	CLEARANCE	To, The Director - Mines	mment of India nt, Forest and Climate Change sessment Division)
i	-	THE SANDUR MANGANESE I Sandur House, Sadashivanaga Urban,Karnataka-560080	RON ORES LIMITED r, Bangalore-560 080,,Bangalore
PARIVESH	and Responsive Facilitation by Interactive, uous Environment Single-Window Hub)	in respect of project submitted to	fication 2006-regarding pplication for Environmental Clearance (EC) the Ministry vide proposal number 2022. The particulars of the environmental below. EC22A008KA143818 IA-J-11011/205/2014-IA-II(I) ProductMix7 A 3(a) Metallurgical industries (ferrous & non ferrous) Amendment of EC Following Change in
	d R us E	7. Name of Company/Organization	THE SANDUR MANGANESE IRON ORES LIMITED
	ar	8. Location of Project	Karnataka
	ve	9. TOR Date	N/A
	(Pro-Active and Virt		conditions are appended herewith from page
A DE		Date: 30/03/2022	(e-signed) Sundar Ramanathan Scientist E IA - (Industrial Projects - 1 sector)
8	PARTER PART		e shall be one that has EC identification

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

This is a computer generated cover page.

This refers to your proposal no. IA/KA/IND/255323/2022 dated 17/02/2022 submitted through Parivesh Portal seeking grant of Environment Clearance (EC) under para 7 (ii) of EIA Notification, 2006 for the project mentioned above.

- 2. As per the provisions of the Environment Impact Assessment (EIA) Notification, 2006, the above-mentioned project/activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA notification, 2006 and appraised at Central level.
- Accordingly, the above-mentioned proposal has been considered by the <u>EAC (Industry-I)</u> in its 1st meeting held on 5-6th March, 2022. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed at https://parivesh.nic.in/.
- 4. The details of the proposal are as per the Addendum EIA report submitted by the proponent. The salient features of the proposal as presented during the above-mentioned meeting of EAC (Industry 1) are as under: -

S.No.	Particulars	Details				
a.	Terms of Reference for undertaking EIA study	EC is under the para 7(ii) provisions of EIA Notification, 2006.				
b.	Period of baseline data collection	Previous Baseline monitoring data for the period from Ambient Air Quality December 2016 to February 2017 and December 2017. Post Project monitoring data AAQ in August 2021, Noise monitoring during July, 2021. GW & SW monitoring during April 2021.				
c.	Date of Public Consultation	Public Consultation for the project was held on 27/07/2017 as part of the existing EC accorded on 25/06/2018.				
d.	Action plan to address the PH issues	As per the previous EC dated 25/06/2018, the proponent had earmarked an amount of Rs. 70 Crores to address the issues raised during public consultation. PH Action plan is enclosed as Annexure-I				
e.	Location of the project	Village Hanumanhalli, Danapur Mandal Taluk Hospet, District Bellary, Karnataka.				
f.	Latitude and Longitude of the project site	PointLatitudeLongitudeA15°12'10.8276°22'45.31B15°11'15.4376°22'39.44C15°11'14.7776°22'58.81D15°10'55.1876°23'3.19E15°10'56.5976°23'32.12F15°11'31.4976°23'13.15G15°11'31.5576°22'54.34H15°12'10.0976°22'55.12				
g.	Total land	129.82 ha [Private Land]				
h.	h.Land acquisition details as per MoEF&CCThe expansion is proposed in existing pro- area of 129.82 ha which is already u possession of the company.					



S.No.	Particulars	Details					
i.	Existence of habitation & involvement of R&R, if any	517 m above mean sea level					
j.	Elevation of the project site						
k.	Involvement of Forest land if any.	No Forest Land is Involved in t				n the	plant site.
1.	Water body exists within the						
	project site as well as study area	Study area:					
		V	Vater B	ody	Distance	e Di	irection
		Tungabhadra4Dam Back water		4 kms		W	
			anayaka		4.7 kms	.7 kms SW	
		and the second states	ngabhad	Ira	6.5 kms		NE
		25. J. C.	ht cana		o.o kiile		
m.	Existence of ESZ / ESA / national	Nil.	,				
	park / wildlife Sanctuary /		ever. fol	llowing	RF are p	reser	nt nearby:
	biosphere Reserve / tiger reserve /	IC7			Dista		
	elephant reserve etc. if any within		5%		fro		Remark
	the study area	SI.	N	ame	th	e	Aerial
		No	N.S.S.		proj		Distance
			1	N	(Kı	n)	
		1	Gunda		3.63		NW
		N REAL PROPERTY	Reser				
			Forest	The second	0.0		Б
		2	Ramg		0.8		E
		- Constant	Reserver Forest				
		3	Sandu		4.6		E
		5	Reser				
	2 \ \ \ 20 \	T STATES	Forest		12		
	2.1	4		Reserved	1 10.4		SE
	2		Forest		C		
		5	Bandr		11.2		S
	P.		Reser				
	Oferen	and and a	Forest				
	Protects if	6		ibanda	7.6		SW
			Reser				
		7	Forest		4		W
			Dam 1	abhadra Back	4		vv
			water				
		8		ayakana	4.7		SW
			Kere				
		9		abhadra	6.5		NE
			Right				
n.	Project cost	Existing Investment – INR 2300 Cro Proposed Investment - INR 900 Cro					
					The second s		
0.	EMP cost	Capital In Crore				urring (Rs	
					In C	Crores)	
		Exis	sting	4().0		8.0

