

F. No. J-11011/205/2014-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

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Dated: 25th June, 2018

To,
**M/s The Sandur Manganese & Iron Ores Ltd.,
Village Hanumanhalli, Danapur Mandal,
Taluk Hospet, District Bellary, Karnataka**

Subject: Expansion by installation of 1.0 MTPA Steel Plant, 40 MW (2x20 MW) waste heat Recovery, 40 MW coal based captive power plant & 500 TPD Air Separation Plant in the existing ferro alloy plant of M/s The Sandur Manganese & Iron Ores Ltd., located at Village Hanumanhalli, Danapur Mandal, Taluk Hospet, District Bellary, Karnataka – Environmental Clearance regarding.

Sir,

This has reference to your online application vide **IA/KA/IND/23395/2014** dated **31st October 2017** along with the copies of EIA/EMP seeking Environmental Clearance under the provisions of the EIA Notification, 2006 and **letter dated 14th May 2018** for the above mentioned proposed project. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

2.0 The proposal for expansion of existing Ferro Alloys Plant to 1.0 MTPA Integrated Steel Plant of M/s Sandur Manganese & Iron Ores Limited comprising of Sinter Plant, Blast Furnace, Coke Oven Plant, SMS, Rebar Mill, Oxygen Plant & WHRB located at villages- Danapur, Danayakankere & Hanumanhalli, Tehsil- Hospet, District- Bellary, State- Karnataka was initially received in the Ministry on 14.05.2014 for obtaining Terms of Reference (ToR) as per EIA Notification 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 21st meeting held during 30th July-1st August 2014 and prescribed ToR to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR to the project on 07.04.2015 vide Lr. No J-11011/205/2014-IA.II(I). Amendment in ToR recommended by EAC (Industry -I) in its 14th Meeting on 23.12.2016.

3.0 The project of M/s Sandur Manganese & Iron Ores Limited is for expansion of existing Plant to 1.0 MTPA integrated Steel Plant comprising of Sinter Plant, Blast Furnace, Coke Oven Plant, SMS, Rebar Mill, Oxygen Plant & WHRB. Environment Clearance for Existing CPP granted by MoEF & CC, vide letter no-SEIAA:39:IND:2007, dated 3rd Sept 2009. The Status of compliance of earlier EC was obtained from Regional Office, MoEFCC, Bangalore vide Lr.no. EP/12.1/SEIAA/228/KAR dated 09.10.2017. There are no non-compliances reported by Regional Officer. The proposed capacity for different products for new site is as below:

Environmental Clearance for the proposed expansion of Ferro Alloy Plant of M/s The Sandur Manganese & Iron Ores Ltd., located at Village Hanumanhalli District Bellary, Karnataka

Sl. No.	Plant/ Unit Name	Existing Configuration	Proposed Configuration of Expansion units	Total capacity after expansion
1	Submerged Arc furnaces	SAF – 1x15 MVA & 2x20 MVA	--	FeSi- 0.0144 MTPA or Ferro Alloy – 0.03 MTPA or FeMn- 0.066 MTPA or SiMn- 0.048MTPA
2	Sinter Plant (bag house dust recycling)	0.012 MTPA	--	0.012 MTPA
3	Manganese Ore beneficiation plant	0.016 MTPA	--	0.016 MTPA
4	Coal based Power plant	32 MW	--	32 MW
5	Non-recovery coke oven	--	1x0.4 MTPA	0.4 MTPA
6	WHRB and power plant	--	32 MW	32 MW
7	Blast Furnace	--	2x0.4 MTPA	0.8 MTPA
8	Pig casting machine	--	1x0.4 MTPA	0. MTPA
9	Sinter plant	--	2x 0.53 MTPA	1.056 MTPA
10	EOF	--	2x50 T	1.057 MTPA
11	LRF	--	2x50 T	1.057 MTPA
12	VAD	--	2x50 T	1.057 MTPA
13	CCM	--	2x0.5 MTPA	1.036 MTPA
14	Rolling mill	--	2x0.5 MTPA	1.00 MTPA
15	Oxygen plant	--	1 x 23100 TPA + 1 x 66000 TPA	1 x 23100 TPA + 1 x 66000 TPA

