	:	**27.08.2024**

4. Chemical Testing

D. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-4
1	Temperature	^0K	--	376
2	Velocity	m/sec	--	9.2
3	Particulate Matter as PM	mg/Nm^3	100	41.7
4	Sulphur Dioxide as SO_2	mg/Nm^3	--	28.6
5	Oxides of Nitrogen as NO_X	mg/Nm^3	--	31.3
6	Carbon Monoxide as CO	mg/m^3	--	0.071
7	Carbon dioxide as (CO_2)	%	--	7.5
8	Mercury (as Hg)	mg/Nm^3	--	0.060
9	Quantity of Gas flow	Nm3/hr	--	181571

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

*** End Report***

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by

Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

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

TEST REPORT

Test Report No: ENVLAB/24-25/TR-10472 *Date: 05.10.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**13.09.2024**
			Sample Received on	:	**14.09.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-1: Dedusting System**
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**14.09.2024**	Test Completed on	:	**18.09.2024**

1. Chemical Testing

A. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-1
1	**Temperature**	^0K	--	**351**
2	**Velocity**	**m/sec**	--	**9.2**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**55.2**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**31.6**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**35.9**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.022**
7	**Carbon dioxide as (CO_2)**	**%**	--	**6.8**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.53**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**1651**

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-10473 *Date: 05.10.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**13.09.2024**
			Sample Received on	:	**14.09.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-2: DRYER STACK**
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**14.09.2024**	Test Completed on	:	**18.09.2024**

2. Chemical Testing

B. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-2
1	**Temperature**	**^0K**	--	**352**
2	**Velocity**	**m/sec**	--	**8.9**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**63.7**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**32.2**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**34.8**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.078**
7	**Carbon dioxide as (CO_2)**	**%**	--	**6.1**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.75**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**1592**

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

TERMS AND CONDITION:-

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

*** End Report***

Reviewed by

Approved by

TEST REPORT

Test Report No: ENVLAB/24-25/TR-10474 *Date: 05.10.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**13.09.2024**
			Sample Received on	:	**14.09.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-3: GCP STACK (45 MVA)**
Sample Condition	;	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**14.09.2024**	Test Completed on	:	**18.09.2024**

3. Chemical Testing

C. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-3
1	Temperature	^0K	--	374
2	Velocity	m/sec	--	7.8
3	Particulate Matter as PM	mg/Nm^3	100	75.6
4	Sulphur Dioxide as SO_2	mg/Nm^3	--	29.4
5	Oxides of Nitrogen as NO_X	mg/Nm^3	--	36.3
6	Carbon Monoxide as CO	mg/m^3	--	0.077
7	Carbon dioxide as (CO_2)	%	--	7.5
8	Mercury (as Hg)	mg/Nm^3	--	0.071
9	Quantity of Gas flow	Nm3/hr	--	52537

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

TERMS AND CONDITION:-

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

*** End Report***

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

TEST REPORT

Test Report No: ENVLAB/24-25/TR-10475 *Date: 05.10.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**13.09.2024**
			Sample Received on	:	**14.09.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-4: GCP STACK (33 MVA)**
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**14.09.2024**	Test Completed on	:	**18.09.2024**

4. Chemical Testing

D. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-4
1	**Temperature**	**^{0}K**	--	**375**
2	**Velocity**	**m/sec**	--	**9.5**
3	**Particulate Matter as PM**	**mg/Nm^3**	**100**	**40.3**
4	**Sulphur Dioxide as SO_2**	**mg/Nm^3**	--	**26.7**
5	**Oxides of Nitrogen as NO_X**	**mg/Nm^3**	--	**30.4**
6	**Carbon Monoxide as CO**	**mg/m^3**	--	**0.075**
7	**Carbon dioxide as (CO_2)**	**%**	--	**7.2**
8	**Mercury (as Hg)**	**mg/Nm^3**	--	**0.066**
9	**Quantity of Gas flow**	**Nm3/hr**	--	**187745**

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

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*
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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/23-24/TR-10482 *Date: 05.10.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**13.09.2024**
			Sample Received on	:	**14.09.2024**
Sample Description	:	**Source Emission**	Sampling Procedure	:	VCSPL/SOP/003, Dt. 01.08.2019
			Sampling Location	:	**ST-5: DG STACK/01**
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**14.09.2024**	Test Completed on	:	**18.09.2024**

5. Chemical Testing

E. Atmospheric Pollution

Sl. No.	Parameter	Unit	Standard as per CTO	Analysis Results
				ST-5
1	Temperature	^0K	--	389
2	Velocity	m/sec	--	6.6
3	Particulate Matter as PM	mg/Nm^3	--	45.5
4	Sulphur Dioxide as SO_2	mg/Nm^3	--	21.3
5	Oxides of Nitrogen as NO_X	mg/Nm^3	--	32.5
6	Carbon Monoxide as CO	mg/m^3	--	0.080
7	Carbon dioxide as (CO_2)	%	--	7.8
8	Mercury (as Hg)	mg/Nm^3	--	0.026
9	Quantity of Gas flow	Nm3/hr	--	89.2

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

TERMS AND CONDITION:-

6. *The Test result is relevant only to the item tested*
7. *This report shall not be reproduced in full or part without written approval of Visiontek consultancy services.(P) Ltd*
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9. *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.*
10. *The laboratory's responsibility under this report is limited to; proven willful negligence.*

*** End Report***

Reviewed by

Approved by

Annexure 6A

REGD. NO.- [redacted] DATE OF EXAM. 22/11/24

MOB. NO. 9 [redacted] VALIDITY UPTO. 21/11/25

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 : R [redacted]
- Employment no. : Sex : Male/Female
- Date of birth/age : 08-06-1983 41 Y
- Date of employment : 22-11-24
- Length in service :
- Nature of job : Helper
- Identification marks : cut mark on left side cheek.
- General Survey :

Health : Good / Fair / Poor

Height - 170 Cm.

Weight - 75 Kg.

- Blood group : B +ve
- Eye vision : Normal / Abnormal
  Use of glass – Yes / No
  Distance vision – RE - 6/6
  LE - 6/6
  Near vision – RE - N/6
  LE - N/6
  Color vision - Normal
- Hearing : Normal / Abnormal
- Respiratory system & chest measurement :
  Inspiration – 84 cm
  Expiration – 81 cm
  Respiratory Rate / min – 17/m
  Remarks if any –
- Cardiovascular system :
  Pulse rate – 80 b/m
  Bp- 130/80 mm Hg
  Heart sounds- (N)

- 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

  N.D

- Recommendation, if any

  For any further investigation

  ↑ Lipid profile.

  T Lipirose - F (1-0-0)

  Adv – Dietary Changes

[redacted]

Signature of the Employee.

Signature of the Medical Officer

22.11.24

MEDICAL OFFICER
VEDANTA FACOR

REGD. NO.- [redacted]

MOB. NO. - [redacted]

DATE OF EXAM. 10/6/24

VALIDITY UPTO 9/6/25

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 : [redacted]
- Employment no. : Sex : Male/Female
- Date of birth/age : [redacted] A - 37 YR.
- Date of employment : 28/02/2023.
- Length in service : 1 yr 4 months.
- Nature of job : Masson.
- Identification marks : A black mole on left side cheek
- General Survey :

Health : Good / Fair / Poor

Height - 167 Cm.

Weight - 64 Kg.

- Blood group : A+ve
- Eye vision : Normal / Abnormal ...... Dist vn Lt 6/6 Rt 6/6

  Use of glass – Yes / No
- Hearing : Normal / Abnormal
- Respiratory system & chest measurement : Colour vision OK

  Inspiration – 84 cm

  Expiration – 86 cm

  Respiratory Rate / min – 18/m

  Remarks if any – NAD

  Near vision Lt N/6 Rt N/6
- Cardiovascular system :

  Pulse rate – 74 b/m

  Bp- 110/70 mmHg.

  Heart sounds- (N)

- Abdomen Tenderness : Yes/ No

  Liver : Normal / Enlarged

  Spleen : Normal / Enlarged

- Nervous system :

  History of fits : Yes / No

  Epilepsy : Yes / No

  Remarks on mental health : NA

- Locomotor system : Normal / Abnormal
- Skin condition : Normal / Abnormal

  Remarks on any skin disease noticed – NO

- 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

[redacted]

Signature of the Employee.

19/6/24

Signature of the Medical Officer

MEDICAL OFFICER
VEDANTA FACOR

Details of Annual Solid Waste Generated from M/S Ferro Alloys Corporation Ltd. (FACOR) during the period from 2021-22 to 2024-25

Year	Name of the Industries	Solid Waste	Generated Quantity (MT)	Utilized Quantity (MT)	Disposal Practices
2021-22	M/S Ferro Alloys Corporation Ltd. (FACOR)	Slag	75378	75378	Used for land filling low lying areas & road making inside and outside plant premises
2022-23	M/S Ferro Alloys Corporation Ltd. (FACOR)	Slag	65811.66	65811.66	Used for land filling low lying areas & road making inside and outside plant premises
2023-24	M/S Ferro Alloys Corporation Ltd. (FACOR)	Slag	82745.71	82745.71	Used for land filling low lying areas & road making inside and outside plant premises
2024-25 (Up to Sept 2024)	M/S Ferro Alloys Corporation Ltd. (FACOR)	Slag	69144.1	69144.1	Used for land filling low lying areas & road making inside and outside plant premises

FERRO ALLOYS CORPORATION LTD. BHADRAK

Annexure 8

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
केन्द्रीय भूमि जल प्राधिकरण
Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)
NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	M/s Ferro Alloys Corporation Ltd.		
Project Address:	M/s Ferro Alloys Corporation Ltd.		
Village:	Randia (og)	Block:	Bhadrak
District:	Bhadrak	State:	Odisha
Pin Code:			
Communication Address:	M/s Ferro Alloys Corporation Ltd, Charge Chrome Plant, D.p Nagar, Randia, Bhadrak, Bhadrak, Odisha - 756135		
Address of CGWB Regional Office :	Central Ground Water Board South Eastern Region, Bhujal Bhawan, Khandagiri Square, Nh-5, Bhubaneshwar, Khordha, Odisha - 751030		

1.	**NOC No.:**	CGWA/NOC/IND/REN/1/2023/8654	2.	**Date of Issuence**	04/12/2023
3.	Application No.:	21-4/74/OR/IND/2008	4.	Category: (GWRE 2022)	Safe
5.	Project Status:	Existing With Additional Ground Water Requirment	6.	NOC Type:	Renewal
7.	**Valid from:**	19/09/2022	8.	**Valid up to:**	18/09/2025

9. Ground Water Abstraction Permitted:

Fresh Water		Saline Water		Dewatering		Total	
m³/day	m³/year	m³/day	m³/year	m³/day	m³/year	m³/day	m³/year
1750.00	638750.00						

10. Details of ground water abstraction /Dewatering structures

	Total Existing No.:6						Total Proposed No.:0					
	DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu
Abstraction Structure*	0	0	6	0	0	0	0	0	0	0	0	0

*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps

11.	Ground Water Abstraction/Restoration Charges paid (Rs.):	3580918.00
12.	Environment Compensation (if applicable) paid (Rs.):	0.00

13.	Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.	No. of Piezometers	Monitoring Mechanism		
			Manual	DWLR**	DWLR With Telemetry
	**DWLR - Digital Water Level Recorder	2	0	1	1

(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011
Phone: (011) 23383561 Fax: 23382051, 23386743
Website: cgwa-noc.gov.in

Rainwater Recharging Structure

Rainwater Harvesting Ponds

Annexure 10

EPABX : 2561909/2562847
Tel : 2562822/2560955
E-mail:paribesh1@ospcboard.org
Website: www.ospcboard.org

STATE POLLUTION CONTROL BOARD, ODISHA

[DEPARTMENT OF FOREST & ENVIRONMENT, GOVERNMENT OF ODISHA]
ParibeshBhawan, A/118, Nilakantha Nagar, Unit – VIII
Bhubaneswar – 751 012, INDIA

No. 10343 / IND-IV-PCP-EW-546 Date: 13.06.2022 /

BY REGD. POST/E-mail

cosmicnet.net@gmail.com

To

Mrs. Reena Sahoo, Proprietress
M/s Cosmic Net,
Corporate Office: Plot No. B-25,
1st Floor, Sahid Nagar, Bhubaneswar

Sub: Authorisation for E-Waste Dismantler under E-Waste Management Rules, 2016 of MoEF&CC, Government of India.

Ref: On line Application ID No.4157285, Dt. 12.04.2022, Seeking Registration for Dismantling of E-waste.

The State Pollution Control Board, Odisha after examining the application is pleased to grant authorization for **Dismantler** under provision of **E-Waste (Management) Rule, 2016** of MoEF & CC Govt. of India. The certificate of authorization is hereby issued as follows.

Registration No.	:	546/PCP E-Waste Registration / June/19/02
Date of Authorization	:	13.06.2022
Name and Address	:	M/s Cosmic Net, Plot No. 823, Mouza-Kesurà, Bhubaneswar, Dist-Khordha
Tele Phone No	:	Ph. No. 0674-2544583, M-9438091660
E-mail	:	cosmicnet.net@gmail.com
Validity	:	Up to 31.03.2024

The authorization is granted for dismantling and collection of following E-Waste item and quantity (MT/Year)

Sl. No.	Waste Description	Quantity / Annum
1	Dismantling of E-Waste	360 MT

Greenbelt

PP currently has 34.84% green belt coverage as per Greenbelt assessment by expert agency. PP is continuously working to achieve the tree density to 2500/Ha by using the existing vacant land and replacement of damaged plants.

Details of plantation is provided below.

Total land coverage by the project : 86.163 HA.

Green Belt developed area : 28.99 HA.