8.th

S.No.	Particulars		Details	
		Proposed	25	2.5
p.	Employment opportunity	450 Nos.		
q.	Water and Power requirement	Water: 8686 n	n ³ /day	
		Power – 73 M	W	

Unit configuration and capacity:

8

SI.	Plant Equipment/ Facility	Existing facilities as per EC dated 25/06/2018		Proposed Units		Final (Existing + Proposed)		Derrol
No		Config- uration	Capacity	Config- uration Capacity		Config- uration	Capacity	Remarks
1	Submerged Arc Furnace	1*15MVA, 2*20 MVA	Capacity: 0.0144 MTPA FeSi or 0.03 MTPA of Ferro Alloys or 0.066 MTPA of FeMn or • 0.048 MTPA of SiMn	1*15MVA, 1*20 MVA Increase of 1*20MVA to 1*24 MVA furnace	 0.059 MTPA FeMn 0.047 MTPA SiMn 0.050 MTPA FeSi 0.135 MTPA Pig Iron 	1*15MVA, 1*20MVA,	 0.125 MTPA of FeMn or 0.095 MTPA of SiMn or 0.135 MTPA Pig Iron or 0.050 MTPA FeSi 	EC is granted for 2x20 MVA Nos o SAF Config Now we proposed the upgrade 1 SAF among those 2 to 24 MVA Production o Pig Iron is additional
2	(Mn Ore fines)	0.012 MTPA	0.012 MTPA				0.012 MTPA	-
3	Mn ore beneficiation plant	0.016 MTPA	0.016 MTPA	AG		0.016 MTPA	0.016 MTPA	-
4	Coal based power plant	32 MW	32 MW			32MW	32 MW	-
5	Non- Recovery coke oven		1*0.4 MTPA		1x 0.1 MTPA		1x0.5 MTPA	-
6	WHRB and power plant	-1	32 MW			i/// -	32 MW	-
7	Blast furnace	2	2*0.4 MTPA		Reduce 1 BF to make it 1*0.4 MTPA	12	1*0.4 MTPA	-
8	BF Gas Based Power Plant	Sec. 7		-	10 MW		10 MW	
9	Pig casting machine	-	1*0.4 MTPA	Constant and the second	Reduce to 1*0.2 MTPA	z v	1*0.2 MTPA	-
10	Sinter plant (Iron ore fines)		2*0.53 MTPA	cts if	Reduce 1 Sinter plant to make it 1*0.53 MTPA	-	1*0.53 MTPA	-
11	DI Pipe Plant	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	-	-	0.3 MTPA	-	0.3 MTPA	-
12	Oxygen plant	-	1*23100 TPA + 1*66000 TPA	-	Reduce in existing configuration to 1*60000 TPA	-	1*60000 TPA	-
13	Energy optimizing furnace (EOF)		2*50 T – 1.057 MTPA	-	To be Dropped from proposed EC		-	-
14	Ladle refining furnace (LRF)	-	2*50T – 1.057 MTPA	-	To be Dropped from proposed EC		-	-
15	Vaccuum de- gassers (VAD)	-	2*50T– 1.057 MTPA	-	To be Dropped from proposed EC		-	
16	Continuous casting machine	-	2*0.5 MTPA - 1.036 MTPA	-	To be Dropped from proposed EC		-	

SI.	Plant Equipment/	Existing facilities as per EC dated 25/06/2018		Prop	oosed Units	Final (Existing + Proposed)		Demoster	
No	No	Equipment/ Facility	Config- uration	Capacity	Config- uration	Capacity	Config- uration	Capacity	Remarks
17	Rolling mill	-	2*0.5 MTPA - 1.00 MTPA	-	To be Dropped from proposed EC	-	-	-	

- 5. The EAC (Industry-I) in its 1st meeting held on 5-6th March, 2022 based on information & clarifications provided by the project proponent and after detailed deliberations recommended the instant expansion proposal for grant of Environment Clearance under the para 7(ii) provisions of EIA Notification, 2006 subject to stipulation of specific and general conditions as detailed in the paragraph given below.
- 6. The MoEF&CC has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the Expert Appraisal Committee (Industry-1) hereby decided to grant Environment Clearance for instant proposal of **M/s The Sandur Manganese & Iron Ores Ltd.** under the para 7(ii) provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions.