4.0 The total land required for the project is 129.82ha. There is no agricultural land or grazing land, govt. land 11.45 ha is proposed in the site. Also, no forestland involved in the project. Most of the land has been acquired for the project. There is no river passing through the project site. Major water body – Tungabhadra Reservoir back waters exist near the project site. No modification/ diversion in the existing natural drainage pattern is envisaged.

5.0 The topography of the area is mostly flat and sloping lies between to 15°11'01.97"N to 15°12'10.98"N Latitude and 76° 22'39.45"E to 76° 23'32.53"E Longitude in Survey of India
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toposheet No. 57 A/8 at an elevation of 517 m AMSL. The ground water table ranges between 7m to 15m below the land surface during the post- monsoon season and 25m to 50m below the land surface during the pre-monsoon season. No ground water will be used for the project.

6.0 There is no National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Elephant Reserve etc. either in the core area or within 10 Km of the project site. The area also does not form any corridor for Schedule-I fauna as per Wildlife (Protection) Act, 1972.

7.0 The process of project showing the basic raw material used and the various processes involved to produce the final output is given in the EMP.

8.0 Management Plan for Waste generated from the proposed expansion is given in following table:

Sl. No.	Items	Description	Quantity	Pollution control
1	Coke Oven Plant			
	Coke fines/dust	After Screening from coke & quenching	3-4% of Coke	Charged back as blend mix for sinter production
2	Sinter Plant			
	Sinter fines (< 5mm)	After Screening from Blast furnace	10% of Sinter	Charged back as blend mix for sinter production
	Fine Dust	Dust from Bag Filter/ ESP	0.5 Kg/t of Sinter	
3	Blast Furnace (BF)			
	Slag	From the Process	320 Kg/t of HM	Sale to local end users/ Cement Plants
	Flue Dust	Dust from Primary dust catcher	10 Kg/t of HM	Charged back as blend mix for sinter production
	Dust	From Gas Cleaning plant (GCP)	0.5 Kg/t of HM	Charged back as blend mix for sinter production
4	Steel Melting Shop (SMS)			
	Slag	From the Process	120kg/t of LS	Construction Filling through outside vendors
	CCM Scales	From the CCM	10 Kg/t of Billets	Charged back to sinter production
	Fine Dust	From the furnace & LF	13-21 Kg/t of Billet	Charged back to Sinter Plant
		From the top of SMS Shed	0.5 Kg/t of Billet	
		From the Ladles & CCM	0.25 Kg/t of Billet	
		From Raw material & handling units	0.5 Kg/t of Billet	
5	Rolling Mills			
	Mill Scales	From the Process	15 kg/t	Charged back as blend mix for sinter production
Hazardous Waste like used oil, Chemical Containers, Spent Resin will be disposed to Authorized re processors.				

9.0 The targeted production capacity of the expansion plant 1 MTPA. Copy of Coal Linkage for sourcing coal from Singareni Collieries Company Limited, Telangana in form of

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E-Fuel Supply Agreement is attached as Annexure-12. Iron Ore for the proposed Integrated Steel Plant will be sourced from Captive Mines of SMIORE at district Bellary. The copy of Consent to Operate and Environmental Clearance for both the mines are enclosed as Annexure-10(a),10(b),11(a) &11 (b). The ore transportation will be done through road and rail.

10.0 Fresh water requirement of the project at final stage is estimated at 16440 m³/day, which will be sourced from Tungabhadra Dam. Agreement executed on 29th January 2015 with Government of Karnataka for supply of water.

11.0 Power requirement for the project is 92 MW. 32 MW will be sourced from existing Coal based CPP and 32 MW from WHRB Steam based power and balance will be sourced from Karnataka Power Transmission Corporation Limited.