Plantation: (Apr 2024-Sept 2024)

Year of plantation	Species planted	Spacing	Height attained (As on Date)	Total area covered in Ha
2024-25	**10895**	1.5 m	0.9 m	4.358

Trees Details:

Local Name	Botanical Name	Family
Trees		
Nimba	*Azadiracta india*	Meliaceae
Radhachura	*Peltophurum ferrugineum*	Caesalpiniaceae
Karanja	*Pongamia pinnata*	Fabaceae
Acacia	*Acacia auriculiformis*	Mimosaceae
Debadaru	*Polyalthia longifolia*	Annonaceae
Jamun	*Syzygium cumini*	Myrtaceae
Kadamba	*Neolamarckia cadamba*	Neolamarckia cadamba
Sishu	*Dalbergia sissoo*	Fabaceae
Amla	*Phyllanthus emblica*	Phyllanthaceae
Arjun	*Terminalia arjuna*	Combretaceae
Debdaru	*Polyalthia longifolia*	Annonaceae
Banyan	*Ficus benghalensis*	Moraceae
Bahada	*Terminalia bellirica*	Combretaceae

Sunari	*Cassia fistula*	Fabaceae
Peepal	*Ficus religiosa*	Moraceae
Indian bael	*Aegle marmelos*	Rutaceae
Shrubs		
Kadali	*Musa paradisiaca*	Musaceae
Pedipedika	*Abutilon persicum*	Malvaceae
Dalimba	*Punica granatum*	Puniaceae

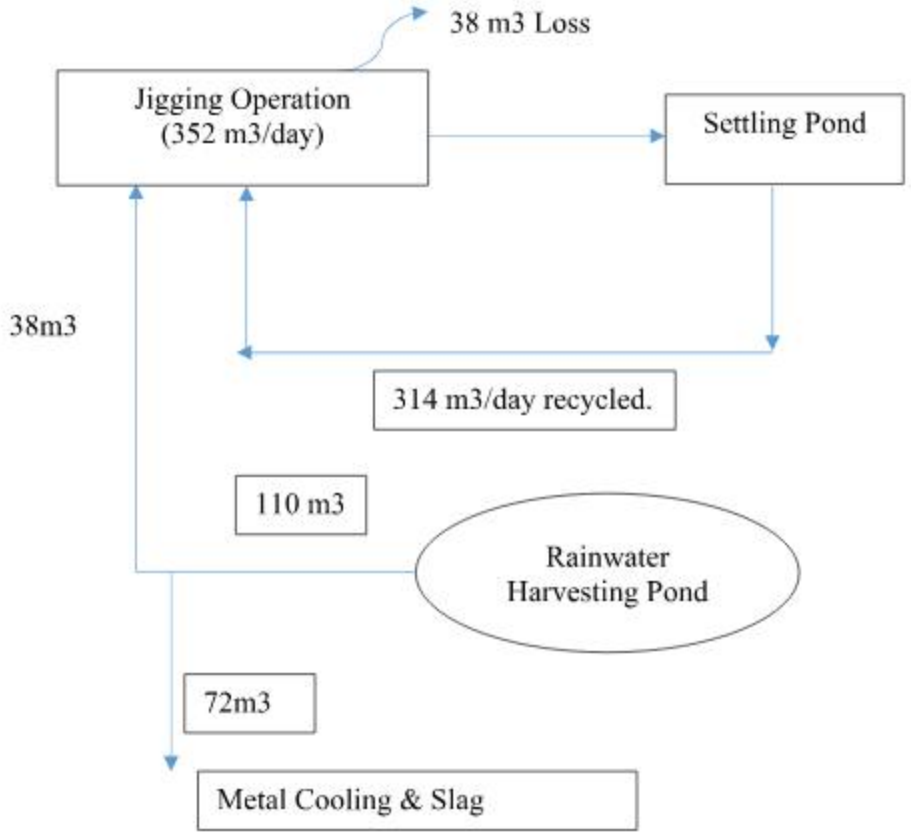
Plantation Programs

at Ferro Alloys Corporation Ltd (Charge Chrome Plant)

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



vedanta
transforming for good

Annexure 13

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.

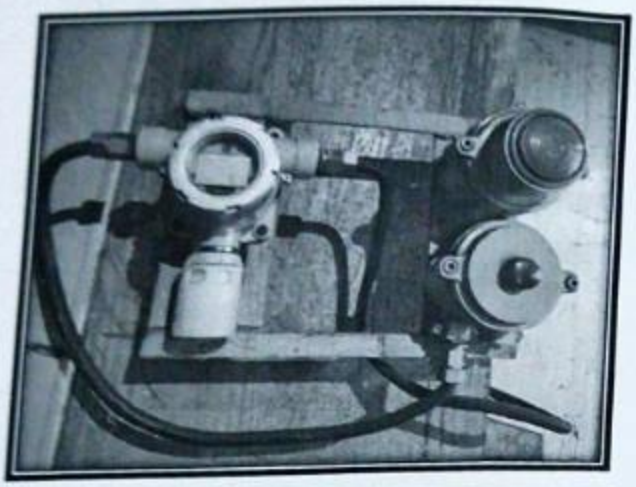
GOVT. OF INDIA
MoEF & CC Integrated R.O
Bhubaneswar-751023
09 MAY 2024
RECEIVED

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

CO Sensor at Furnace Top Level

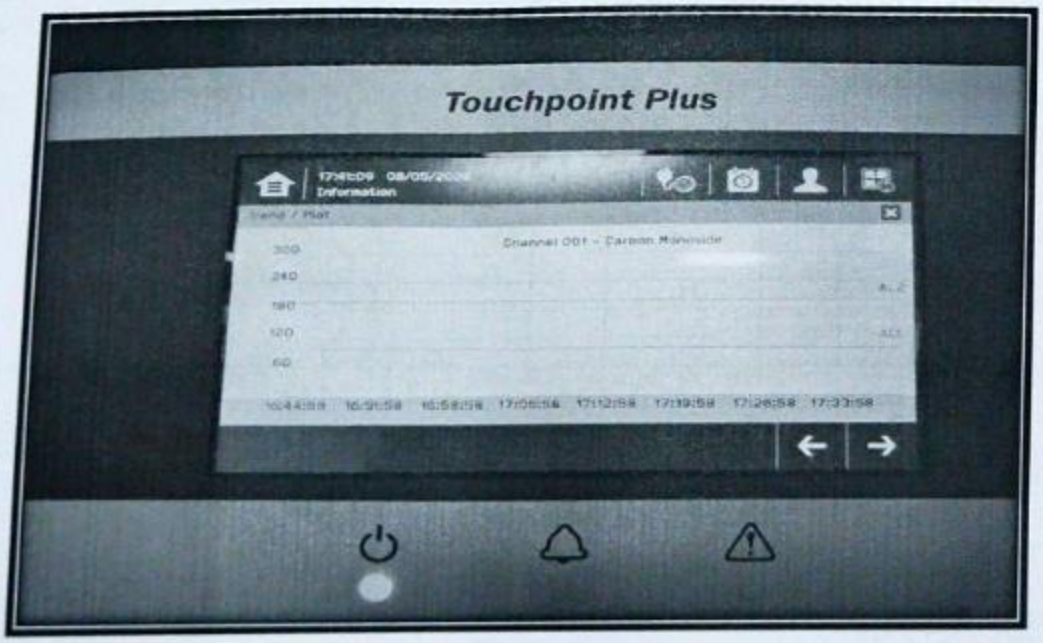
Charge Chrome Plant

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

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

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

7	Air Environment	Bag filter with designed outlet dust concentration of 50 mg/Nm3;	Outlet dust concentration is within the limit and analysis report has been attached as **Annexure 3.**	Being complied
8		The event of failure of any pollution control equipment, automatic tripping in the control system, shall be provided	Air pollution control device (Gas cleaning plant) has been provided with interlocking system.	Complied
9		Attempt shall be made to use low sulfur coke to the possible extent	Coke with sulfur content of < 0.7 % (wt.) is used in the process. Total consumption for the year 2023-24 is 36102 MT. Testing report is enclosed as **Annexure 4**	Complied
10		Flame temperature will be maintained to ensure emission of less NOx	Emission of NOx from GCP bag filters are monitored through external NABL accredited lab. Report of the same has been attached with the **Annexure 3**	Complied
11		All vehicles and their exhausts would be well maintained and regularly tested for emission concentration	PUC certificate is maintained for all vehicles. Reference copy is enclosed as **Annexure 5**	Complied
12		Regular preventive maintenance of pollution control equipment;	It is being maintained regularly. Reference copy is enclosed as **Annexure 6**	Complied
13		Stack emissions shall be regularly monitored by FERRO ALLOYS CORPORATION LTD. / SPCB/external agencies on periodic basis as per statutory requirements.	It is being monitored regularly. Report for the same is enclosed as **Annexure 3**	Complied
14		Jet Pulse bag filters at all dry material conveying and transfer points	For controlling dust pollution in conveying and transfer points Dedusting unit with bag filter system has been installed. Photocopy is enclosed as **Annexure 7**	Complied
15		Regular dust suppression with water sprinkler on the haul roads;	Regular water sprinkling is being done through mobile sprinkler. Photocopy is attached for reference as **Annexure 7**	Being complied
16		Plant roads &approach roads shall be made of bitumen/concrete;	All internal road and connecting road from project site to main highway connected with PQC (Pavement Quality Concrete Road). Photocopy is attached for reference in **Annexure 8**	Complied
17		Areas between various sections and truck parking areas shall be made of concrete/bitumen/brickwork;	Photocopy attached for reference in **Annexure 8**	Complied
18		Open areas within the plant premises and along with boundaries of the plant premises shall be covered under greenbelt/plantation	PP have planted native species of trees around the plant boundaries. PP is currently having 34.84% of greenbelt coverage as per Greenbelt assessment by expert agency.	Complied
19		Construction materials such as sand etc. shall be fully covered during transportation to/from the plant site by road.	It is being followed and implemented	Complied
20		Installation of dust suppression system i.e. Dry Fog System near the fugitive dust generation sources in the Metal Recovery Plant.	Water sprinkling system has been installed in the fugitive dust generation points in metal recovery plant. Photographs to be attached	Complied
21		GCP stack emission monitoring	Stack emission monitoring is being carried out on monthly basis. Monitoring Report has been attached as **Annexure 3**	Complied

22	Noise Environment	Plantation around the plant boundary will create a noise barrier for attenuating noise level.	Greenbelt along with stone patching boundary wall in the periphery of the plant boundaries has been developed to create a noise barrier for attenuating noise level.	Complied
23		Machinery design specifications of all the equipment in the Silico manganese plant will be to operate with noiselevelshallnotexceed85dBA as per the requirement of OSHA (Occupational Safety and Health Administration).	There is no silico manganese plant. So, this is not applicable.	Not applicable
24		Provision of acoustic enclosures to modulate the noise generated by machines.	Acoustic enclosures have been provided in the heavy noise generating equipment like DG sets, Compressors etc. Photographs enclosed as **Annexure 9**	Complied
25		Periodical lubrication of the heavy vehicles will help to keep the noise & vibration level at minimum.	It is being maintained.	Complied
26		Provision of Protective device like earmuff/plugs to the workers	Ear plugs have been provided to the workers working in high noise prone area. Reference copy is enclosed as **Annexure 10**	Complied
27		Post health check-ups of employees &contractual labourers working in the noise prone areas	Health check-ups is being carried out regularly for employees &contractual laborers working in the noise prone areas. PME attached as **Annexure 11.**	Being complied

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

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

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

For Ferro Alloys Corporation Limited

Chief HSE Officer

Krutisunder Mohapatra

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

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

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

KSM

Chief HSE Officer

Krutisunder Mohapatra

Annexure 16

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.

AAXIS NANO
TECHNOLOGIES PVT. LTD.
Solutions For A Sustainable Environment

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CALIBRATION CERTFICATE

INSTRUMENT USER

M/S Vedanta Facor D.P.NAGAR,RANDIA,DIST: BHADRAK, ODISHA INDIA - 756135

NAME OF THE INSTRUMENT : ONLINE STACK MONITORING SYSTEM

MAKE : ABB & DYNOPTIC
MODEL : EL3040, DSL-340
SAMPLE LOCATION : STACK
DATE OF CALIBRATION : 04th October, 2024
Calibration due date : 04th January, 2025

DIAGNOSTIC CHECKS	STANDARD/LAB VALUES (PPM & mg/Nm3)	MEASURED VALUES (PPM & mg/Nm3)	CALIBRATED VALUES (PPM & mg/Nm3)	ACTUAL VALUES BEFORE CALIBRATION	ACTUAL VALUES AFTER CALIBRATION
PARAMETER : SO2 (CALIBRATED WITH ZERO AND SPAN NON GAS)	0.00 mg/Nm3 961.00 mg/Nm3	00.00 mg/Nm3 955.00 mg/Nm3	0.00 mg/Nm3 817.00 mg/Nm3	42.00 mg/Nm3	37.00 mg/Nm3
PARAMETER : NO (CALIBRATED WITH ZERO AND SPAN NON GAS)	0.00 mg/Nm3 893.00 mg/Nm3	00.00 mg/Nm3 890.00 mg/Nm3	0.00 PPM 820.00 mg/Nm3	33.00 mg/Nm3	29.00 mg/Nm3
PARAMETER : CO (CALIBRATED WITH ZERO AND SPAN NON GAS)	0.00 mg/Nm3 910.00 mg/Nm3	00.00 mg/Nm3 903.00 mg/Nm3	0.00 mg/Nm3 910.00 mg/Nm3	102.00 mg/Nm3	98.00 mg/Nm3
PARAMETER : PM (CALIBRATED WITH ZERO & SPAN FILTER)	0.00 mg/Nm3 500.00 mg/Nm3	0.00 mg/Nm3 495.00 mg/Nm3	0.00 mg/Nm3 500.00 mg/Nm3	22.00 mg/Nm3	19.00 mg/Nm3
Physical Check	Dimensions & Designed Characteristics	OK			
Power Supply Test	230V AC	OK			

Conclusion & Results: The system has been validated and calibrated with known standards and found operational satisfactory.