A. Specific conditions

- i. Three tier Green Belt shall be developed in a time frame of one year covering 33% of total area 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.
- ii. All the observations stated in the certified compliance report of RO dated 11/01/2022 shall be complied with by 31/12/2022 as committed. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.
- iii. Water requirement of 8,686 m³/day will be met from Tungbhadra River after prior approval of the Competent Authority. No ground water abstraction is permitted.
- iv. Particulate matter emission from all the stacks shall not exceed 30 mg/Nm³.
- v. 100 % solid waste generated in the facility shall be utilized.
- vi. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
- vii. 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.
- viii. Performance monitoring of all Pollution Control Devices shall be carried out annually and report submitted to MoEF&CC, Regional Office.
 - ix. Fourth hole extraction system shall be provided in the Sub Merged Arc Furnaces.

x. Sinter Plant

- Sinter cooler waste recovery system shall be installed to generate process steam or power.
- Equipped with MEROS technology to reduce emission of SO2, NOx and heavy metals.
- xi. Coke oven plant shall be equipped with modified wet quenching system.

- xii. Blast Furnaces shall be equipped with Top Recovery Turbine, dry gas cleaning plant, stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.
- xiii. Ductile Iron (DI) plant shall have the following provisions:
 - a. Bag filter for Zn coating and Mg converter area.
 - b. Wet scrubbers in paint and bitumen coating area.
 - c. Bag Filter in Cement lining area.
 - d. PTFE dipped bags shall be used in the plant.
 - e. PM emissions from BF in Zinc coating area shall be 5 mg/Nm³.
 - f. ETP with recycling facility shall be included.

B. General conditions

I. Statutory compliance:

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.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04 Nos. Continuous Ambient Air Quality Station (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 recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- 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.
- iii. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- iv. 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.
- v. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- vi. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- vii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- viii. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
 - ix. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).
 - x. Land-based APC system shall be installed to control coke pushing emissions.
 - xi. Monitor CO, HC and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.

- xii. Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.
- xiii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xiv. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- 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 recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- iv. Garland drains and collection pits shall be provided for each stock pile to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off.
- v. Tyre washing facilities shall be provided at the exit and entrance of the plant gates.
- vi. Water meters shall be provided at the inlet to all unit processes in the steel plants.

2 July

IV. Noise monitoring and prevention

i. Noise pollution 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.

V. Energy Conservation measures

- i. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
- ii. Restrict Gas flaring to < 1%.
- iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- iv. Provide LED lights in their offices and residential areas.
- v. Ensure installation of regenerative/recuperative type burners on all reheating furnaces.

VI. Waste management

- i. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.
- ii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

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 by trees.

ii. Project proponent shall submit a study report on Decarbonisation 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.

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- 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.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

- 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.
- 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 / 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.
- 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.

X. Miscellaneous

the

- 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.
- 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.
- 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.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

- 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.
- 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.
- 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.
- 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.
 - ix. 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).
 - x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 - xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. 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.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
- 7. This issues with the approval of the Competent Authority.

(Sundar Ramanathan) Scientist 'E'

Copy to:-

- 1. Secretary, Department of Environment, Government of Karnataka, Secretariat, Bangalore-560 001.
- Regional Officer, Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road, Koramangala II Block, Bangalore – 560034
- 3. Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
- 4. Chairman, Karnataka State Pollution Control Board, No. 25, 6th 9th Floor, Public Utility Building, M.G. Road, Bangalore 560 001.
- 5. Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- 6. District Collector, Bellary District, Karnataka.
- 7. Guard File/Record File/Monitoring File.
- 8. MoEF&CC Website

fr. Kny (Sundar Ramanathan) Scientist 'E'

Annexure-I

Action Plan as ner MoFF&CCO M dated 30/09/2020

SI	Area of Concern	MoEF&CC O. M. dated 30/09/2020 Action plan	Budgeted	Budget Spent
no		F	in Lakhs	in ₹ Lakhs during 2018-19 to 2021 - 22
1	Employment for localpeople	Preference shall be given to qualified and deserved candidates form the local surrounding villages. Adequate training shall be provided for and after employment	500	154.01
2	Education facilities and sports facilities	 Deserving children will be given preference in Sandur polytechnic SMIORE is already running 16 education institution New school will be built Free distribution of sports kits , uniforms, lab equipment's, school bags 	2900	243.76
3	Drinking water to local village	 Drinking water requirement has been discussed with village panchayat of Danapura, Hanumahalli and vysanekere and Galemannagudi Water tanks, pipeline connections shall be provided in these villages 	250	33.10
4	Health care	 Health care centre at Hanumanahalli Regular health camps for surrounding villages 24x7 Ambulance facility made available for all the villages 	250	74.32
5	Development of grave yard	Construction of compound wall Provide water facility Built a small temple	50	19.68
6	Toilets	Toilets will be constructed to individual houses Public toilets will be constructed for villages and schools	450	506.31
7	Up gradation of Temples	Provide funds to local villages for festival celebrations and Up gradation of temples	50	281.67
8	Green belt development and environment	Green belt shall be developed as per MOEF guidelines in the plant Green belt shall be developed in consultation with local village panchayats	550	39.01
9	Basic Infrastructure development		2000	10.75

******* EC Identification No. - EC22A008KA143818 File No. - IA-J-11011/205/2014-IA-II(I) Date of Issue EC - 30/03/2022 6 Page 10 of 10