12.0 Baseline Environmental Studies were conducted during winter season i.e. from December 2016 to February 2017. Ambient air quality monitoring has been carried out at 8 locations during December 2016 to February 2017 and the data indicates PM₁₀ (54.6 µg/m³ to 102.6 µg/m³), PM_{2.5} (21.6 to 66.9 µg/m³), SO₂ (18.8 to 42.8 µg/m³), NO_x (19.4 to 44.0 µg/m³) and CO (0.2 to 0.61 mg/m³). The result of the modelling study indicates that the maximum increase of GLC for the proposed project is 0.76282 µg/m³ with respect to the PM₁₀, 1.65458 µg/m³ with respect to the SO₂ & 3.86284 µg/m³ with respect to the NO_x.

13.0 Ground Water Quality has been monitored in 8 locations in the study area and analysed pH 6.94 to 7.26, Total Hardness: 94.0 to 268.0 mg/l, Chlorides 21.99 to 129.95 mg/l, Fluoride: 0.11 to 0.20 mg/l. heavy metals are within the limits. Surface water Quality has been monitored in 8 locations in the study area and analysed pH:7.36 to 7.41; DO 4.6 to 5.22mg/l and BOD: 1.8 to 2.8mg/l, COD 8 to 12.2 mg/l.

14.0 Noise levels are in the range of 41.35 to 58.18 dB(A) for daytime and 24.7 to 41.45 dB(A) for night time.

15.0 There are no people residing in the core zone of the project. No R&R is involved. It has been envisaged that no families are to be rehabilitated for the project.

16.0 Solid waste @ 562Kg/T of steel will be generated due to the project out of 179Kg/T will be used in SMIORE Plant and balance will be supplied to outside vendors for utilization in Cement & construction industries. However, 2.5 Ha is earmarked inside the plant premises for interim solid waste storage & handling. It has been envisaged that an area of 33.92 Ha will be developed as green belt inside the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

17.0 Consent to Establish for Existing Coal based CPP from SPCB, Karnataka vide letter No. PCB/CEO/SEO/17-Cat/Thermal/Star Metallic 2009-10 on 16.01.2010. Combined Consent to Operate obtained for the existing Ferro Alloys and Power Plant from SPCB, Karnataka vide letter NoAWH-302081 on 15.02.2017 and valid up to 30.06.2021.

18.0 The Public Hearing of the project was held on 25.07.2017 at PU collage Ground, Vyasapuri Colony, (Near existing plant), Vysanakere, Hanumanahalli post, Hospet Taluk, Ballari under the chairmanship of Sri Vijay Mahantesh Danammanavar, KAS, Additional Deputy Commissioner and Additional District Magistrate, Ballari District for expansion of existing plant to 1.0 Million TPA Integrated Steel Plant. A budget of Rs. 70 Crore (approx. 3% of project cost) has been earmarked for implementing Enterprise Social Commitment. This

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amount includes expenditures to be incurred for addressing Public Hearing issues. The details of the ESC are as follows:

Sl. No.	Activities	Details	Fund Allocation in Lakhs	Year 1 Rs. in Lakhs	Year 2 Rs. in Lakhs	Year 3 Rs. in Lakhs	Year 4 Rs. in Lakhs	Year5 Rs. in Lakhs
1	Rural Sanitation	Providing Drainage and Sanitation / toilets in nearby villages	500	100	100	100	100	100
2	Provision of Drinking water facilities for	Dhanapur, Hanumanahalli and Galliyamma Gudi villages.	250	100	50	35	35	30
3	Supporting Education Programme	<ul style="list-style-type: none"> • Constructing school building for Girls residential school and PU college at Hospet • Construction of building for Vedapatashala at Hospet, • Providing laboratory equipment to the following school, <ol style="list-style-type: none"> 1) Govt Higher Primary school Dhanapur, 2) Govt High School Dhanapur 3) Govt Primary High School Galemmanagudi 4) Anganavadi Kendra etc. 	2800	1050	915	410	265	160
4	Rural Health Programme	<ul style="list-style-type: none"> • Health center at Hanumanahalli. • Ambulance for 24 x 7 Facility for surrounding villages. 	250	100	40	40	40	30
5	Promotion of Sports	<p>Sports equipment and Kit to schools</p> <ol style="list-style-type: none"> 1) Govt Higher Primary school Dhanapur, 2) Govt High School Dhanapur 3) Govt Primary High School Galemmanagudi 4) Govt school hanumanahalli etc. 	100	20	20	20	20	20