CALIBRATED BY:

CALIBRATED & INSPECTED

ThermoFisher SCIENTIFIC
The world leader in serving science

CALIBRATION REPORT

M/s Ferro Alloys Corporation Ltd		AAQMS-1	
	S.No	Model code	Date : 27.05.2024
Nox ANALYSER	IN2401500016	42i-BNMSDAA	
Cylinder Concentra on		NO = 43 PPM	NO2 =5 PPM
	Set value(MGC)	Analyzer value	Remarks
Zero	0.00 PPM	NO = - 0.1 µg NO2 = -1.8 µg NOX = -1.7 µg	OK
NO span	0.4 PPM	321 µg	OK
NO2 span	0.4 PPM	76 µg	
Nox span	0.4 PPM	397 µg	
	S.No	Model code	Date : 27.05.2024
SO2 ANALYSER	IN2401700022	43i-BNSAA	
Cylinder Concentraion		SO2= 46 PPM	
	Set value	Analyzer value	Remarks
Zero	0.000 PPM	0.34 µg	OK
SO 2 span	0.20 PPM	381 µg	
	S.No	Model code	Date : 27.05.2024
CO ANALYSER	IN2403300070	48i-BNSAA	
Cylinder Concentraion		CO= 198 PPM	
	Set value	Analyser value	Remarks
Zero	0.000 PPM	0.151 mg/m3	OK
CO Span	4 PPM	4.54 mg/m3	
M/s Ferro Alloys Corporation Ltd		M/s Thermo Fisher Scientific	
Name Mr. Sachyajit Samantaray		Name Mr. Lakshmipathi balaji S	

Annexure 18

TEST REPORT

Test Report No: ENVLAB/24-25/TR-04209 *Date: 06.06.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**24.05.2024**
			Sample Received on	:	**25.05.2024**
Sample Description	:	**Fugitive Emission**	Sampling Procedure	:	**IS 5182**
			Sampling Location	:	**1-Raw Material Handling Yard 2- 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	:	**25.05.2024**	Test Completed on	:	**28.05.2024**

SL. No	Location	Test Result	
		Suspended Particulate Matter(µg/m³)	Respirable Particulate Matter (µg/m³)
1	**Raw Material Handling Yard**	**328**	**137**
2	**Daybin Area**	**236**	**108**
Standard For Crusher /Industrial Area		**1200**	**----**

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*** End Report***

Reviewed by

Approved by

TEST REPORT

Test Report No: ENVLAB/24-25/TR-09367 *Date:* **05.09.2024**

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.08.2024**
			Sample Received on	:	**24.08.2024**
Sample Description	:	**Fugitive Emission**	Sampling Procedure	:	**IS 5182**
			Sampling Location	:	**1-Near Agglomeration area** **2- Near MRP area**
Environment Condition during Sampling	:	Atmospheric Temp.: 29 – 33°C Barometric Pressure : 755 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550), VOC Sampler
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.08.2024**	Test Completed on	:	**26.08.2024**

SL. No	Location	Test Result	
		Suspended Particulate Matter($\mu g/m^3$)	Respirable Particulate Matter ($\mu g/m^3$)
1	Near Agglomeration area	248	97
2	Near MRP Area	216	85
Standard For Crusher /Industrial Area		1200	----

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VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

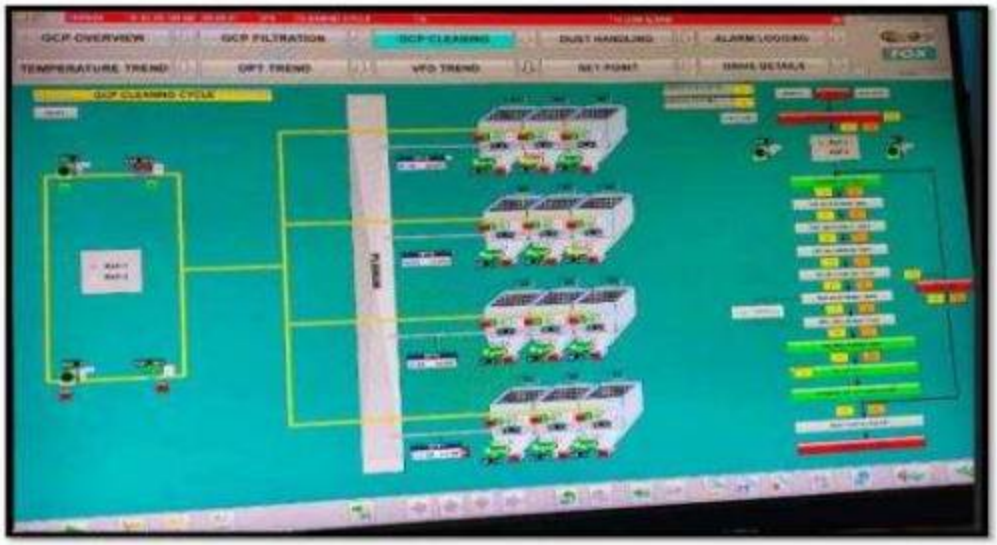
Dedusting Unit

Gas Cleaning Plant

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

Annexure 21

TEST REPORT

Test Report No: ENVLAB/24-25/TR-01987 *Date: 06.05.2024*

Chemical Testing :

Name & Address of the Customer	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**			
Sample Description	:	**Sewage Water (STP)**	Date of Sampling	:	**29.04.2024**
			Sample Received on	:	**30.04.2024**
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	**STP-1, STP-2**	Sampling Location	:	**S-1: Water From Inlet** **S-2: Water From Outlet**
Sample Condition	:	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**30.04.2024**	Test Completed on	:	**05.05.2024**

A. Waste Water

SL No.	Parameters	Unit	Standard (Inland Surface water) Part-A	Test methods	S-1	S-2
1	**Total Suspended Solids**	**mg/l, max**	**100**	**APHA 2540 D**	**41**	**22**
2	**pH at 25°C**	**-**	**6.5-9.0**	**APHA 4500H⁺B**	**7.13**	**7.22**
3	**Biochemical Oxygen Demand (as BOD) , 3 Days at 27°C**	**mg/l, max**	**30**	**IS 3025(P-44): 1993 RA 1999**	**61**	**24**
4	**Fecal Coliform (as TC)**	mg/l	**APHA 9221 E**	**<1000**	**220**	**70**

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-01991 *Date:06.05.2024*

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	29.04.2024
			Sample Received on	:	30.04.2024
Sample Description	:	Waste Water	Sampling Procedure	:	APHA 1060 B
Sample Condition	:	Ice Preservation	Sampling Location	:	WW-: SRTS Outlet
			Sampling done by	:	Ashutosh Mohanty
Test Started on	:	30.04.2024	Test Completed on	:	05.05.2024

Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results
					WW4
1.	pH at 25^{0}C	mg/l	APHA4500 H+B	6.5-9.0	7.14
2.	Suspended Solids	mg/l	APHA 2540 D	<100	33.0
3.	Biochemical Oxygen Demand (as BOD at 27^{0}C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	8.0
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	33.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.25
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

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*** End Report***

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TEST REPORT

Test Report No: ENVLAB/24-25/TR- **04217** *Date: 06.06.2024*

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Sewage Water (STP)	Date of Sampling	:	24.05.2024
			Sample Received on	:	25.05.2024
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	STP-1, STP-2	Sampling Location	:	S-1: Water From Inlet S-2: Water From Outlet
Sample Condition	:	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	25.05.2024	Test Completed on	:	30.05.2024

Chemical Testing :

A. Waste Water

SL No.	Parameters	Unit	Standard (Inland Surface water) Part-A	Test methods	S-1	S-2
1	Total Suspended Solids	mg/l, max	100	APHA 2540 D	45	26
2	pH at 25°C	-	6.5-9.0	APHA 4500H+B	7.08	7.19
3	Biochemical Oxygen Demand (as BOD), 3 Days at 27°C	mg/l, max	30	IS 3025(P-44): 1993 RA 1999	59	22
4	Fecal Coliform (as TC)	mg/l	APHA 9221 E	<1000	200	63

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-04221 *Date:06.06.2024*

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	24.05.2024
			Sample Received on	:	25.05.2024
Sample Description	:	Waste Water	Sampling Procedure	:	APHA 1060 B
Sample Condition	:	Ice Preservation	Sampling Location	:	WW-: SRTS Outlet
			Sampling done by	:	Ashutosh Mohanty
Test Started on	:	25.05.2024	Test Completed on	:	30.05.2024

Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results
					WW4
1.	pH at 25^0C	mg/l	APHA4500 H+B	6.5-9.0	7.20
2.	Suspended Solids	mg/l	APHA 2540 D	<100	40.0
3.	Biochemical Oxygen Demand (as BOD at 27^0C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	8.8
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	36.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.28
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

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- Environmental & Social Study
- Surface & Sub-Surface Investigation
- Quality Control & Project Management
- Renewable Energy
- Agricultural Development
- Information Technology
- Public Health Engineering
- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

Laboratory Services
Environment Lab
Food Lab
Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

TEST REPORT

Test Report No: ENVLAB/24-25/TR- **05586** *Date: 06.07.2024*

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Sewage Water (STP)	Date of Sampling	:	21.06.2024
			Sample Received on	:	22.06.2024
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	STP-1, STP-2	Sampling Location	:	S-1: Water From Inlet S-2: Water From Outlet
Sample Condition	:	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	22.06.2024	Test Completed on	:	27.06.2024

Chemical Testing :

A. Waste Water

SL No.	Parameters	Unit	Standard (Inland Surface water) Part-A	Test methods	S-1	S-2
1	Total Suspended Solids	mg/l, max	100	APHA 2540 D	48	25
2	pH at 25°C	-	6.5-9.0	APHA 4500H⁺B	7.12	7.23
3	Biochemical Oxygen Demand (as BOD) , 3 Days at 27°C	mg/l, max	30	IS 3025(P-44): 1993 RA 1999	56	25
4	Fecal Coliform (as TC)	mg/l	APHA 9221 E	<1000	180	70

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Approved by

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E-mail: visiontek@visiontek.org, visiontekin@gmail.com

Visiontek Consultancy Services Pvt. Ltd.

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- Water Resource Management
- Environmental & Social Study
- Surface & Sub-Surface Investigation
- Quality Control & Project Management
- Renewable Energy
- Agricultural Development
- Information Technology
- Public Health Engineering
- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

Laboratory Services
Environment Lab
Food Lab
Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

TEST REPORT

Test Report No: ENVLAB/24-25/TR-05590 *Date:06.07.2024*

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	21.06.2024
			Sample Received on	:	22.06.2024
Sample Description	:	Waste Water	Sampling Procedure	:	APHA 1060 B
Sample Condition	:	Ice Preservation	Sampling Location	:	WW-: SRTS Outlet
			Sampling done by	:	Ashutosh Mohanty
Test Started on	:	22.06.2024	Test Completed on	:	28.06.2024

Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results
					WW4
1.	pH at 25^{0}C	mg/l	APHA4500 H+B	6.5-9.0	7.24
2.	Suspended Solids	mg/l	APHA 2540 D	<100	42.0
3.	Biochemical Oxygen Demand (as BOD at 27^{0}C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	8.5
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	34.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.35
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

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

*** End Report***

Reviewed by

Approved by

Plot No - M-22 & 23, Chandaka Industrial Estate, Patia, Bhubaneswar, Khurda, Odisha-751024, India Tel.: 0674-3511721

TEST REPORT

Test Report No: ENVLAB/24-25/TR-08279

Date:05.08.2024

Chemical Testing :

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Sewage Water (STP)	Date of Sampling	:	23.07.2024
			Sample Received on	:	24.07.2024
Identification by Customer	:	STP-1, STP-2	Sampling Procedure	:	APHA 1060 B
Sample Condition	:	Ice Preserved	Sampling Location	:	S-1: Water From Inlet S-2: Water From Outlet
Test Started on	:	24.07.2024	Sampling done by	:	Ashutosh Mohanty
			Test Completed on	:	30.07.2024

A. Waste Water

SL No.	Parameters	Unit	Standard (Inland Surface water) Part-A	Test methods	S-1	S-2
1	Total Suspended Solids	mg/l, max	100	APHA 2540 D	52	29
2	pH at 25^{0}C	-	6.5-9.0	APHA 4500H$^+$B	7.08	7.15
3	Biochemical Oxygen Demand (as BOD) , 3 Days at 27°C	mg/l, max	30	IS 3025(P-44): 1993 RA 1999	50	22
4	Fecal Coliform (as TC)	mg/l	APHA 9221 E	<1000	220	84

TERMS AND CONDITION:-

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**** End Report****

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

TEST REPORT

Test Report No: ENVLAB/24-25/TR-08283 *Date:05.08.2024*

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	23.07.2024
			Sample Received on	:	24.07.2024
Sample Description	:	Waste Water	Sampling Procedure	:	APHA 1060 B
Sample Condition	:	Ice Preservation	Sampling Location	:	WW-: SRTS Outlet
			Sampling done by	:	Ashutosh Mohanty
Test Started on	:	24.07.2024	Test Completed on	:	30.07.2024

Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results
					WW4
1.	pH at 25^{0}C	mg/l	APHA4500 H+B	6.5-9.0	7.18
2.	Suspended Solids	mg/l	APHA 2540 D	<100	44.0
3.	Biochemical Oxygen Demand (as BOD at 27^{0}C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	8.1
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	32.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.40
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

TERMS AND CONDITION:-

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*** End Report***

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

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VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by

TEST REPORT

Test Report No: ENVLAB/24-25/TR-09373

Date:05.09.2024

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Sewage Water (STP)	Date of Sampling	:	23.08.2024
			Sample Received on	:	24.08.2024
Identification by Customer	:	STP-1, STP-2	Sampling Procedure	:	APHA 1060 B
Sample Condition	:	Ice Preserved	Sampling Location	:	S-1: Water From Inlet S-2: Water From Outlet
Test Started on	:	24.08.2024	Sampling done by	:	Ashutosh Mohanty
			Test Completed on	:	29.08.2024

Chemical Testing :

A. Waste Water

SL No.	Parameters	Unit	Standard (Inland Surface water) Part-A	Test methods	S-1	S-2
1	Total Suspended Solids	mg/l, max	100	APHA 2540 D	55	28
2	pH at 25°C	-	6.5-9.0	APHA 4500H⁺B	7.12	7.20
3	Biochemical Oxygen Demand (as BOD) , 3 Days at 27°C	mg/l, max	30	IS 3025(P-44): 1993 RA 1999	47	20
4	Fecal Coliform (as TC)	mg/l	APHA 9221 E	<1000	210	79

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

**** End Report****

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

TEST REPORT

Test Report No: ENVLAB/24-25/TR-09377

Date:05.09.2024

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	23.08.2024
Sample Description	:	Waste Water	Sample Received on	:	24.08.2024
Sample Condition	:	Ice Preservation	Sampling Procedure	:	APHA 1060 B
			Sampling Location	:	WW-: SRTS Outlet
			Sampling done by	:	Ashutosh Mohanty
Test Started on	:	24.08.2024	Test Completed on	:	30.08.2024

Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results
					WW4
1.	pH at 25^{0}C	mg/l	APHA4500 H+B	6.5-9.0	7.11
2.	Suspended Solids	mg/l	APHA 2540 D	<100	48.0
3.	Biochemical Oxygen Demand (as BOD at 27^{0}C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	7.5
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	30.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.48
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

TERMS AND CONDITION:-

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

*** End Report***

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TEST REPORT

Test Report No: ENVLAB/24-25/TR- 10480 *Date:05.10.2024*

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak	Date of Sampling	:	13.09.2024
			Sample Received on	:	14.09.2024
Sample Description	:	Waste Water	Sampling Procedure	:	APHA 1060 B
Sample Condition	:	Ice Preservation	Sampling Location	:	WW-: SRTS Outlet
			Sampling done by	:	Ashutosh Mohanty
Test Started on	:	14.09.2024	Test Completed on	:	20.09.2024

Chemical Testing

WATER :

Sl. No	Parameter	Unit	Testing Methods	Standard as per CTO	Analysis Results
					WW4
1.	pH at 25^{0}C	mg/l	APHA4500 H+B	6.5-9.0	7.08
2.	Suspended Solids	mg/l	APHA 2540 D	<100	46.0
3.	Biochemical Oxygen Demand (as BOD at 27^{0}C For 3 days)	mg/l	IS3025(P-44)1993 RA 2003	<30	7.2
4.	Chemical Oxygen Demand as COD	mg/l	APHA 5220-C	<250	28.0
5.	Oil & Grease	mg/l	APHA 5520 B	10	ND
6.	Iron (as Fe)	mg/l	APHA3500-Fe, B	3	0.45
7.	Chromium as (Cr+6)	mg/l	APHA 3500 Cr B	0.1	<0.01

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

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Annexure 18A

TEST REPORT

Test Report No: ENVLAB/24-25/TR-10476

Date:05.10.2024

Name & Address of the Customer	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**			
Sample Description	:	**Sewage Water (STP)**	Date of Sampling	:	**13.09.2024**
			Sample Received on	:	**14.09.2024**
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	**STP-1, STP-2**	Sampling Location	:	**S-1: Water From Inlet** **S-2: Water From Outlet**
Sample Condition	:	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**14.09.2024**	Test Completed on	:	**20.09.2024**

