सत्यमेव जयते

File No.: J-11011/290/2018-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division
****

Dated **02/10/2024**

To,

Gaurav Jajodia
JAI BALAJI INDUSTRIES LTD
5, Bentinck Street, 1st Floor, Kolkata-700001 , KOLKATA, KOLKATA, WEST BENGAL, , 700001
indrajit.ghosh@jaibalajigroup.com

Subject: Grant of Standard Terms of Reference (ToR) to the proposed Project under the EIA Notification 2006-and as amended thereof-regarding.

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/WB/IND1/499003/2024 dated 01/10/2024 for grant of Terms of Reference (ToR) to the project under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) ToR Identification No.	TO24A1005WB5442699N
(ii) File No.	J-11011/290/2018-IA-II(I)
(iii) Clearance Type	Fresh ToR
(iv) Category	A
(v) Project/Activity Included Schedule No.	3(a) Metallurgical Industries (ferrous and non ferrous),1(d) Thermal Power Plants,2(b) Mineral beneficiation
(vi) Sector	Industrial Projects - 1
(vii) Name of Project	Proposed Expansion cum Modification of Existing Steel Plant.
(viii) Name of Company/Organization	JAI BALAJI INDUSTRIES LTD
(ix) Location of Project (District, State)	PASCHIM BARDHAMAN, WEST BENGAL
(x) Issuing Authority	MoEF&CC
(xii) Applicability of General Conditions	NO

3. The **MoEF&CC** has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after detailed examination hereby decided to grant Terms of

Reference to the instant proposal of **M/s.JAI BALAJI INDUSTRIES LTD** under the provisions of the aforementioned Notification.

4. The brief about products and by products as submitted by the Project proponent in Form-1 (Part A, B) and Standard Terms of Reference are annexed to this letter as Annexure (1).

5. The original proposal was appraised in 64th EAC and the technical details of the project shall be governed as per the Agenda no. 64.19 of the referred EAC Meeting. Due to technical issue, the proposal IA/WB/IND1/483007/2024 was returned in present form. The PP applied instant proposal for ToRs, and the specific ToRs, generic ToRs, additional ToRs, Sector-specific ToRs, as may be applicable, shall be governed in line with the 64th EAC Recommendations as per MoM uploaded on the website (Agenda No. 64.19). The Ministry reserves the right to stipulate additional TORs, if found necessary.

6. The Terms of Reference (ToR) to the aforementioned project is under provisions of EIA Notification, 2006 and as amended thereof. It does not tantamount to approvals/consent/permissions etc required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

7. The granted letter, all the documents submitted as a part of application viz. Form-1 Part A and Part B are available on PARIVESH portal which can be accessed by scanning the QR Code above.

8. The specific ToRs shall be as below:

(i) The nearest industrially developed town is Raniganj and Andal, which are located at around 2.5 km in north-west direction and 6.0 km in south-east direction respectively w.r.t. the project site along with other sensitive areas within the study area of the project site. Proponent shall prepare appropriate environmental safeguard measures to minimise the impact of the project activities on these sensitive areas.
(ii) There are around 10 nos. of ponds nearby project location. Damodar River is at a distance of 4.5 km in SW direction from the project site. The PP shall include in the EIA/EMP report suitable steps /conservation plan along with contouring (close intervals), Run -off calculations, disposal etc. 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 prepared and included in EIA/EMP Report.
(iii) Water requirement of 3450 m3/day is proposed to be obtained from ADDA supply (2450 m3/day) and recycled water (1000 m3/day). PP shall obtain necessary water permission from the Competent Authority. No ground water abstraction is permitted.
(iv) PP shall provide a digital display board for displaying environmental parameters at the main gate of the company.
(v) PP shall submit distance authentication certificate and map from the SPCB certifying that the proposed project area do not fall within CPA/SPA. The certificate shall also bear the geographical coordinates of the proposed project site.
(vi) PP shall prepare an action plan for improving the housekeeping of the plant premises.
(vii) PP shall prepare a time-bound action plan for improving the conditions of roads within the plant premises.
(viii) Annual Wind Rose diagram must be provided. Data may be obtained from secondary sources such as IMD, for this purpose.
(ix) The “input” parameters used for the AAQ modelling must be given in the E.I.A. Report.
(x) The “mixing height” and the “inversion height” must be reported without any ambiguity, in the E.I.A. Report.
(xi) CO sensors with alarm systems must be installed inside the Plant at strategic locations.