6	Promotion of cultural/religious faith	<ul style="list-style-type: none"> Build temples for Local festival Build boundary wall around graveyard 	50	25	25			
7	Roads and Infrastructure	<ul style="list-style-type: none"> Development of approach road from villages to Highway. Providing Solar Street Light to surrounding villages. Providing Solar Lighting system for house hold in surrounding villages. Construction of Labor colony. 	2500	600	600	500	400	400
8.	As per local body recommendation	Green belt along roads and plantation in villages and other requirement of the area as envisaged by local bodies	550	150	100	100	100	100
	Total	(approx 3.0 % of the project cost Rs. 2300 Cr)	7000 Lakhs	2145	1850	1205	960	840

19.0 The Capital Cost of the Project is Rs.2300 Crores and the capital cost for environmental protection measures is proposed as Rs.40 Crores. The annual recurring cost toward the environmental protection measures is proposed as Rs.8 Crores. The employment generation from the proposed expansion project is 898. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Sl.	Particulars	Time frame (implementation)	Capital cost (Rs. in Crores)	Recurring cost (Rs. in Crores)
1	Air pollution control <ul style="list-style-type: none"> Covered Shed, Dust Suppression System, Covering of RM in yards Enhancement of efficiency of existing APCD etc. 	18 – 24 month after CTE	15.0	3.5
2	Water pollution control <ul style="list-style-type: none"> Rain water harvesting Bunding along yards / storage Conservation measures etc. 	18 – 24 month after CTE	5.0	0.5
3	Noise pollution control <ul style="list-style-type: none"> Providing isolation to high noise equipments 	18 – 24 month after CTE	2.0	0.5

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	• Noise barriers as required			
4	Solid waste management • Boundry of area, water sprinklers • Proper storage and handling system	2 – 3 month after CTO	5.0	1.0
5	Environment monitoring • In house laboratory and • Capacity building for monitoring & analysis	1 – 2 month After CTO	3.0	0.5
6	Occupational health	1 year after CTO	5.0	1.0
7	Green belt & plantation	1 - 5 years after CTE	5.0	1.0
Total			40.0	8.0

20.0 Green belt will be developed in 33.92 Ha which is about 38% of the acquired area. A 50-m wide green belt, consisting of at least 3 tiers along the plant boundary will be developed as green belt and green cover as per CPCB/ MoEF and CC, New Delhi guidelines. Local and native species will be planted. Total number of 84775 saplings will be planted and nurtured in 5 years.

21.0 There is no court case or violation under EIA notification to the project or related activity.

22.0 The proposal was considered by the Expert Appraisal Committee (Industry-I) during its 26th meeting held during 11th – 13th December, 2017 and further considered in the 28th meeting held on 5th – 7th February, 2018. After detailed deliberations, the committee recommended the project for environmental clearance subject the Specific and General conditions in addition to any other conditions stipulated by the Ministry during the processing of application.