Chemical Testing :

A. Waste Water

SL No.	Parameters	Unit	Standard (Inland Surface water) Part-A	Test methods	S-1	S-2
1	Total Suspended Solids	mg/l, max	100	APHA 2540 D	51	25
2	pH at 25°C	-	6.5-9.0	APHA 4500H⁺B	7.08	7.22
3	Biochemical Oxygen Demand (as BOD), 3 Days at 27°C	mg/l, max	30	IS 3025(P-44): 1993 RA 1999	45	18
4	Fecal Coliform (as TC)	mg/l	APHA 9221 E	<1000	220	63

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

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Annexure 22

Ref. no: Envlab/24-25/R-01993 **Date: 06.05.2024**

GROUND WATER QUALITY ANALYSIS REPORT FOR APR-24

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Drinking Water	Date of Sampling	:	29.04.2024
			Sample Received on	:	30.04.2024
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	DW-1	Sampling Location	:	GW-1: Randia village ground water
Sample Condition	:	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	30.04.2024	Test Completed on	:	05.05.2024

Sl. No.	Parameter	Unit	TEST METHOD	Standard as per IS -10500:2012 Amended on 2015 & 2018 Permissible Limit	Analysis Result
	Physical Parameter				
1	Colour	Hazen,Max	APHA 23rd Ed,2017 : 2120 B, C	5	<5
2	Odour	--	APHA 23rd Ed,2017 :2120 B	Agreeable	Agreeable
3	Taste	--	APHA 23rd Ed,2017 : 2160 C	Agreeable	Agreeable
4	Turbidity	NTU,Max	APHA 2130 B	1	1.3
5	pH at 25°C	--	APHA 23Krd Ed,2017 : 4500H+ B	6.5-8.5	6.95
6	Dissolved Solids	mg/l,Max	APHA 23rd Ed,2017 : 2540 C	500	402
	CHEMICAL PARAMETER				
1	Total Hardness (as $CaCO_3$)	mg/l,Max	APHA 23rd Ed,2017 : 2340 C	200	191
2	Iron (as Fe)	mg/l,Max	APHA 23rd Ed,2017 : 3111, B	1.0	0.48
3	Chloride (as Cl)	mg/l,Max	APHA 23rd Ed,2017 : 4500Cl- B	250	35.0
4	Residual, free Chlorine	mg/l,Min	APHA 4500 Cl B	0.2	ND
5	Calcium (as Ca)	mg/l,Max	APHA 23rd Ed,2017 : 3500Ca B	75	60.2
6	Magnesium (as Mg)	mg/l,Max	APHA 3500 Mg B	30	9.9
7	Copper (as Cu)	mg/l,Max	APHA 3111 B,C	0.05	BDL
8	Manganese (as Mn)	mg/l,Max	APHA 3500Mn B	0.1	<0.05
9	Sulphate (as SO_4)	mg/l,Max	APHA 4500 SO_4^{2-} E	200	20.5
10	Nitrate (as NO_3)	mg/l,Max	APHA 4500 NO_3^- E	45	BDL
11	Fluoride (as F)	mg/l,Max	APHA 4500 F,C	1.0	BDL
12	Phenolic Compounds(as C_6H_5OH)	mg/l,Max	APHA 5530 B,D	0.001	BDL
13	Anionic Detergents (as MBAS)	mg/l,Max	APHA 5540 C	0.2	BDL

14	Chromium (as Cr^{+6})	mg/l,Max	APHA 3500Cr B	0.05	BDL
15	Mineral Oil	mg/l,Max	APHA 5520 B	0.5	BDL
16	Alkalinity	mg/l,Max	APHA 2320 B	200	141
17	Aluminium as(Al)	mg/l,Max	APHA 3500Al B	0.03	BDL
18	Boron (as B)	mg/l,Max	APHA 4500 B,B	0.5	BDL
19	Ammonia (as total ammonia-N)	mg/l,Max	APHA 23rd Ed,2017 4500	0.5	BDL
20	Barium (as Ba)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.7	BDL
21	Silver (as Ag)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	BDL
22	Polyaromatic hydrocarbons (PAH)	mg/l,Max	APHA 23rd Ed,2017 :6440 B	0.0001	BDL
23	Total Chromium (as Cr)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.05	BDL
24	Zinc (as Zn)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	5	1.21
25	Selenium (as Se)	mg/l,Max	APHA 23rd Ed,2017: 3500 Se C	0.01	BDL
	PESTICIDES				
1	Endosulfan à	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
2	Endosulfan ß	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
3	Endosulfan sulphate	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
4	Alachlor	µg/l, Max	APHA 23rd edition: 6630 C	20	BDL
5	Atrazine	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL
6	Aldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	BDL
7	Dieldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	BDL
8	Alpha HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.01	BDL
9	Beta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	BDL
10	Delta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	BDL
11	Butachlor	µg/l, Max	APHA 23rd edition: 6630 C	125.0	BDL
12	Chloropyriphos	µg/l, Max	APHA 23rd edition: 6630 C	30.0	BDL
13	2,4-Dichlorophenoxyacetic acid	µg/l, Max	APHA 23rd edition: 6630 C	30.0	BDL
14	p p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
15	p p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
16	p p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
17	o p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
18	o p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
19	o p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
20	Ethion	µg/l, Max	APHA 23rd edition: 6630 C	3.0	BDL

21	Lindane	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL
22	Isoproturon	µg/l, Max	APHA 23rd edition: 6630 C	9.0	BDL
23	Malathion	µg/l, Max	APHA 23rd edition: 6630 C	190.0	BDL
24	Methyl parathion	µg/l, Max	APHA 23rd edition: 6630 C	0.3	BDL
25	Monocrotophos	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
26	Phorate	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL

BACTERIOLOGICAL QUALITY					
1	Total Coliform	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
2	Feacal Coliform	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
3	E.Coli	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
TOXIC SUBSTANCES					
1	Mercury as (Hg)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.001	BDL
2	Cadmium as(Cd)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.003	BDL
3	Nickel as(Ni)	mg/l,max	APHA 23rd Ed,2017 3111 B	--	BDL
4	Arsenic as (As)	mg/l,Max	APHA 23rd Ed,2017: 3114 B	0.2	BDL
5	Cyanide as (CN-)	mg/l,Max	APHA 23rd Ed,2017: 4500 CN- C,D	0.05	BDL
6	Lead as(Pb)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	BDL

Reviewed By:

Approved By:

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Ref. no: Envlab/24-25/R-04210 **Date: 06.06.2024**

GROUND WATER QUALITY ANALYSIS REPORT FOR MAY-24

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Ground Water	Date of Sampling	:	24.05.2024
			Sample Received on	:	25.05.2024
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	GW-1	Sampling Location	:	GW-1: Borewell-3
Sample Condition	;	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	25.05.2024	Test Completed on	:	31.05.2024

Sl. No.	Parameter	Unit	TEST METHOD	Standard as per IS -10500:2012 Amended on 2015 & 2018 Permissible Limit	Analysis Result
	Physical Parameter				
1	Colour	Hazen,Max	APHA 23rd Ed,2017 : 2120 B, C	5	<5
2	Odour	--	APHA 23rd Ed,2017 :2120 B	Agreeable	Agreeable
3	Taste	--	APHA 23rd Ed,2017 : 2160 C	Agreeable	Agreeable
4	Turbidity	NTU,Max	APHA 2130 B	1	0.8
5	pH at 25°C	--	APHA 23Rrd Ed,2017 : 4500H+ B	6.5-8.5	6.98
6	Dissolved Solids	mg/l,Max	APHA 23rd Ed,2017 : 2540 C	500	389
	CHEMICAL PARAMETER				
1	Total Hardness (as $CaCO_3$)	mg/l,Max	APHA 23rd Ed,2017 : 2340 C	200	176
2	Iron (as Fe)	mg/l,Max	APHA 23rd Ed,2017 : 3111, B	1.0	0.50
3	Chloride (as Cl)	mg/l,Max	APHA 23rd Ed,2017 : 4500Cl- B	250	30.0
4	Residual, free Chlorine	mg/l,Min	APHA 4500 Cl B	0.2	ND
5	Calcium (as Ca)	mg/l,Max	APHA 23rd Ed,2017 : 3500Ca B	75	61.7
6	Magnesium (as Mg)	mg/l,Max	APHA 3500 Mg B	30	5.33
7	Copper (as Cu)	mg/l,Max	APHA 3111 B,C	0.05	BDL
8	Manganese (as Mn)	mg/l,Max	APHA 3500Mn B	0.1	<0.05
9	Sulphate (as SO_4)	mg/l,Max	APHA 4500 SO_4^{2-} E	200	18.6
10	Nitrate (as NO_3)	mg/l,Max	APHA 4500 NO_3^- E	45	BDL
11	Fluoride (as F)	mg/l,Max	APHA 4500 F,C	1.0	BDL
12	Phenolic Compounds(as C_6H_5OH)	mg/l,Max	APHA 5530 B,D	0.001	BDL
13	Anionic Detergents (as MBAS)	mg/l,Max	APHA 5540 C	0.2	BDL
14	Chromium (as Cr^{+6})	mg/l,Max	APHA 3500Cr B	0.05	BDL
15	Mineral Oil	mg/l,Max	APHA 5520 B	0.5	BDL
16	Alkalinity	mg/l,Max	APHA 2320 B	200	130

18	Boron (as B)	mg/l,Max	APHA 4500 B,B	0.5	BDL
19	Ammonia (as total ammonia-N)	mg/l,Max	APHA 23rd Ed,2017 4500	0.5	BDL
20	Barium (as Ba)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.7	BDL
21	Silver (as Ag)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	BDL
22	Polyaromatic hydrocarbons (PAH)	mg/l,Max	APHA 23rd Ed,2017 :6440 B	0.0001	BDL
23	Total Chromium (as Cr)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.05	BDL
24	Zinc (as Zn)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	5	1.28
25	Selenium (as Se)	mg/l,Max	APHA 23rd Ed,2017: 3500 Se C	0.01	BDL
	PESTICIDES				
1	Endosulfan à	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
2	Endosulfan ß	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
3	Endosulfan sulphate	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
4	Alachlor	µg/l, Max	APHA 23rd edition: 6630 C	20	BDL
5	Atrazine	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL
6	Aldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	BDL
7	Dieldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	BDL
8	Alpha HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.01	BDL
9	Beta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	BDL
10	Delta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	BDL
11	Butachlor	µg/l, Max	APHA 23rd edition: 6630 C	125.0	BDL
12	Chloropyriphos	µg/l, Max	APHA 23rd edition: 6630 C	30.0	BDL
13	2,4-Dichlorophenoxyacetic acid	µg/l, Max	APHA 23rd edition: 6630 C	30.0	BDL
14	p p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
15	p p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
16	p p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
17	o p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
18	o p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
19	o p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
20	Ethion	µg/l, Max	APHA 23rd edition: 6630 C	3.0	BDL

21	Lindane	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL
22	Isoproturon	µg/l, Max	APHA 23rd edition: 6630 C	9.0	BDL
23	Malathion	µg/l, Max	APHA 23rd edition: 6630 C	190.0	BDL
24	Methyl parathion	µg/l, Max	APHA 23rd edition: 6630 C	0.3	BDL
25	Monocrotophos	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
26	Phorate	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL

	BACTERIOLOGICAL QUALITY				
1	Total Coliform	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
2	Feacal Coliform	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
3	E.Coli	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
	TOXIC SUBSTANCES				
1	Mercury as (Hg)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.001	BDL
2	Cadmium as(Cd)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.003	BDL
3	Nickel as(Ni)	mg/l,max	APHA 23rd Ed,2017 3111 B	--	BDL
4	Arsenic as (As)	mg/l,Max	APHA 23rd Ed,2017: 3114 B	0.2	BDL
5	Cyanide as (CN-)	mg/l,Max	APHA 23rd Ed,2017: 4500 CN^- C,D	0.05	BDL
6	Lead as(Pb)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	BDL

Reviewed by:

Approved By

Ref. no: Envlab/24-25/R-05580 **Date: 06.07.2024**

GROUND WATER QUALITY ANALYSIS REPORT FOR JUNE-24

Name & Address of the Customer	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak			
Sample Description	:	Ground Water	Date of Sampling	:	21.06.2024
			Sample Received on	:	22.06.2024
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	GW-2	Sampling Location	:	GW-2: Chengagadia Village
Sample Condition	;	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	22.06.2024	Test Completed on	:	28.06.2024

Sl. No.	Parameter	Unit	TEST METHOD	Standard as per IS -10500:2012 Amended on 2015 & 2018 Permissible Limit	Analysis Result
	Physical Parameter				
1	Colour	Hazen,Max	APHA 23rd Ed,2017 : 2120 B, C	5	<5
2	Odour	--	APHA 23rd Ed,2017 :2120 B	Agreeable	Agreeable
3	Taste	--	APHA 23rd Ed,2017 : 2160 C	Agreeable	Agreeable
4	Turbidity	NTU,Max	APHA 2130 B	1	0.4
5	pH at 25^{0}C	--	APHA 23Rrd Ed,2017 : 4500H$^+$ B	6.5-8.5	7.06
6	Dissolved Solids	mg/l,Max	APHA 23rd Ed,2017 : 2540 C	500	394
	CHEMICAL PARAMETER				
1	Total Hardness (as $CaCO_3$)	mg/l,Max	APHA 23rd Ed,2017 : 2340 C	200	180
2	Iron (as Fe)	mg/l,Max	APHA 23rd Ed,2017 : 3111, B	1.0	0.39
3	Chloride (as Cl)	mg/l,Max	APHA 23rd Ed,2017 : 4500Cl$^-$ B	250	95
4	Residual, free Chlorine	mg/l,Min	APHA 4500 Cl B	0.2	ND
5	Calcium (as Ca)	mg/l,Max	APHA 23rd Ed,2017 : 3500Ca B	75	64.0
6	Magnesium (as Mg)	mg/l,Max	APHA 3500 Mg B	30	4.91
7	Copper (as Cu)	mg/l,Max	APHA 3111 B,C	0.05	BDL
8	Manganese (as Mn)	mg/l,Max	APHA 3500Mn B	0.1	BDL
9	Sulphate (as SO_4)	mg/l,Max	APHA 4500 SO_4^{2-} E	200	2.05
10	Nitrate (as NO_3)	mg/l,Max	APHA 4500 NO_3^- E	45	3.46
11	Fluoride (as F)	mg/l,Max	APHA 4500 F,C	1.0	BDL
12	Phenolic Compounds(as C_6H_5OH)	mg/l,Max	APHA 5530 B,D	0.001	BDL
13	Anionic Detergents (as MBAS)	mg/l,Max	APHA 5540 C	0.2	BDL
14	Chromium (as Cr^{+6})	mg/l,Max	APHA 3500Cr B	0.05	BDL
15	Mineral Oil	mg/l,Max	APHA 5520 B	0.5	BDL
16	Alkalinity	mg/l,Max	APHA 2320 B	200	115