Copy To
N/A

Annexure 1

Standard Terms of Reference

1. Preliminary requirements

S. No..	Terms of Reference
1.1	EIA/EMP report cover page shall consists of project title with location, applicable schedule of the EIA Notification, 2006, ToR letter No. with date, study period along with EIA consultant & laboratory details with QCI/NABET/NABL accreditation certificate detail.
1.2	Besides, following points shall be compiled as per QCI/NABET norms: a. Disclaimer by the EIA consultant. b. Declaration by the Functional Area Experts contributed to the EIA study and declaration by the head of the accredited consultant organization/authorized person. c. Undertaking by the project proponent owning the contents (information and data) of the EIA/EMP report. d. Undertaking by the EIA consultant regarding compliance of ToR issued by MoEF&CC. e. Consultant shall submit the Plagiarism Certificate for the EIA/EMP Report.

2. Executive Summary

S. No..	Terms of Reference
2.1	Table of Contents of the EIA report including list of tables/figures/annexures/abbreviations/symbols/notations.
2.2	Point wise compliance to the ToR issued by MoEF&CC.

3. Executive Summary

3.1. Introduction

S. No..	Terms of Reference
3.1.1	Name of the project along with applicable schedule and category as per EIA, 2006.
3.1.2	Location and accessibility

4. Executive Summary

4.1. Project description

S. No..	Terms of Reference
4.1.1	Resource requirements (Land; water; fuel; manpower)
4.1.2	Operational activity
4.1.3	Key pollution concerns

5. Executive Summary

5.1. Baseline Environment Studies

S. No..	Terms of Reference
5.1.1	Ambient air quality

S. No..	Terms of Reference
5.1.2	Ambient Noise quality
5.1.3	Traffic study
5.1.4	Surface water quality
5.1.5	Ground water quality
5.1.6	Soil quality
5.1.7	Biological Environment
5.1.8	Land use
5.1.9	Socio-economic environment

6. Executive Summary

6.1. Anticipated impacts

S. No..	Terms of Reference
6.1.1	Impact on ambient air quality
6.1.2	Impact on ambient noise quality
6.1.3	Impact on road and traffic
6.1.4	Impact on surface water resource and quality
6.1.5	Impact on ground water resource and quality
6.1.6	Impact on terrestrial and aquatic habitat
6.1.7	Impact on socio-economic environment

7. Executive Summary

7.1. Alternative analysis

S. No..	Terms of Reference
7.1.1	

8. Executive Summary

8.1. Environmental Monitoring program

S. No..	Terms of Reference
8.1.1	Ambient air, noise, water and soil quality
8.1.2	Noise quality management plan
8.1.3	Emission and discharge from the plant
8.1.4	Green Belt
8.1.5	Social Parameters

9. Executive Summary

9.1. Additional Studies

S. No..	Terms of Reference
9.1.1	Risk assessment
9.1.2	Public consultation
9.1.3	Action plan to address the issues raised during public consultation as per MoEF&CC O.M. dated 30/09/2020

10. Executive Summary

10.1. Environment management plan

S. No..	Terms of Reference
10.1.1	Air quality management plan
10.1.2	Solid and hazardous waste management plan
10.1.3	Effluent management plan
10.1.4	Storm water management plan
10.1.5	Occupational health and safety management plan
10.1.6	Green belt development plan
10.1.7	Socio-economic management plan
10.1.8	Project cost and EMP implementation budget.