23.0 The Ministry of Environment, Forest and Climate Change has considered the application based on the recommendations of the Expert Appraisal Committee (Industry-I) and hereby decided to grant Environmental Clearance for the expansion by installation of 1.0 MTPA Steel Plant, 40 MW (2x20 MW) waste heat Recovery, 40 MW coal based captive power plant & 500 TPD Air Separation Plant in the existing ferro alloy plant of M/s The Sandur Manganese & Iron Ores Ltd., located at Village Hanumanhalli, Danapur Mandal, Taluk Hospet, District Bellary, Karnataka under the provision of EIA Notification dated 14th September, 2006, as amended, subject to strict compliance of the following Specific and General conditions:

A. SPECIFIC CONDITION:

1. The PP shall take up the following dust control measures along the National Highway (3 Km length) near to the plant:
 - a. Regular sprinkling of water by deploying water tankers at a frequency of thrice a day.

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- b. Avenue plantation both the sides of the road for a length of 3 kms with broad-leave species.
 - c. Maintenance of the road near the plant premises such as filling of potholes, etc.
2. An amount of Rs 70.00 Crores proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.
 3. Green belt shall be developed in 33.92 Ha with a native tree species in accordance with CPCB guidelines. The 15-m wide greenbelt shall *inter alia* cover the entire periphery of the plant.
 4. The Capital cost of Rs. 40.00 Crores and annual recurring cost of Rs. 8.0 Crores towards the environmental protection measures shall be provided for separately. The funds so provided shall not be diverted for any other purpose.
 5. Kitchen waste shall be composted or converted to biogas for further use.

B. GENERAL CONDITIONS:

1. The project proponent shall (Air Quality Monitoring):
 - a. install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 277 (E) dated 31st March 2012; G.S.R 414 (E) dated 30th May 2008 as amended from time to time; S.O. 3305 (E) dated 7th December 2015 as amended from time to time) and connected to SPCB and CPCB online 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.
 - b. monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
 - c. Install system carryout Continuous Ambient Air Quality monitoring for parameters relevant to pollutants released as per National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 (as amended from time to time) within and outside the plant area at least at four locations one within and three outside the plant area at an angle of 120° each, covering upwind and downwind directions;
 - d. install cameras at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings;
 - e. provide sampling facility at process stacks and at quenching tower as per CPCB guidelines for manual monitoring of emissions;
 - f. submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring for calibrations of CEMS and manual monitoring of air quality /fugitive emission to Regional Office of MoEF&CC,

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Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

2. The project proponent shall (Water Quality Monitoring):
 - a. install 24x7 continuous effluent monitoring system at all discharge points with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 277 (E) dated 31st March 2012; G.S.R 414 (E) dated 30th May 2008 as amended from time to time; S.O. 3305 (E) dated 7th December 2015 as amended from time to time) and connected to SPCB and CPCB online 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.
 - b. 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; and
 - c. submit monthly summary report of continuous effluent monitoring and results of manual effluent testing for calibration of CEMS and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
3. The project proponent shall (Air Pollution Control):
 - a. Ensure the ambient air quality G.S.R. No. 826(E) dated 16th November, 2009 (as amended from time to time) around the project site.
 - b. provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
 - c. provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;
 - d. provide secondary emission control system at SMS Converters;
 - e. provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;
 - f. provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
 - g. 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;
 - h. use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin;
 - i. provide facilities for spillage collection for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility);

- j. install land-based APC system to control coke pushing emissions;
 - k. also monitor CO, HC and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber;
 - l. provide vapour absorption system in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens;
 - m. provide catalytic conversion of NH3 to N2 in coke oven gas for reduction of NOx emissions in combustion facilities using CO gas;
 - n. in case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NOx control facility shall be provided to meet the prescribed standards;
 - o. the coke oven gas be subjected to desulphurization if the sulphur content in the coal exceeds 1%;
 - p. provide wind shelter fence and chemical spraying on the raw material stock piles; and
 - q. design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars
4. The project proponent shall (Water Pollution Control):
- a. provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 as amended from time to time;
 - b. adhere to 'zero liquid discharge';
 - c. provide Sewage Treatment Plant for domestic wastewater;
 - d. provide garland drains and collection pits 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;
 - e. provide tyre washing facilities at the entrance of the plant gates;
 - f. explore extensive use of RO technology to recycle permeate to the plant to reduce fresh water demand;
 - g. introduce CO2 injection in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning; and
 - h. install RO for water softening in place of conventional water softening that use huge amount of salt in order to reduce TDS in plant water system and increase recycling to conserve water
5. The project proponent shall (Water Conservation):
- a. practice rainwater harvesting to maximum possible extent;
 - b. not use treated water from ETP of COBP for coke quenching;
 - c. provide water meters at the inlet to all unit processes in the steel plants; and