17	Aluminium as(Al)	mg/l,Max	APHA 3500Al B	0.03	BDL
18	Boron (as B)	mg/l,Max	APHA 4500 B,B	0.5	BDL
19	Ammonia (as total ammonia-N)	mg/l,Max	APHA 23rd Ed,2017 4500	0.5	BDL
20	Barium (as Ba)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.7	BDL
21	Silver (as Ag)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	BDL
22	Polyaromatic hydrocarbons (PAH)	mg/l,Max	APHA 23rd Ed,2017 ;6440 B	0.0001	BDL
23	Total Chromium (as Cr)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.05	BDL
24	Zinc (as Zn)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	5	BDL
25	Selenium (as Se)	mg/l,Max	APHA 23rd Ed,2017: 3500 Se C	0.01	BDL
	PESTICIDES				
1	Endosulfan à	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
2	Endosulfan ß	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
3	Endosulfan sulphate	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
4	Alachlor	µg/l, Max	APHA 23rd edition: 6630 C	20	BDL
5	Atrazine	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL
6	Aldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	BDL
7	Dieldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	BDL
8	Alpha HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.01	BDL
9	Beta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	BDL
10	Delta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	BDL
11	Butachlor	µg/l, Max	APHA 23rd edition: 6630 C	125.0	BDL
12	Chloropyriphos	µg/l, Max	APHA 23rd edition: 6630 C	30.0	BDL
13	2,4-Dichlorophenoxyacetic acid	µg/l, Max	APHA 23rd edition: 6630 C	30.0	BDL
14	p p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
15	p p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
16	p p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
17	o p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
18	o p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
19	o p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL

20	Ethion	µg/l, Max	APHA 23rd edition: 6630 C	3.0	BDL
21	Lindane	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL
22	Isoproturon	µg/l, Max	APHA 23rd edition: 6630 C	9.0	BDL
23	Malathion	µg/l, Max	APHA 23rd edition: 6630 C	190.0	BDL
24	Methyl parathion	µg/l, Max	APHA 23rd edition: 6630 C	0.3	BDL
25	Monocrotophos	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
26	Phorate	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL

	BACTERIOLOGICAL QUALITY				
1	Total Coliform	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
2	Feacal Coliform	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
3	E.Coli	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
	TOXIC SUBSTANCES				
1	Mercury as (Hg)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.001	BDL
2	Cadmium as(Cd)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.003	BDL
3	Nickel as(Ni)	mg/l,max	APHA 23rd Ed,2017 3111 B	--	BDL
4	Arsenic as (As)	mg/l,Max	APHA 23rd Ed,2017: 3114 B	0.2	BDL
5	Cyanide as (CN-)	mg/l,Max	APHA 23rd Ed,2017: 4500 CN^- C,D	0.05	BDL
6	Lead as(Pb)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	BDL

Reviewed by

Approved By

Ref. no: Envlab/24-25/R-08413 **Date: 05.08.2024**

GROUND WATER QUALITY ANALYSIS REPORT FOR JULY-24

Name & Address of the Customer	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**			
Sample Description	:	**Ground Water**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
			Sampling Procedure	:	APHA 1060 B
Identification by Customer	:	**GW-1**	Sampling Location	:	**GW-1: Borewell No-4**
Sample Condition	:	Ice Preserved	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.07.2024**	Test Completed on	:	**30.07.2024**

Sl. No.	Parameter	Unit	TEST METHOD	Standard as per IS -10500:2012 Amended on 2015 & 2018 Permissible Limit	Analysis Result
	Physical Parameter				
1	Colour	Hazen,Max	APHA 23rd Ed,2017 : 2120 B, C	5	<5
2	Odour	--	APHA 23rd Ed,2017 :2120 B	Agreeable	Agreeable
3	Taste	--	APHA 23rd Ed,2017 : 2160 C	Agreeable	Agreeable
4	Turbidity	NTU,Max	APHA 2130 B	1	0.8
5	pH at 25°C	--	APHA 23Rrd Ed,2017 : 4500H^+ B	6.5-8.5	6.81
6	Dissolved Solids	mg/l,Max	APHA 23rd Ed,2017 : 2540 C	500	401
	CHEMICAL PARAMETER				
1	Total Hardness (as $CaCO_3$)	mg/l,Max	APHA 23rd Ed,2017 : 2340 C	200	183
2	Iron (as Fe)	mg/l,Max	APHA 23rd Ed,2017 : 3111, B	1.0	0.54
3	Chloride (as Cl)	mg/l,Max	APHA 23rd Ed,2017 : 4500Cl^- B	250	35.0
4	Residual, free Chlorine	mg/l,Min	APHA 4500 Cl B	0.2	ND
5	Calcium (as Ca)	mg/l,Max	APHA 23rd Ed,2017 : 3500Ca B	75	64.4
6	Magnesium (as Mg)	mg/l,Max	APHA 3500 Mg B	30	
7	Copper (as Cu)	mg/l,Max	APHA 3111 B,C	0.05	BDL
8	Manganese (as Mn)	mg/l,Max	APHA 3500Mn B	0.1	<0.05
9	Sulphate (as SO_4)	mg/l,Max	APHA 4500 SO_4^{2-} E	200	16.8
10	Nitrate (as NO_3)	mg/l,Max	APHA 4500 NO_3^- E	45	<1
11	Fluoride (as F)	mg/l,Max	APHA 4500 F,C	1.0	0.11
12	Phenolic Compounds(as C_6H_5OH)	mg/l,Max	APHA 5530 B,D	0.001	BDL

13	Anionic Detergents (as MBAS)	mg/l,Max	APHA 5540 C	0.2	BDL
14	Chromium (as Cr^{+6})	mg/l,Max	APHA 3500Cr B	0.05	BDL
15	Mineral Oil	mg/l,Max	APHA 5520 B	0.5	BDL
16	Alkalinity	mg/l,Max	APHA 2320 B	200	112
17	Aluminium as(Al)	mg/l,Max	APHA 3500Al B	0.03	BDL
18	Boron (as B)	mg/l,Max	APHA 4500 B,B	0.5	BDL
19	Ammonia (as total ammonia-N)	mg/l,Max	APHA 23rd Ed,2017 4500	0.5	BDL
20	Barium (as Ba)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.7	BDL
21	Silver (as Ag)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	BDL
22	Polyaromatic hydrocarbons (PAH)	mg/l,Max	APHA 23rd Ed,2017 :6440 B	0.0001	BDL
23	Total Chromium (as Cr)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.05	BDL
24	Zinc (as Zn)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	5	1.35
25	Selenium (as Se)	mg/l,Max	APHA 23rd Ed,2017: 3500 Se C	0.01	BDL
	PESTICIDES				
1	Endosulfan à	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
2	Endosulfan ß	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
3	Endosulfan sulphate	µg/l,Max	APHA 23rd edition: 6630 C	0.4	BDL
4	Alachlor	µg/l, Max	APHA 23rd edition: 6630 C	20	BDL
5	Atrazine	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL
6	Aldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	BDL
7	Dieldrin	µg/l, Max	APHA 23rd edition: 6630 C	0.03	BDL
8	Alpha HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.01	BDL
9	Beta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	BDL
10	Delta HCH	µg/l, Max	APHA 23rd edition: 6630 C	0.04	BDL
11	Butachlor	µg/l, Max	APHA 23rd edition: 6630 C	125.0	BDL
12	Chloropyriphos	µg/l, Max	APHA 23rd edition: 6630 C	30.0	BDL
13	2,4-Dichlorophenoxyacetic acid	µg/l, Max	APHA 23rd edition: 6630 C	30.0	BDL
14	p p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
15	p p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
16	p p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
17	o p DDE	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
18	o p DDD	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
19	o p DDT	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL

20	Ethion	µg/l, Max	APHA 23rd edition: 6630 C	3.0	BDL
21	Lindane	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL
22	Isoproturon	µg/l, Max	APHA 23rd edition: 6630 C	9.0	BDL
23	Malathion	µg/l, Max	APHA 23rd edition: 6630 C	190.0	BDL
24	Methyl parathion	µg/l, Max	APHA 23rd edition: 6630 C	0.3	BDL
25	Monocrotophos	µg/l, Max	APHA 23rd edition: 6630 C	1.0	BDL
26	Phorate	µg/l, Max	APHA 23rd edition: 6630 C	2.0	BDL

BACTERIOLOGICAL QUALITY					
1	Total Coliform	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
2	Feacal Coliform	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
3	E.Coli	MPN/100 ml	APHA 23rd Ed,2017: 9221 B	Shall not be detectable in any 100 ml sample	ABSENT
TOXIC SUBSTANCES					
1	Mercury as (Hg)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.001	BDL
2	Cadmium as(Cd)	mg/l,Max	APHA 23rd Ed,2017: 3111 B	0.003	BDL
3	Nickel as(Ni)	mg/l,max	APHA 23rd Ed,2017 3111 B	--	BDL
4	Arsenic as (As)	mg/l,Max	APHA 23rd Ed,2017: 3114 B	0.2	BDL
5	Cyanide as (CN-)	mg/l,Max	APHA 23rd Ed,2017: 4500 CN^- C,D	0.05	BDL
6	Lead as(Pb)	mg/l,Max	APHA 23rd Ed,2017 3111 B	0.1	BDL

Reviewed by

Approved By

Sewage Treatment Plant (STP)

Surface Runoff Treatment Plant (SRTP)

Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Accredited by : NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade

- Infrastructure Engineering
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- Mineral/Sub-Soil Exploration
- Waste Management Services

Laboratory Services
Environment Lab
Food Lab
Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

TEST REPORT

Test Report No: ENVLAB/24-25/TR-01982 *Date: 06.05.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak**	Date of Sampling	:	**29.04.2024**
			Sample Received on	:	**30.04.2024**
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	61.6
S-2	NEAR ADMINISTRATIVE BUILDING	61.2	44.2
S-3	NEAR AGGLOMERATION PLANT	72.6	68.6
S-4	NEAR AUTO GARAGE	65.4	56.3
S-5	NEAR BRIQUETTE STORAGE AREA	71.8	60.5
S-6	NEAR CENTRAL STORE	58.3	45.4
S-7	NEAR DRYER PLANT	73.1	69.3
S-8	NEAR FACOR COLONY	57.4	45.5
S-9	NEAR FINISHED PRODUCT HANDLING	74.0	62.8
S-10	NEAR GCP	71.7	65.3
S-11	NEAR MAIN GATE	66.5	54.1
S-12	NEAR MATERIAL RECOVERY PLANT	73.5	68.8
S-13	NEAR MRSS SWITCH YARD	64.1	58.2
S-14	NEAR STORAGE AREA	56.3	42.3
S-15	NEAR VEHICLE PARKING AREA	60.7	46.7
S-16	NEAR WATER COOLING TOWER AREA	73.8	67.8
S-17	OHC	59.1	48.9
Limit		75.0	70.0

Reviewed by

Approved by

TEST REPORT

Test Report No: ENVLAB/24-25/TR-04211 *Date: 06.06.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak**	Date of Sampling	:	**24.05.2024**
			Sample Received on	:	**25.05.2024**
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	66.1	62.9
S-2	NEAR ADMINISTRATIVE BUILDING	62.0	45.4
S-3	NEAR AGGLOMERATION PLANT	71.9	66.1
S-4	NEAR AUTO GARAGE	67.3	58.5
S-5	NEAR BRIQUETTE STORAGE AREA	72.2	63.2
S-6	NEAR CENTRAL STORE	59.5	47.2
S-7	NEAR DRYER PLANT	73.8	68.9
S-8	NEAR FACOR COLONY	58.6	45.2
S-9	NEAR FINISHED PRODUCT HANDLING	74.1	61.7
S-10	NEAR GCP	72.0	65.8
S-11	NEAR MAIN GATE	66.9	55.3
S-12	NEAR MATERIAL RECOVERY PLANT	74.4	68.9
S-13	NEAR MRSS SWITCH YARD	64.8	59.4
S-14	NEAR STORAGE AREA	57.5	43.1
S-15	NEAR VEHICLE PARKING AREA	61.2	45.4
S-16	NEAR WATER COOLING TOWER AREA	74.2	69.2
S-17	OHC	60.4	49.2
Limit		75.0	70.0

Reviewed by:

Approved by:

TEST REPORT

Test Report No: ENVLAB/24-25/TR-08274 *Date:05.08.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
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	66.1	61.2
S-2	NEAR ADMINISTRATIVE BUILDING	60.8	43.9
S-3	NEAR AGGLOMERATION PLANT	68.9	64.5
S-4	NEAR AUTO GARAGE	70.2	60.8
S-5	NEAR BRIQUETTE STORAGE AREA	71.8	62.2
S-6	NEAR CENTRAL STORE	63.3	47.5
S-7	NEAR DRYER PLANT	71.9	67.2
S-8	NEAR FACOR COLONY	53.9	44.1
S-9	NEAR FINISHED PRODUCT HANDLING	73.8	63.3
S-10	NEAR GCP	72.0	67.2
S-11	NEAR MAIN GATE	65.4	55.8
S-12	NEAR MATERIAL RECOVERY PLANT	72.6	65.7
S-13	NEAR MRSS SWITCH YARD	64.8	59.1
S-14	NEAR STORAGE AREA	55.4	43.6
S-15	NEAR VEHICLE PARKING AREA	62.3	44.2
S-16	NEAR WATER COOLING TOWER AREA	73.8	66.5
S-17	OHC	60.2	49.5
Limit		75.0	70.0

Reviewed by:

Approved by:

TEST REPORT

Test Report No: ENVLAB/24-25/TR-05581 *Date:06.07.2024*

Name of the Industry	:	Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak	Date of Sampling	:	21.06.2024
			Sample Received on	:	22.06.2024
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	65.4	60.3
S-2	NEAR ADMINISTRATIVE BUILDING	61.7	44.8
S-3	NEAR AGGLOMERATION PLANT	70.8	65.3
S-4	NEAR AUTO GARAGE	68.6	59.2
S-5	NEAR BRIQUETTE STORAGE AREA	71.5	63.9
S-6	NEAR CENTRAL STORE	60.2	46.8
S-7	NEAR DRYER PLANT	73.3	68.1
S-8	NEAR FACOR COLONY	54.6	44.5
S-9	NEAR FINISHED PRODUCT HANDLING	74.5	62.1
S-10	NEAR GCP	72.7	65.3
S-11	NEAR MAIN GATE	66.0	54.2
S-12	NEAR MATERIAL RECOVERY PLANT	73.9	67.5
S-13	NEAR MRSS SWITCH YARD	64.3	58.9
S-14	NEAR STORAGE AREA	56.3	42.8
S-15	NEAR VEHICLE PARKING AREA	61.9	45.7
S-16	NEAR WATER COOLING TOWER AREA	74.0	68.9
S-17	OHC	61.3	48.7
Limit		75.0	70.0

Reviewed by:

Approved by:

TEST REPORT

Test Report No: ENVLAB/24-25/TR-09368 *Date:05.09.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak**	Date of Sampling	:	**23.08.2024**
			Sample Received on	:	**24.08.2024**
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	65.3	61.0
S-2	NEAR ADMINISTRATIVE BUILDING	60.2	44.5
S-3	NEAR AGGLOMERATION PLANT	68.1	64.8
S-4	NEAR AUTO GARAGE	71.1	60.3
S-5	NEAR BRIQUETTE STORAGE AREA	71.2	62.7
S-6	NEAR CENTRAL STORE	64.5	47.9
S-7	NEAR DRYER PLANT	72.0	66.8
S-8	NEAR FACOR COLONY	54.4	44.3
S-9	NEAR FINISHED PRODUCT HANDLING	73.2	62.8
S-10	NEAR GCP	71.8	69.1
S-11	NEAR MAIN GATE	66.7	56.3
S-12	NEAR MATERIAL RECOVERY PLANT	72.3	63.8
S-13	NEAR MRSS SWITCH YARD	64.5	58.7
S-14	NEAR STORAGE AREA	54.8	43.2
S-15	NEAR VEHICLE PARKING AREA	62.1	44.9
S-16	NEAR WATER COOLING TOWER AREA	73.9	65.8
S-17	OHC	60.8	50.2
Limit		75.0	70.0

Reviewed by: VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by: VISIONTEK CONSULTANCY SERVICES PVT. LTD.