11. Introduction

S. No..	Terms of Reference
11.1	Background about the project
11.2	Need of the project
11.3	Purpose of the EIA study
11.4	Scope of the EIA study

12. Project description

12.1. Site Details

S. No..	Terms of Reference
12.1.1	Location of the project site covering village, Taluka/Tehsil, District and State.
12.1.2	Site accessibility
12.1.3	A digital toposheet in pdf or shape file compatible to google earth of the study area of radius of 10km and site location preferably on 1:50,000 scale. (including all eco-sensitive areas and environmentally sensitive places).
12.1.4	Latest High-resolution satellite image data having 1 m - 5 m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc., along with delineation of plant boundary co-ordinates. Area must include at least 100 m all around the project location.
12.1.5	Environment settings of the site and its surrounding along with map.
12.1.6	A list of major industries with name, products and distance from plant site within study area (10km radius) and the location of the industries shall be depicted in the study area map.
12.1.7	In case if the project site is in vicinity of the water body, 50 meters from the edge of the water body towards the site shall be treated as no development/construction zone. If it's near the wetland, Guidelines for implementing Wetlands (Conservation and Management) Rules, 2017 may be followed.
12.1.8	In case if the project site is in vicinity of the river, the industry shall not be located within the river flood plain corresponding to one in 25 years flood, as certified by concerned District Magistrate/Executive Engineer from State Water Resources Department (or) any other officer authorized by the State Government for this purpose as per the provisions contained in the MoEF&CC Office Memorandum dated 14/02/2022.
12.1.9	In case of canal/ nala/ seasonal drain and any other water body passing through project site, the PP shall submit the suitable steps /conservation plan/mitigation measures along with contouring, Run -off calculations, disposal etc. A robust and full proof Drainage Conservation scheme to protect the natural drainage/water bodies and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided in the report.
12.1.10	Type of land, land use of the project site needs to be submitted.

S. No..	Terms of Reference
12.1.11	Status of acquisition of land. If acquisition is not complete, stage of the acquisition process as per the MoEF&CC O.M. dated 7/10/2014 shall be furnished.
12.1.12	Project proponent shall prepare Engineering layout plan showing all internal roads minimum 6 m width and 9 m turning radius for smooth traffic flow inside including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
12.1.13	Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including Rain Water Harvesting details with calculations mentioning about GW recharge along with relevant drawing.
12.1.14	A detailed report covering all aspects of Fire Safety Management and Fire Emergency Plan shall be submitted.
12.1.15	Details of drone survey for the site, needs to be included in report and presented before the EAC during appraisal of the project.

13. Project description

13.1. Forest and wildlife related issues (if applicable)

S. No..	Terms of Reference
13.1.1	Status of Forest Clearance for the use of forest land shall be submitted.
13.1.2	Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife if the project site located within notified Eco-Sensitive Zone, 10 km radius of national park/sanctuary wherein final ESZ notification is not in place as per MoEF&CC Office Memorandum dated 8/8/2019.
13.1.3	The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, Eco-sensitive Zone and Eco-sensitive areas, the project proponent shall submit the map duly authenticated by Divisional Forest Officer showing the distance between the project site and the said areas.
13.1.4	Wildlife Conservation Plan duly authenticated by the Competent Authority of the State Government for conservation of Schedule I fauna along with budget and action plan, if any exists in the study area.

14. Project description

14.1. Salient features of the project

S. No..	Terms of Reference
14.1.1	Products with capacities in Tons per Annum for the proposed project.
14.1.2	If expansion project, status of implementation of existing project, details of existing/proposed products