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- d. make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water
6. The PP shall (Energy Conservation):
- a. provide TRTs to recover energy from top gases of Blast Furnaces;
 - b. provide CDQ for coke quenching for both recovery and non-recovery type coke ovens;
 - c. practice waste heat recovery from Sinter Plants coolers and Sinter Machines;
 - d. use torpedo ladle for hot metal transfer as far as possible. If not use ladles covers for open top ladles;
 - e. use hot charging of slabs and billets/blooms as far as possible;
 - f. provide waste heat recovery systems in all units where the flue gas or process gas exceeds 300°C;
 - g. explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed;
 - h. restrict Gas flaring to < 1%;
 - i. 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;
 - j. provide LED lights in their offices and residential areas; and
 - k. ensure installation of regenerative type burners on all reheating furnaces
7. Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke.
8. In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery.
9. Tar Sludge and waste oil shall be blended with coal charged in coke ovens (applicable only to recovery type coke ovens).
10. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
11. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.
12. Used refractories shall be recycled as far as possible.
13. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. PP shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. PP shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.

14. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office
15. Sufficient number of colour coded waste collection bins shall be constructed at shop floors in each shop to systematically segregate and store waste materials generated at the shop floors (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.
16. The PP shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
17. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
18. The PP 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.
19. The PP shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
20. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.
21. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.
22. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
23. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
24. 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).
25. The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016. Coal tar sludge shall be recycled to coke ovens.
26. 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
27. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.

28. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
29. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
30. The project proponent shall (Post-EC monitoring):
- a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
 - b. put on the clearance letter on the web site of the company for access to the public.
 - c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.
 - d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
 - e. monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (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;
 - f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
 - g. 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;
 - h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

24.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

25.0 The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

26.0 The PP shall abide by all the commitments and recommendations made in the EIA/EMP report and that during their presentation to the EAC. The commitment made by the project proponent to the issue raised during Public Hearing shall be implemented by the proponent.

27.0 The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

Environmental Clearance for the proposed expansion of Ferro Alloy Plant of M/s The Sandur Manganese & Iron Ores Ltd., located at Village Hanumanhalli District Bellary, Karnataka

28.0 This EC is in supersession of the earlier environmental clearance vide SEIAA:39:IND:2007, dated 3rd Sept 2009.

29.0 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.

This issues with the approval of Competent Authority.

Sharath Kumar Pallerla
25/6/18

(Sharath Kumar Pallerla)
Scientist 'F' / Director

Copy to:-

1. **The Secretary**, Department of Environment, Government of Karnataka, Secretariat, Bangalore.
2. **The Additional Principal Chief Conservator of Forests(C)**, Ministry of Environment, Forest and Climate Change, Regional Office (EZ), A/3, Chandrasekharapur, Bhubneshwar-751 023. **The Chairman**, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
3. **The Chairman**, Karnataka State Pollution Control Board, No. 25, 6th – 9th Floor, Public Utility Building, M.G. Road, Bangalore – 560 001.
4. **The Member Secretary**, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
5. **The District Collector, Bellary District**, State of Karnataka.
6. **Guard File / Record file / Monitoring file.**
7. **MOEF&CC Website.**

Sharath Kumar Pallerla
25/6/18

(Sharath Kumar Pallerla)
Scientist 'F'/Director