TEST REPORT

Test Report No: ENVLAB/24-25/TR-10471 *Date:05.10.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nag Randia, Bhadrak**	Date of Sampling	:	**13.09.2024**
			Sample Received on	:	**14.09.2024**
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	66.2	61.5
S-2	NEAR ADMINISTRATIVE BUILDING	60.9	44.1
S-3	NEAR AGGLOMERATION PLANT	67.5	63.9
S-4	NEAR AUTO GARAGE	70.8	59.8
S-5	NEAR BRIQUETTE STORAGE AREA	72.1	62.3
S-6	NEAR CENTRAL STORE	65.3	46.8
S-7	NEAR DRYER PLANT	72.5	66.2
S-8	NEAR FACOR COLONY	52.9	43.7
S-9	NEAR FINISHED PRODUCT HANDLING	72.6	62.2
S-10	NEAR GCP	72.0	68.9
S-11	NEAR MAIN GATE	67.1	55.4
S-12	NEAR MATERIAL RECOVERY PLANT	71.9	63.3
S-13	NEAR MRSS SWITCH YARD	65.3	58.1
S-14	NEAR STORAGE AREA	52.2	42.9
S-15	NEAR VEHICLE PARKING AREA	61.9	44.4
S-16	NEAR WATER COOLING TOWER AREA	73.3	65.3
S-17	OHC	59.9	50.1
Limit		75.0	70.0

Reviewed by:

Approved by:

vedanta transforming for good | FACOR

Annexure 25

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

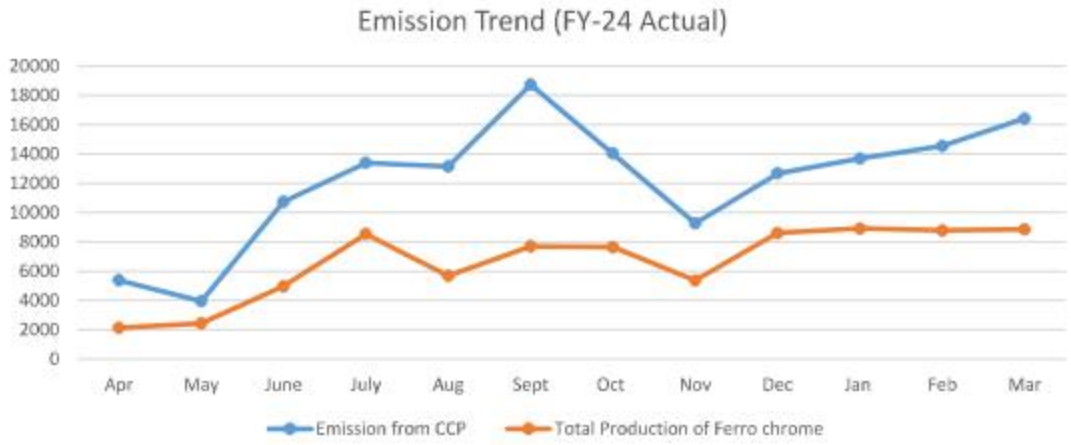
SN	FACOR Unit	Product	Current Capacity	Production Achieved (FY 2024)	Proposed Capacity (Post Expansion)
1	Charge Chrome Plant	Ferro Chrome (in MT)	145000	79572	445000

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

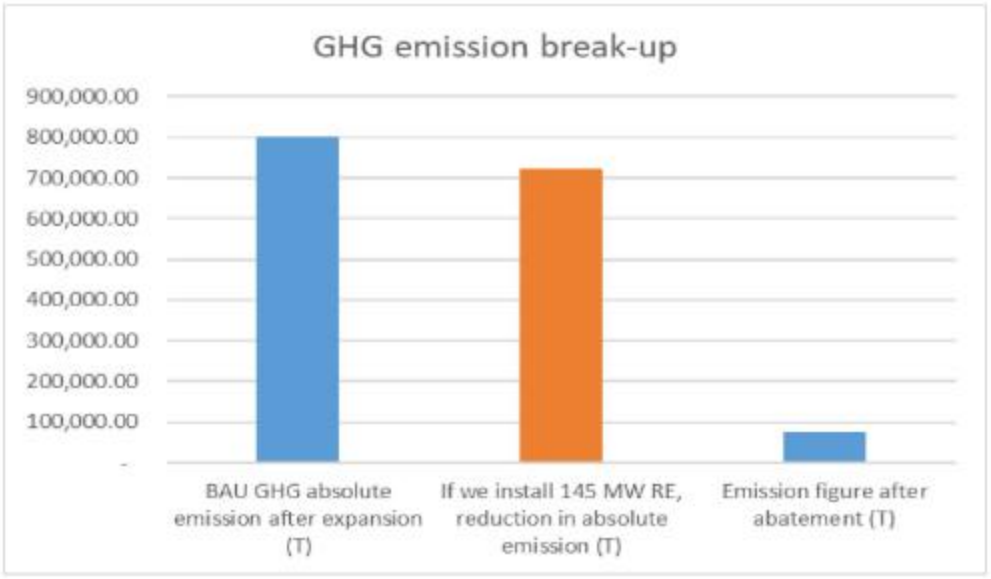
Month	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Total
Emission from CCP	5378	3948.5	10741.2	13399.9	13138.41	18723.34	14025.35	9266.67	12673.36	13695.88	14543.33	16423.67	**145957.6**
Total Production of Ferro chrome	2120	2431	4966	8539	5684	7688	7642	5364	8602	8907	8779	8850	**79572**
GHG Intensity	2.536792	1.624228712	2.162948	1.569259	2.311473	2.435398	1.835298	1.727567	1.473304	1.537654	1.656604	1.855782	**1.834284**



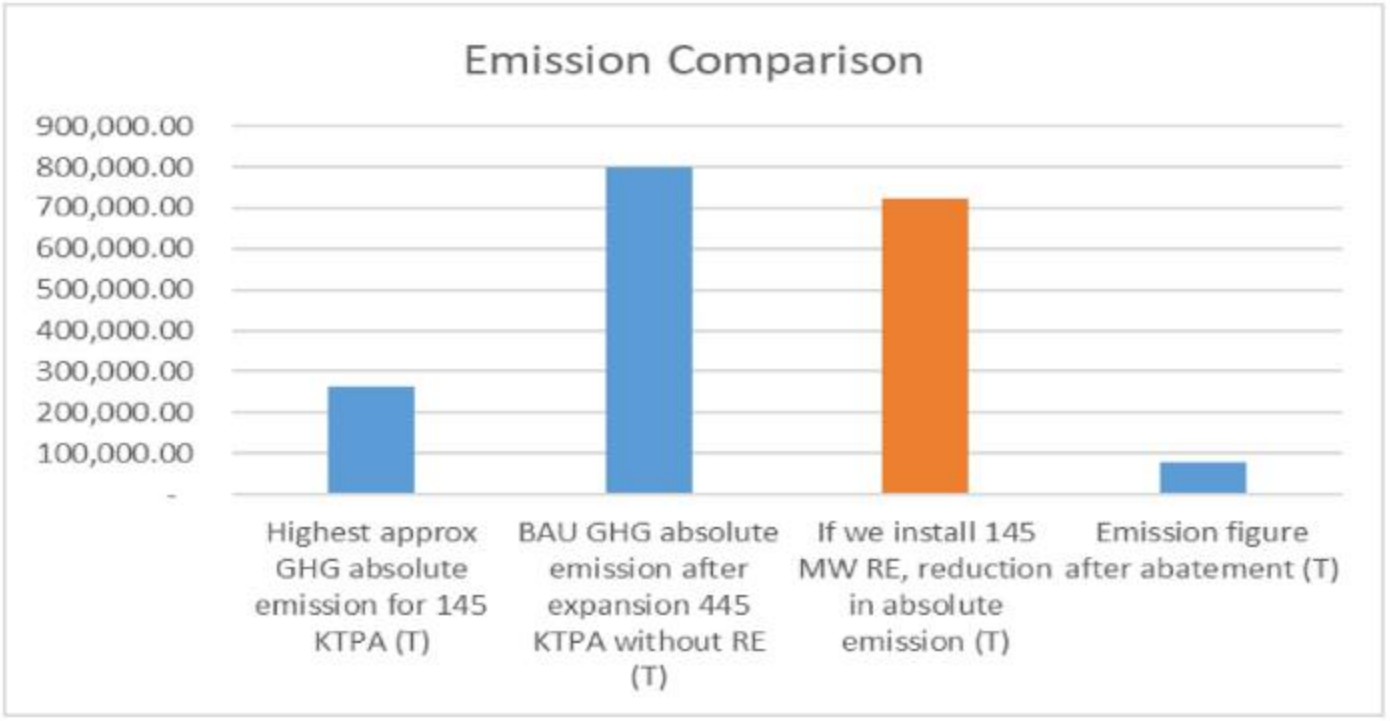
Way Forward

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

EXTRACT FROM THE MINUTES OF THE MEETING OF THE BOARD OF DIRECTORS OF FERRO ALLOYS CORPORATION LIMITED CONVENED AND CONDUCTED AS A MEETING HELD THROUGH ELECTRONIC MODE AND VENUE RECORDED AS D.P. NAGAR, RANDIA, BHADRAK-756135, ODISHA ON THURSDAY, OCTOBER 19, 2023 AT 12.10 P.M.

Adoption of Vedanta Environmental Policy for the Company

"**RESOLVED THAT** the Board accorded its approval for adoption of Vedanta Environmental Policy along with other related policies viz. biodiversity policy, water management policy and carbon energy policy.

RESOLVED FURTHER THAT Mr. Pankaj Kumar Sharma, Whole-Time Director be and is hereby authorised to implement this environmental policy in the Company.

RESOLVED FURTHER THAT the Board of Directors of the Company be and is hereby authorized to adopt the revised environmental policy deem fit and suggest the changes and/or improvements therein, if any, required from time to time by Vedanta Ltd."

Certified to be true
Ferro Alloys Corporation Limited,

Company Secretary
Sambit Kumar Sarangi
ACS 11105

Environmental Policy

Purpose

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

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

Scope

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

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

Objectives of the Environmental Policy

Vedanta will strive to:

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

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

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

Energy & Climate Change Policy

Purpose

Vedanta Limited ("Vedanta") is committed to minimizing the impact of climate change on its own business as well as on the environment and society. We aim to collaborate with stakeholders to drive timely, meaningful action on climate change.

This Energy & Climate Change policy shall help us to define, strategize, plan, and implement essential roadmap, towards achieving climate goals. This policy is forward looking and sets an energy and climate 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 upstream and operations, including the distribution, logistics, and sale of products and services up to the customer.

Objectives of the Energy & Climate Change Policy

Vedanta will strive to:

- Adopt and maintain global best practices on climate and energy management and minimizing greenhousegas (GHG) emissions throughout our operations, including:
    - aligning with the overall objectives of the Paris Agreement.
    - measuring energy usage and greenhouse gas emissions (Scope 1&2) across all operations and geographies and maintain year-on-year efforts to reduce energy consumption and GHGemissions.
    - measuring and disclosing greenhouse gases emissions (Scope 3) across the entire value chain-including upstream and downstream emissions.
    - defining energy and GHG reduction roadmap in alignment with Vedanta's commitment to become a net zero carbon business by 2050.
- Conduct risk assessments to understand the impact of climate change on the business under differentscenarios and time periods.
- Integrate climate change considerations into our strategic approach, financial planning and analyzing theclimate-related risks and opportunities (both physical and transition).
- Adapt and futureproof our facilities to the physical risks of climate change and to achieve an orderlytransition to a world in which GHG emissions are constrained.
- Include the adoption of carbon pricing or similar mechanisms into our investment decision-making.
- Promote, engage, and invest in energy consumption reduction projects including energy conservation,energy efficiency, fuel switch and clean energy and maximize benefits from energy by waste recovery.
- Foster research and innovation techniques within our operations leading to optimal utilization of resources which continuously improve the efficiency of operations, minimizing energy consumption and resource use.
- Report GHG emissions, climate trajectory scenario analysis and climate change risk analysis on yearly basis in alignment with internationally recognized protocols (like Taskforce on Climate Financial Disclosure (TCFD and CDP) and work closely with other stakeholders to reduce energy consumption and carbon intensity.
- Communicate our approach and achievements actively to stakeholders, and work closely with national and

global policy makers to encourage effective and equitable abatement policies within the sectors of our operation.

- Support joint efforts by the private and public sectors to reduce the impacts of climate change.
- Collaborate with our employees, wider communities, business partners, customers, and other stakeholders to achieve our commitment to energy and greenhouse gas emission reduction.
- Encourage and influence our business partners including supply chain to adopt energy conservation practices, set energy and climate targets and report on their practices.
- Review the performance against the policy on a periodic basis to ensure management of energy & climate change as per our objectives including the sharing of good practices throughout the organization and stakeholders.

Responsibility & Review

This policy is part of the Vedanta Sustainability Framework, and each Vedanta business shall implement this policy. 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: *Environmental Policy, Biodiversity Policy, Water Policy*

Signed by:

Sunil Duggal

Group CEO, Vedanta Limited

Date: 27 July 2023

Biodiversity Policy

Purpose

Protecting and enhancing biodiversity is an integral part of Vedanta's commitment to sustainable development. We are conscious of the potential impacts and dependencies of our business on the environment in general and on biodiversity. Integrating the need for biodiversity conservation into operational decision-making processes and taking measures to minimize impacts is a commitment across the company with a vision of Nature Positive.