S. No..	Terms of Reference
	with production capacities in Tons per Annum.
14.1.3	Site preparatory activities.
14.1.4	List of raw materials required and their source along with mode of transportation.
14.1.5	Other than raw materials, other chemicals and materials required with quantities and storage capacities.
14.1.6	Manufacturing process details along with process flow diagram of proposed units.
14.1.7	Consolidated materials and energy balance for the project.
14.1.8	Total requirement of surface/ ground water and power with their respective sources, status of approval.
14.1.9	Water balance diagram
14.1.10	Details of Emission, effluents, hazardous waste generation and mode of disposal during construction as well as operation phase.
14.1.11	Man-power requirement.
14.1.12	Cost of project and scheduled time of completion.
14.1.13	In case of expansion projects, project proponent shall submit structural stability certificate showing whether existing structure withstand for proposed expansion activity.
14.1.14	Brief on present status of compliance (Expansion/modernization proposals) a. Cumulative Environment Impact Assessment for the existing as well as the proposed expansion/modernization shall be carried out. b. Cumulative Impact Assessment need to be carried out by greenfield projects considering the nearby industries. c. In case of ground water drawl for the existing unit, action plan for phasing out of ground water abstraction in next two years except for domestic purposes and shall switch over to 100 % use of surface water from nearby source. d. Copy of all the Environment Clearance(s) including Amendments/validity of extension/transfer of EC, there to obtained for the project from MoEF&CC/SEIAA shall be attached as Annexures. A Certified Compliance Report (CCR) of the Integrated Regional Office of the Ministry of Environment, Forest and Climate Change/ or concerned authority as per OM No. IA3-22/10/2022-IA.III [E 1772581], dated 8th June, 2022 on the status of compliance of conditions stipulated in all the existing environment clearances including amendments shall be provided. A Certified Compliance Report (CCR) issued by the concerned Authority shall be valid for a period of one year from the date of inspection. e. In case the existing project has not obtained Environment Clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. A proper justification needs to be submitted along with documentary proof. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 1994 or 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of CTO from the Regional Office of the SPCB shall be submitted, as per OM No. IA3-22/10/2022-IA.III [E 1772581], dated 8th June, 2022. CCR on CTO conditions issued by the concerned SPCBs/PCCs shall be valid for a period of one year from the date of inspection of the project.

15. Description of the Environment

S. No..	Terms of Reference
15.1	Study period
15.2	Approach and methodology for data collection as furnished below

Attributes	Sampling		Remarks
	Network	Frequency	
Air Environment Micro-Meteorological • Wind speed (Hourly) • Wind direction • Dry bulb temperature • Wet bulb temperature • Relative humidity • Rainfall • Solar radiation • Cloud cover • Environmental • Lapse Rate	Minimum 1 site in the project impact area	hourly continuous	IS 5182 Part 1-20 • Site specific primary data is essential • Secondary data from IMD, New Delhi • CPCB guidelines to be considered.
Pollutants • PM10 • SO2 • NOx • CO • HC • Other parameters relevant to the project and topography of the area	At least 8-12 locations	As per National Ambient Air Quality Standards,CPCB Notification.	• Sampling as per CPCB guidelines • Collection of AAQ data (except in monsoon season) • Locations of various stations for different parameters should be related to the characteristic properties of the parameters. • The monitoring stations shall be based on the NAAQM standards as per GSR 826(E) dated 16/11/2009 and take into account the predominant wind direction, population zone and sensitive receptors including reserved forests, • Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAAQM Notification of 16/11/2009 along with min., max.,

S. No..	Terms of Reference
	average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report. Noise Hourly equivalent noise levels — At least 8-12 locations — s per CPCB norms Water Parameters for water quality • pH, temp, turbidity, magnesium hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, sodium, potassium, salinity • Total nitrogen, total phosphorus, DO, BOD, COD, Phenol • Heavy metals • Total coliforms, faecal coliforms • Phyto plankton • Zoo plankton Samples for water quality should be collected and analyzed as per: • IS: 2488 (Part 1-5) methods for sampling and testing of Industrial effluents • Standard methods for examination of water and wastewater analysis published by American Public Health Association For River Bodies • Total Carbon • pH • Dissolved Oxygen • Biological Oxygen Demand • Free NH4 • Boron • Sodium Absorption Ratio • ElectricalConductivity Surface water quality of the nearest River (60m upstream and downstream) and other surface water bodies • Yield of water sources to be measured during critical season • Standard methodology for collection of surface water (BIS standards) For Ground Water Ground water monitoring data should be collected at minimum of 8 locations (from existing wells /tube wells/existing current records) from the study area and shall be included. Traffic Study Type of vehicles — Land Environment

S. No..	Terms of Reference	
	• Frequency of vehicles for transportation of materials • Additional traffic due to proposed project Soil • Particle size distribution • Texture • pH • Electrical conductivity • Cation exchange capacity • Alkali metals • Sodium Absorption Ratio (SAR • Permeability Water holding capacity • Porosity Land use/Landscape • Location code • Total project area • Topography • Drainage (natural) Cultivated, forest,plantations, water bodies, roads and settlements Biological Environment 1. Aquatic • Primary productivity • Aquatic weeds • Enumeration of phyto plankton, zoo plankton and benthos • Fisheries Diversity indices • Trophic levels	Soil samples be collected as per BIS specifications • Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. Indicator species which indicate ecological and environment degradation should be identified and included to clearly state whether the proposed project would result in to any adverse effect on any species. • Samples to collect from upstream and downstream of discharge point, nearby tributaries at downstream, and also from dug wells close to activity site. • For forest studies, direction of wind should be considered while

S. No..	Terms of Reference
	• Rare and endangered species • Marine Parks/ Sanctuaries/ closed areas /coastal regulation zone (CRZ) selecting forests. • Secondary data to collect from Government offices, NGOs, published literature. 2. Terrestrial • Vegetation-species list, economic importance, forest produce,medicinal value • Importance value index (IVI) of trees • Fauna • Avi fauna • Rare and endangered species • Sanctuaries / National park / Biosphere reserve • Migratory routes socio-economic Demographic structure • Infrastructure resource base • Economic resource base • Health status:Morbidity pattern • Cultural and aesthetic attributes. • Education Socio-economic survey is based on proportionate, stratified and random sampling method. • Primary data collection through questionnaire • Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. agencies Approach and methodology for data collection as furnished below **Attributes** / **Sampling** (Network, Frequency) / **Remarks** Air Environment Micro-Meteorological IS 5182 Part 1-20 • Wind speed (Hourly) • Wind direction • Dry bulb temperature Minimum 1 site in the project impact area, hourly continuous • Site specific primary data is essential • Secondary data from IMD,

S. No..	Terms of Reference		
	• Wet bulb temperature • Relative humidity • Rainfall • Solar radiation • Cloud cover • Environmental • Lapse Rate		New Delhi • CPCB guidelines to be considered.
	Pollutants • PM10 • SO2 • NOx • CO • HC • Other parameters relevant to the project and topography of the area	At least 8-12 locations	As per National Ambient Air Quality Standards,CPCB Notification.
	Noise Hourly equivalent noise levels	At least 8-12 locations	s per CPCB norms
	Water Parameters for water quality	Samples for water quality should be collected and analyzed as per:	

• Sampling as per CPCB guidelines
• Collection of AAQ data (except in monsoon season)
• Locations of various stations for different parameters should be related to the characteristic properties of the parameters.
• The monitoring stations shall be based on the NAAQM standards as per GSR 826(E) dated 16/11/2009 and take into account the predominant wind direction, population zone and sensitive receptors including reserved forests,
• Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAAQM Notification of 16/11/2009 along with min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.