Biodiversity is a complex phenomenon that needs to be identified, understood, and valued from a biological and societal (i.e., in terms of ecosystem services) perspective and the Company is conscious of the potential impacts and dependencies of our business on the environment in general and on biodiversity in particular. This Biodiversity policy shall help us define, strategize, plan, and implement the essential roadmap, guidance, and measurement towards achieving sustainability goals.

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 value chain.

Objectives of the Biodiversity Policy

Vedanta will strive to:

- Achieve nature positive impacts to biodiversity values by implementing intense management actions either on site or off site, to compensate for any project impacts to areas recognized nationally or internationally for their high values of threatened, endemic or migratory / congregatory species or unique and threatenedecosystems.
- Comply with, and exceed whenever feasible, the local, regional, and national legislative requirements concerning land management and biodiversity conservation, as well as relevant international agreements,in all jurisdictions where we operate.
- Avoid deforestation and habitat loss in internationally recognized areas such as World Heritage Sites andIUCN Protected Area Management Categories 1a, b and 2.
- Compensate with future reforestation (no net deforestation) by appropriate on or off-site habitat
- restoration. Achieve No-Net Loss (NNL) at our project operations and ensure that we will operate on the principles of Net Positive Impact (NPI) for critical habitat (when we operate in or near areas declared as biodiversity hotspot areas, ecologically sensitive zones, International Union for the Conservation of Nature IUCN Category I-IV protected areas, nearby world heritage sites & areas
- having critical habitat and ecosystems). Set targets and objectives to avoid, reduce or mitigate biodiversity and nature-based impacts on people and planet.
- Integrate biodiversity & nature considerations into our strategic approach, financial planning and analyzing the nature-related risks and opportunities throughout the project lifecycle, including decommissioning, closure, and rehabilitation.
- Conduct biodiversity risk assessment and apply the mitigation hierarchy to avoid or minimize biodiversity and nature-based risks.
- Ensure continuous improvements in biodiversity performance through effective management and

implementation of action plans in alignment with the "Nature-Based Solutions" approach.

- Review the performance against the policy on a periodic basis to ensure management of biodiversity as per our objectives including the sharing of good practices throughout the organization and stakeholders.
- Engage with local, national, and global conservation initiatives, conservation experts and organizations. Support joint efforts by the private and public sectors, and foster knowledge, awareness, and participation among relevant stakeholders, including employees, to collectively address biodiversity and nature-related challenges.
- Engage and raise awareness amongst our employees, business partners, supply chain and other stakeholders to enhance their knowledge and understanding of biodiversity and ecosystem management practices.
- Actively encourage value chain partners and suppliers to align with this policy and avoid operational activities near sites containing globally or nationally important biodiversity

Responsibility & Review

This policy is part of the Vedanta Sustainability Framework, and each Vedanta business shall implement this policy. 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 will review this policy annually and recommend appropriate revisions to the Board as may deem necessary.

Signed by:

Sunil Duggal

Group CEO, Vedanta Limited

Date: 27 July 2023

Annexure 27

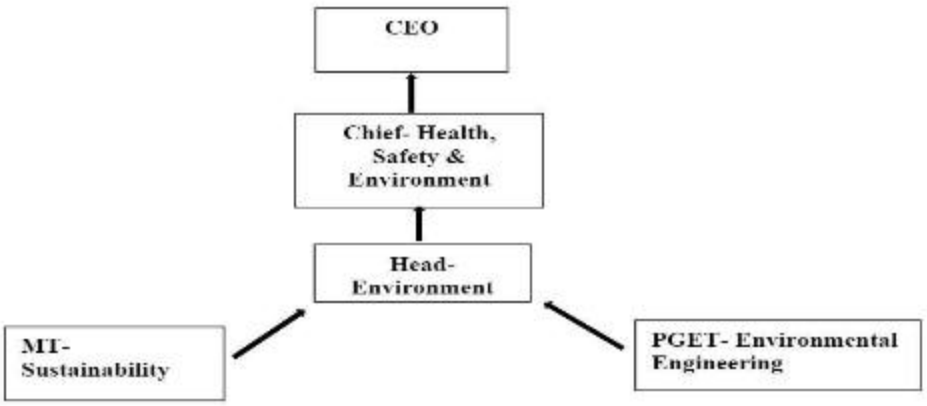
Environment Management Cell

STATUS OF 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	Experience
01	Krutisunder Mohapatra	Chief- HSE	Health, Safety & Environment	7894405442 krutisunder.mohapatra@vedanta.co.in	M.Tech in ENV., PDIS, PGDBM	23 Yrs.
02	Biswa Bhusan Panigrahi	Head-Environment	Env.mgmt.& Pollution control	7735738480 Biswabhusan.Panigrahi@vedanta.co.in	Postgraduate in Environmental Science	15 Yrs.
03	Avik Biswas	MT-Sustainability	ESG & Sustainability	8902791259 Avik.Biswas@vedanta.co.in	Postgraduate Diploma in Forestry Management	
04	Priyadarshi Rai	PGET-Environmental Engineering	Env.mgmt.& Pollution control	7908866705 Priyadarshi.Rai@vedanta.co.in	M.Tech in Environmental Engineering	
05	Somnath Pal	PGET-Environmental Engineering	Env.mgmt.& Pollution control	9064376724 Somnath.Pal@vedanta.co.in	M.Tech in Environmental Engineering	

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



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FACOR / Bhadrak / Legal / 185 / 2022 Dt. 11.11.2022

To

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

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

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

Dear Sir,

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

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

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

Compliance status of Condition No.X(i) :

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

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

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

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

Manoj Kr. Shaw

Ferro Alloys Corporation Limited
Charge Chrome Plant, D.P. Nagar, Randia - 756 135, Dist. Bhadrak, Odisha, India.
Phone : 06784 240320/240347/240272, Fax : 06784 240626.
E-mail : Facor.corporate@vedanta.co.in I Website : www.facorgroup.in
CIN : U45201OR1955PLC008400

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Compliance status of Condition No. X(ii) :

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

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

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

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

Compliance status of Condition No. X(vi) :

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

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

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

This is for your kind information and records please.

Thanking you
Yours faithfully
For Ferro Alloys Corporation Ltd.

Factory Manager
Charge Chrome Plant

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

Ferro Alloys Corporation Limited
Charge Chrome Plant, D.P. Nagar, Randia - 756,135, Dist. Bhadrak, Odisha, India.
Phone : 06784 240320/240347/240272, Fax : 06784 240626.
E-mail : Facor.corporate@vedanta.co.in I Website : www.facorgroup.in
CIN : L45201OR1955PLC008400

Sd/- Principal
J.B.(D) College,
Sardhapali

277

VIL JUDGE Sr. Div., Jeypore
01/2022

...Petitioner

...Opposite Party

otice
oner, Ayshwarjya Deepak Swain,
shok Kumar Swain, resident at
: Bolpariguda, Dist: Koraput has
certificate claiming rights over
1117226 PS- Rs.5,22,101/-

es having any interest may appear
11.2022 in person or through an

his Court on this the 22 Oct., 2022.
d/- Civil Judge (Sr. Division),
Jeypore

NGIR C-1489

r paper, EMD, Time of completion,
other necessary documents can be

mentioned in DTCN

bids (including GST)

to 5.00 PM of 14.11.2022

ir Municipality

ection with the tenders shall be
ll be given. Bidders are advised to
Executive Officer
Balangir Municipality

DIVISION, Nayagarh

11.2022
ehalf of Managing Director, Odisha
Rate bids in single cover system in
ving H.T Electrical License issued by
with the state PWD/Irrigation/PHED

aries from Rs.13.00 lakh to 30.00 lakh

le 23.11.2022 upto 17.00 hours

gov.in.
n in the said website.
EXECUTIVE ENGINEER,
L.I. DIVISION, Nayagarh

ନେଇ ମୁଖ୍ୟମନ୍ତ୍ରୀ କହିଛନ୍ତି । ଜଳସାଥୀଙ୍କ ଯୋଗୁଁ ମିଟର ରିଡିଂ, ଜଳକର ଆଦାୟ ଓ ବେନିୟମ
ପାଇପ ସଂଯୋଗ ଦୂର କରିବା କାର୍ଯ୍ୟରେ ବହୁତ ଉନ୍ନତି ଆସିପାରିଛି । ଏହି କାର୍ଯ୍ୟକ୍ରମର

The SAKALA
03-11-2022

FACOR

ସାଧାରଣ ବିଜ୍ଞପ୍ତି

ଏତଦ୍ୱାରା ସର୍ବସାଧାରଣଙ୍କ ଅବଗତି ନିମନ୍ତେ ଜଣାଇ ଦିଆଯାଉଛି ଯେ ମେସର୍ସ ଫେରୋଏଲୋଏଜ କର୍ପୋରେସନ ଲିମିଟେଡ୍ (ଫେକର) କାଳିଆ ଅଧୁନା ଚାର୍ଜକ୍ରୋମ ପ୍ଲାଣ୍ଟ, ପି.ଓ. ଚଉଦ୍ୱାର, ଗ୍ରାମ / ପୋଷ୍ଟ: ରାନିଆ, ତହସିଲ / ଜିଲ୍ଲା: କଟକ, ଓଡ଼ିଶାରୁ ଫେରୋଏଲୋଏଜ ପ୍ରକଳ୍ପ ର ସମ୍ପ୍ରସାରଣ କରି ୧ x ୪୫ ଏମ.ଭି.ଏ. ଫର୍ନେସ ଏବଂ ଅତିରିକ୍ତ ୧ x ୩୩ ଏମ.ଭି.ଏ. ଫର୍ନେସରୁ ସର୍ବମୋଟ ବାର୍ଷିକ ୧,୪୫,୦୦୦ ଟନ୍ ଏବଂ ମେଟାଲ ରିକଭରୀ ପ୍ଲାଣ୍ଟରୁ ବାର୍ଷିକ ୧୯,୮୭୦ ଟନ୍ ଉତ୍ପାଦନ ବୃଦ୍ଧି କରିବାପାଇଁ ଭାରତ ସରକାରଙ୍କ ପରିବେଶ, ଜଙ୍ଗଲ ଏବଂ ଜଳବାୟୁ ପରିବର୍ତ୍ତନ ମନ୍ତ୍ରଣାଳୟ ପତ୍ର ସଂ [illegible] ୨୦୨୨ ତାରିଖରେ ଇ.ସି. ପରିଚୟ କ୍ରମାଙ୍କ : [illegible] ମାଧ୍ୟମରେ ପରିବେଶ ସ୍ୱୀକୃତି ପ୍ରଦାନ କରିଛନ୍ତି । ଉକ୍ତ ସ୍ୱୀକୃତିପ୍ରାପ୍ତ ଚିଠି ପରିବେଶ ଜଙ୍ଗଲ ଏବଂ ଜଳବାୟୁ ପରିବର୍ତ୍ତନ ମନ୍ତ୍ରଣାଳୟ, ଭାରତ ସରକାରଙ୍କ ୱେବସାଇଟ http://environmentclearance.nic.in ରେ ମଧ୍ୟ ଉପଲବ୍ଧ ଅଛି ।

କାରଖାନା ପରିଚାଳକ
ଫେରୋଏଲୋଏଜ କର୍ପୋରେସନ ଲିମିଟେଡ୍ (ଫେକର)
ପି.ଓ.ଚଉଦ୍ୱାର, କାଳିଆ, ଜିଲ୍ଲା: କଟକ ।

Office of the Notified Area of Council, Dharamgarh.

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"e" Procurement Notice No.3190,Dated. 31.10.2022 C-1499

BID IDENTIFICATION No. DHARAMGARH/NAC/02/2022-23

The Notified Area of Council, Dharamgarh invites online bid in single cover system through e-procurement.

Tender reference No.	DHARAMGARH/NAC/02/2022-23
Name of Work	Civil Work
Total Nos of Works	2 (Two)
Value of Works	RS. 1,32,000/- TO Rs.20,00,000/-
Date of availability of	From Dt.01/11/2022 at 11.00 AM
Tender for online Bidding	Up to Dt.07/11/2022 at 5.00 PM
Date of Opening of Bids	Dt.09/11/2022 at 11.00 AM
Name and Address of the	Executive Officer
Officer Inviting Bid	NAC, Dharamgarh

Further details can be seen from procurement portal the website: www.tendersodisha.gov.in

Sub-Collector-cum-Executive Officer
NAC, Dharamgarh

OIPR-13163/11/0007/2223

OFFICE OF THE DEPUTY DIRECTOR SOIL CONSERVATION-CUM-PROJECT DIRECTOR WATERSHEDS, BARGARH

Letter No. 1062 Dated-31.10.2022

TENDER NOTICE

Sealed tenders are invited from reputed manpower agencies/service providers to provide the services for engagement of Watershed Development Team (WDT) At-Padmapur project Implementing Agency (PIA) Level for implementation of centrally sponsored scheme Watershed Development Component of Pradhan Mantri Krishi Sinchayee Yojana (WDC-PMKSY 2.0) to guide Watershed Committee (WC) in Planning and implementation of project activities at Micro Watershed Level for a period upto **31.03.2023** from the date of contract through a suitable placement agency on contract basis. The detail information for outsourcing the service of aforesaid posts has been given in the Tender document which may either be downloaded from the website in **www.bargarh.nic.in** or obtained in person from Project Director, Watersheds, Bargarh with an EMD cost of **Rs. 5000/-** in shape of Bank Draft payable at Bargarh, in favour of **Project Director. Watersheds, Bargarh**, on any working day between **10.00 AM to 4.00 PM** and deposit processing fees of **Rs. 450/-** in shape of cash/ Draft **(Non refundable)**. The last date & time for submission of Tender document is **15.11.2022 by 4.00 PM** through Regd. Post or Drop Box in Office. Tender documents received by other mode shall summarily be rejected. The authority reserves the right to accept or reject some or all quotations without assigning reason thereof.

Dy. Director Soil Conservation-Cum-Project Director Watersheds, Bargarh

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ଓଡ଼ିଶାରେ ତଦନ୍ତକାର, ...
... ୪,୦୦ ...
୨୦୨୨ ...
୨୦୨୨ ...
... ୨୦,୨୦୨୨ ...
OIPR-24098/11/0003/2

OFFI
MINOR

BID ID
1. Name of the Inviti
Jashipur
2. Name of the Work:-
3. No. of Works:-
4. Tender Amount Vari
5. Date and Time of Av for online Bidding
6. Last Date and Time
7. Last Date and Time
8. Date of opening of B
The detail tender call notic
Name & Address of the O

Further details can be see
e-Procurement market p
- Subsequent corrigend
- The tender inviting a without assigning an

OIPR-32282/11/00

1. The Block Developm Percentage rate bid in class of eligible contr Government and contr MES / Railway, to be proof of registration fr successful, the bidder the State PWD to appr submit bids for any or downloaded from the undersigned during offi

Sl. No	Name of work
1	2
1	Construction of Ad Room 2 nos. Reno Old room and Head Platform at Kard Bidyapitha, Padmpur

1. Sale of Tender Pap Holiday during off
2. Last date of receip or registered post o
3. Date of Opening of undersigned)

OIPR-19091/11/000

...absconding after the
...rding to the police, impact of
...ident was very severe and two
...irbags of the car were deployed
...crash. The person sitting on
...nt seat was possibly thrown
...the car and he survived the ac-
... His condition is stated to be
...ving, police informed.