S. No..	Terms of Reference		
	• pH, temp, turbidity, magnesium hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, sodium, potassium, salinity • Total nitrogen, total phosphorus, DO, BOD, COD, Phenol • Heavy metals • Total coliforms, faecal coliforms • Phyto plankton • Zoo plankton	• IS: 2488 (Part 1-5) methods for sampling and testing of Industrial effluents • Standard methods for examination of water and wastewater analysis published by American Public Health Association	
	For River Bodies • Total Carbon • pH • Dissolved Oxygen • Biological Oxygen Demand • Free NH4 • Boron • Sodium Absorption Ratio • ElectricalConductivity	Surface water quality of the nearest River (60m upstream and downstream) and other surface water bodies	• Yield of water sources to be measured during critical season • Standard methodology for collection of surface water (BIS standards)
	For Ground Water	Ground water monitoring data should be collected at minimum of 8 locations (from existing wells /tube wells/existing current records) from the study area and shall be included.	
	Traffic Study Type of vehicles • Frequency of vehicles for transportation of materials • Additional traffic due to proposed project	Land Environment	
	Soil • Particle size distribution • Texture • pH	Soil samples be collected as per BIS specifications	

S. No..	Terms of Reference
	• Electrical conductivity • Cation exchange capacity • Alkali metals • Sodium Absorption Ratio (SAR • Permeability Water holding capacity • Porosity Land use/Landscape • Location code • Total project area • Topography • Drainage (natural) Cultivated, forest,plantations, water bodies, roads and settlements Biological Environment 1. Aquatic • Primary productivity • Aquatic weeds • Enumeration of phyto plankton, zoo plankton and benthos • Fisheries Diversity indices • Trophic levels • Rare and endangered species • Marine Parks/ Sanctuaries/ closed areas /coastal regulation zone (CRZ) 2. Terrestrial • Vegetation-species list, economic importance, forest produce,medicinal • Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. Indicator species which indicate ecological and environment degradation should be identified and included to clearly state whether the proposed project would result in to any adverse effect on any species. • Samples to collect from upstream and downstream of discharge point, nearby tributaries at downstream, and also from dug wells close to activity site. • For forest studies, direction of wind should be considered while selecting forests. • Secondary data to collect from Government offices, NGOs, published literature.

S. No..	Terms of Reference
	value • Importance value index (IVI) of trees • Fauna • Avi fauna • Rare and endangered species • Sanctuaries / National park / Biosphere reserve • Migratory routes socio-economic Demographic structure • Infrastructure resource base • Economic resource base • Health status:Morbidity pattern • Cultural and aesthetic attributes. • Education Socio-economic survey is based on proportionate, stratified and random sampling method. • Primary data collection through questionnaire • Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. agencies
15.3	Interpretation of each environment attribute shall be enumerated and summarized as given below: • Ambient air quality • Ambient Noise quality • Surface water quality • Ground water quality • Soil quality • Biological Environment • Land use • Socio-economic environment
15.4	The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.

16. Anticipated Environment Impacts and mitigation measures (In case of expansion, cumulative impact assessment shall be carried out)

S. No..	Terms of Reference
16.1	Identification of potential impacts in the form of a matrix for the construction and operation phase for all the environment components **Activity** **Environment** **Ecological** **Socio-economic** Construction phase Operation phase
16.2	Impact on ambient air quality (Sources; Embedded control measures; Assessment; Mitigation measures;

S. No..	Terms of Reference
	Residual impact) a. Construction phase b. Operation phase • Details of stack emissions from the existing as well as proposed activity. • Assessment of ground level concentration of pollutants from the stack emission based on AQIP Modelling The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any along with wind rose map for respective period • Impact on ground level concentration, under normal, abnormal and emergency conditions. Measures to handle emergency situations in the event of uncontrolled release of emissions.
16.3	Impact on ambient noise quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.4	Impact on traffic (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.5	Impact on soil quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.6	Impact on land use (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.7	Impact on surface water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.8	Impact on ground water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.9	Impact on terrestrial and aquatic habitat (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.10	Impact on socio-economic environment (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase
16.11	Impact on occupational health and safety (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact) a. Construction phase b. Operation phase

17. Analysis of Alternatives (Technology & Site)

S. No..	Terms of Reference
17.1	No project scenario
17.2	Site alternative
17.3	Technical and social concerns
17.4	Conclusion