A D

rape

...wo persons for allegedly raping a
...ed a complaint in Kharavela Nagar
...n had come from Cuttack to visit a
...k and was sitting near Ram Mandir
...ched her and offered her a place to
...s away and allegedly gangraped her
...), who is also a security guard.

Appendix - IV [Rule 8(1)]

...pur, POSSESSION NOTICE
...838 (For Immovable Property)

...a Securitisation and Reconstruction of ...powers conferred under Section 13(12) ...13(2) of the said act calling upon the ...rs from the date of the receipt of the said ...ce is hereby given to the Borrower(s)/ ...the property described herein below, in ...e Security Interest (Enforcement) Rules, ... and the public in general are hereby ...rge of IDBI Bank Limited for the amount ...r(s)/ Mortgagor(s) attention is invited to ...ed assets.

Description of the Immovable Property
All that piece and parcel of immovable properties situated at Mouza: Bargarh, Khata No.: 2414/10426, Plot No.: ...e state of Odisha recorded in the name of Gartia, East: Land of Ashok Gartia, West: ...nd machinery attached to the earth or

Authorised Officer, IDBI Bank Limited

POSSESSION NOTICE

(RULE-8(1)) For Immovable Property

...SARFAESI Act, 2002 ...ts and Enforcement of Security Interest ...urity Interest (Enforcement) Rules 2002, ...hereinafter calling upon the following ...s within 60 days from the date of receipt ...y given to the Borrower/Guarantors and ...ed herein below in exercise of power ...t on the date mentioned against below ...ned not to deal with the property and any ...amount stated below with interest, costs

...of the section 13 of the Act, in respect

	Liabilities due on the specified date as per Notice	Date of Demand/ Possession Notice
...consist of ...S./ Khata, ..., Plot No.: ...02, Area: Khata No.: ...Dec., Plot ...homestead: ...ite. Mohan	₹30,22,215/- as on 09.03.2022 with further interest, incidental expenses and costs thereon	28.03.2022 & 01.11.2022

Authorised Officer, State Bank of India

- DEO 'B' - 01 Post at ICMR-NITM Belagavi

For detailed advertisement please visit the **https://icmrnitm.res.in/careers/** and **www.icmr.nic.in** websites.

Date: 14.10.2022 Sd/-
Place: Belagavi **Director**

The Indian Express **FACOR**

03.11.22 PUBLIC NOTICE

It is hereby informed to the general public that the Ministry of Environment, Forest and Climate Change, Government of India (MOEF & CC) has granted Environment Clearance (E.C) to the Charge Chrome Plant of M/s Ferro Alloys Corporation Ltd. (FACOR) on dtd. 31.10. 2022 vide **E.C. Identification No. EC22A008OR193113,** for expansion of Ferro Alloys Plant for production of High Carbon Ferro Chrome up to 1,45,000 TPA from two furnace i.e 1 X 45 MVA & 1 X 33 MVA and 11,800 TPA from the Metal Recovery Plant (MRP) situated at village Randia of Bhadrak District of Odisha. This E.C. is also available in the official portal of Ministry of Environment, Forest and Climate Change, Govt. of India i.e **http://environmentclearance.nic.in.**

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

राष्ट्रीय पृ...
NATIONAL CENT...
पृथ्वी विज्ञा...
Ministry of E...
Akkulam, ...

No. NCESS/P&GA/9115/11/2022

RECR...

NCESS invites online applications in... post of Technical Assistant, Project... tract basis initially for a period of o... changes, if any, will be notified thr... Phone-0471-2511500

Tamilnadu Priv... Associati...
Prasanna Enclo... (near Kottaipuram Rail...

Admission for M.Pharm. ... in unaided private colle...

The Committee to Regulate - Mon... courses by the self financing ,Pri... No.COA/M.Pharm/052/2022 date... prepare the General Merit List for ... 2022-23 session). The online app... downloaded from the website www...

Date of online application form a...
Last date for submission of onlin...
Date of Downloading Hall ticket
Date of Entrance Examination
Publication of Merit List/results
The candidate should send the ... (with enclosures) on or before 18.1...
Tel: 044-24422211

गार्डन रीच शिप... Garden Reach S...

EMPLOYMENT NOTI... RECRUITME...

Opening Date for On...
Closing Date for On...

GRSE Ltd. is one of the p... Ratne Category-I Compar... from qualified, talented ar... posts indicated below: -

Name of Post/ (Grade)	Discip...
Design Assistant (S-2 Grade) (Permanent Employment)	(I) Hull &... (UR-0... (II) Electri... (III) IT-01(Out of the reserved ... and 1 por...
Supervisor (S-4 Grade) (On Fixed Term Contract)	(I) Mecha... (II) Electric... (III) Hull & ... Out of the ... for PwBD ... reserved ...
Supervisor (S-1Grade) (On Fixed Term Contract)	Security ... Out of th... reserved ...

The details like Gene... qualification, selection pro... in 'Career Section' o... https://jobapply.in/grse... only through ONLINE r... submission of application... Any Addendum/Corrig... GRSE website.

Previous EC Compliance Status on Ferro Alloys Corporation Limited Website

Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Accredited by : NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade

- Infrastructure Engineering
- Water Resource Management
- Environmental & Social Study
- Surface & Sub-Surface Investigation
- Quality Control & Project Management
- Renewable Energy
- Agricultural Development
- Information Technology
- Public Health Engineering
- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

Laboratory Services
Environment Lab
Food Lab
Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

TEST REPORT

Test Report No: ENVLAB/24-25/TR-01979 *Date:06.05.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**29.04.2024**
			Sample Received on	:	**30.04.2024**
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	:	**30.04.2024**	Test Completed on	:	**05.05.2024**

2. Chemical Testing

B. 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**	**62.5**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**32.8**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**15.2**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**18.2**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.15**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**7.3**
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.*
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-01978 *Date: 06.05.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**29.04.2024**
			Sample Received on	:	**30.04.2024**
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	:	**30.04.2024**	Test Completed on	:	**05.05.2024**

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**	**56.4**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**28.8**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**14.1**
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**	**0.78**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**7.1**
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:-

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

*** End Report***

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

TEST REPORT

Test Report No: ENVLAB/24-25/TR-01980 *Date: 06.05.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**29.04.2024**
			Sample Received on	:	**30.04.2024**
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	:	**30.04.2024**	Test Completed on	:	**05.05.2024**

3. Chemical Testing

C. 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**	**65.4**
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**	**15.2**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**20.9**
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**	**6.9**
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 resultsare within the prescribed standard for the above mentioned parameters.*

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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-01981 *Date: 06.05.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**29.04.2024**
			Sample Received on	:	**30.04.2024**
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	:	**30.04.2024**	Test Completed on	:	**05.05.2024**

4. Chemical Testing

D. 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**	**60.5**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**30.9**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**22.5**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**24.3**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.072**
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**	**<0.006**
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.*

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VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-04205 *Date: 06.06.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**24.05.2024**
			Sample Received on	:	**25.05.2024**
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	:	**25.05.2024**	Test Completed on	:	**30.05.2024**

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	57.1
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	60	29.3
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	80	14.5
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	80	19.8
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	<0.006
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:-

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*** End Report***

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-04206 *Date: 06.06.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**24.05.2024**
			Sample Received on	:	**25.05.2024**
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	:	**25.05.2024**	Test Completed on	:	**30.05.2024**

2. Chemical Testing

B. 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**	**61.9**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**32.2**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**14.8**
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**	**0.18**
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**	**<0.006**
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.*

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-04207 *Date: 06.06.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**24.05.2024**
			Sample Received on	:	**25.05.2024**
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	:	**25.05.2024**	Test Completed on	:	**30.05.2024**

3. Chemical Testing

C. 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	66.7
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	16.3
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	0.082
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	<0.006
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.*

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*** End Report***

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-04208 *Date: 06.06.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**24.05.2024**
			Sample Received on	:	**25.05.2024**
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	:	**25.05.2024**	Test Completed on	:	**30.05.2024**

4. Chemical Testing

D. 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**	**61.6**
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**	**22.8**
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**	**0.075**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**7.1**
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:-

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-05575 *Date: 06.07.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**21.06.2024**
			Sample Received on	:	**22.06.2024**
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	:	**22.06.2024**	Test Completed on	:	**28.06.2024**

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	55.8
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	60	28.7
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	80	14.9
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	0.72
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	<0.006
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:-

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

*** End Report***

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TEST REPORT

Test Report No: ENVLAB/24-25/TR05576- *Date: 06.07.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**21.06.2024**
			Sample Received on	:	**22.06.2024**
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	:	**22.06.2024**	Test Completed on	:	**28.06.2024**

2. Chemical Testing

B. 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**	**62.0**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**31.6**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**14.5**
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**	**0.19**
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 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***

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TEST REPORT

Test Report No: ENVLAB/24-25/TR-05577 *Date: 06.07.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**21.06.2024**
			Sample Received on	:	**22.06.2024**
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	:	**22.06.2024**	Test Completed on	:	**28.06.2024**

3. Chemical Testing

C. 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	65.4
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	16.8
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	80	21.0
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	<0.006
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-05578 *Date: 06.07.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**21.06.2024**
			Sample Received on	:	**22.06.2024**
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	:	**22.06.2024**	Test Completed on	:	**28.06.2024**

4. Chemical Testing

D. 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**	**60.7**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**30.8**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**22.5**
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**	**0.072**
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 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-08271 *Date: 05.08.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
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	:	**24.07.2024**	Test Completed on	:	**27.07.2024**

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**	**51.9**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**26.7**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**14.4**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**18.9**
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.*
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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-08272 *Date: 05.08.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
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	:	**24.07.2024**	Test Completed on	:	**27.07.2024**

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**	**60.2**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**30.9**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**14.8**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**18.6**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.15**
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**	**<0.006**
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

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

TEST REPORT

Test Report No: ENVLAB/24-25/TR-08273 *Date: 05.08.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
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	:	**24.07.2024**	Test Completed on	:	**27.07.2024**

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**	**61.4**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**32.2**
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**	**20.5**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.072**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.2**
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**	**<0.006**
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:-

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

*** End Report***

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

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VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

TEST REPORT

Test Report No: ENVLAB/24-25/TR-08274 *Date:05.08.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
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	:	**24.07.2024**	Test Completed on	:	**27.07.2024**

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**	**58.6**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**30.1**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**20.6**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**23.8**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.066**
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-09363 *Date: 05.09.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.08.2024**
			Sample Received on	:	**24.08.2024**
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	:	**24.08.2024**	Test Completed on	:	**27.08.2024**

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	50.5
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	60	26.1
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	80	14.9
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	80	17.8
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	6.6
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	<0.006
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*
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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-09364 *Date: 05.09.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.08.2024**
			Sample Received on	:	**24.08.2024**
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 Scaled and gaseous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.08.2024**	Test Completed on	:	**27.08.2024**

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	59.6
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	14.5
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	80	18.1
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	2	0.13
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	180	6.2
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	<0.006
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.*
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

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Accredited by : NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade

- Infrastructure Engineering
- Water Resource Management
- Environmental & Social Study
- Surface & Sub-Surface Investigation
- Quality Control & Project Management
- Renewable Energy
- Agricultural Development
- Information Technology
- Public Health Engineering
- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

Laboratory Services
Environment Lab
Food Lab
Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

TEST REPORT

Test Report No: ENVLAB/24-25/TR-09365 *Date: 05.09.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
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 gascous Sample Solution Refrigerated	Sampling done by	:	Ashutosh Mohanty
Test Started on	:	**24.07.2024**	Test Completed on	:	**27.07.2024**

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	60.6
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	16.5
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	80	20.2
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	2	0.075
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:-

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

*** End Report***

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

TEST REPORT

Test Report No: ENVLAB/24-25/TR-09366 *Date:05.09.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**23.07.2024**
			Sample Received on	:	**24.07.2024**
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	:	**24.07.2024**	Test Completed on	:	**27.07.2024**

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**	**30.4**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**20.2**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**22.8**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.061**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.3**
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.*

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

*** End Report***

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

TEST REPORT

Test Report No: ENVLAB/24-25/TR-10467 *Date: 05.10.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**13.09.2024**
			Sample Received on	:	**14.09.2024**
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	:	**14.09.2024**	Test Completed on	:	**18.09.2024**

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	51.2
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	60	26.6
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	80	15.2
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	80	18.1
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	2	0.66
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 results are within the prescribed standard for the above mentioned parameters.*

TERMS AND CONDITION:-

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

*** End Report***

Reviewed by

Approved by

TEST REPORT

Test Report No: ENVLAB/24-25/TR-10468 *Date: 05.10.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**13.09.2024**
			Sample Received on	:	**14.09.2024**
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	:	**14.09.2024**	Test Completed on	:	**18.09.2024**

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**	**58.3**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**29.9**
3	Sulphur Oxides as SO_2	($\mu g/m^3$)	IS 5182 (Part 2): 2001, RA 2017	**80**	**14.8**
4	Nitrogen Oxides as NOx	($\mu g/m^3$)	IS 5182 (Part 6): 2006, RA 2017	**80**	**17.6**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.15**
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:-

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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-10469 *Date: 05.10.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**13.09.2024**
			Sample Received on	:	**14.09.2024**
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	:	**14.09.2024**	Test Completed on	:	**18.09.2024**

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**	**59.8**
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**	**16.8**
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**	**0.072**
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 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-10470 *Date:05.10.2024*

Name of the Industry	:	**Ferro Alloys Corporation Ltd., Charge Chrome Plant, D.P. Nagar, Randia, Bhadrak**	Date of Sampling	:	**13.09.2024**
			Sample Received on	:	**14.09.2024**
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	:	**14.09.2024**	Test Completed on	:	**18.09.2024**

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**	**57.5**
2	Particulate matter as $PM_{2.5}$	($\mu g/m^3$)	IS 5182 (Part 24):2019	**60**	**29.1**
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**	**22.2**
5	Carbon monoxide as CO	(mg/m^3)	IS 5182(Part 10):2019	**2**	**0.066**
6	Ozone as O_3	($\mu g/m^3$)	IS 5182 (Part-09):2019	**180**	**6.2**
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**	**<0.006**
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:-

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*** End Report***

Reviewed by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Approved by

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Ref. No: FACOR/HSE/ES/24-1
Date: 28.09.2024

To,

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

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

Sir,

With reference to the above cited subject, please find enclosed copy of Environmental Statement for the financial year ending 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 25^0C	-	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 25^0C	-	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.