18. Environmental Monitoring Program

S. No..	Terms of Reference
18.1	Details of the Environment Management Cell
18.2	Performance monitoring schedule for all pollution control devices shall be furnished.
18.3	Corporate Environment Policy a. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report. b. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environment or forest norms / conditions? If so, it may be detailed in the EIA. c. What is the hierarchical system or Administrative order of the company to deal with the environment issues and for ensuring compliance with the environment clearance conditions? Details of this system may be given.Page 9 of 10 d. Does the company have system of reporting of non compliances / violations of environment norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
18.4	Action plan for post-project environment monitoring matrix: **Activity Aspect Monitoring Parameter Location Frequency Responsibility** Construction phase Operation phase

19. Additional Studies

S. No..	Terms of Reference
19.1	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 after offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.
19.2	Details of adoption/ implementation status/plan to achieve the goal of Glasgow COP26 Climate Submit with regard to enhance the non-fossil energy, use of renewable energy, minimization of net carbon emission and carbon intensity with long-term target of "net Zero" emission.
19.3	Implementation status/measures adopted for avoiding the generation of single used plastic waste.
19.4	In cases the project is located in Critically and Severely Polluted Areas, additional mitigation measures adopted and detailed action plan to be submitted in the EIA/EMP Report as per MoEF&CC O.M. No. 22-23/2028-IA.III dated 31/10/2019 and MoEF&CC O.M. No. 22-23/2028-IA.III dated 5/07/2022 has to be submitted.
19.5	Public consultation details (Entire proceedings as separate annexure along with authenticated English

S. No..	Terms of Reference
	Translation of Public Consultation proceedings).
19.6	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. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.
19.7	Summary of issues raised during public consultation along with action plan to address the same as per MoEF&CC O.M. dated 30/09/2020 **S.No** / **Physical activity and action plan** (Name of the Activity / Physical Targets) / **Year of implementation (Budget in INR)** (1st / 2nd / 3rd) / **Total Expenditure (Rs. in Crores)**
19.8	Risk assessment • Methodology • Hazard identification • Frequency analysis • Consequence analysis • Risk assessment outcome
19.9	Emergency response and preparedness plan

20. Project Benefits

S. No..	Terms of Reference
20.1	Environment benefits
20.2	Social infrastructure
20.3	Employment and business opportunity
20.4	Other tangible benefits

21. Environment Cost Benefit Analysis

S. No..	Terms of Reference
21.1	Net present value
21.2	Internal rate of return
21.3	Benefit cost ratio

S. No..	Terms of Reference
21.4	Cost effectiveness analysis

22. Environment Management Plan (Construction and Operation phase)

S. No..	Terms of Reference
22.1	Action plan for hazardous waste management
22.2	Action plan for solid waste management
22.3	Action plan for e-waste management.
22.4	Action plan for plastic waste management, considering the Plastic Waste Management Rules 2016.
22.5	Action plan for construction and demolition waste management.
22.6	Rain water harvesting plan
22.7	Plan for maximum usage of waste water/treated water in the Unit
22.8	Green belt development plan: An action plan for Green Belt development consisting of 3 tiers of plantations of native species all along the periphery of the project of adequate width shall be raised in 33% of total area with a tree density shall not less than 2500 per ha within a time frame of one year shall be submitted. Survival rate of green belt shall be monitored on periodic basis to ensure that survival rate not be less than 80 %.
22.9	Wildlife conservation plan (In case of presence of schedule I species)
22.10	Total capital cost and recurring cost/annum for environment pollution control measures shall be included.
22.11	Explore possibilities for recycling and reusing of treated water in the unit to reduce the freshwater demand and waste disposal.
22.12	An Action Plan for improving the house-keeping activities in the raw material handling area need to be submitted
22.13	Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
22.14	Action plan to limit the dust emission from all the stacks below 30 mg/Nm3 shall be furnished.
22.15	Action plan for fugitive emission control in the plant premises shall be provided.

Standard Terms of Reference for conducting Environment Impact Assessment Study for Thermal Power Plants and information to be included in EIA/EMP report

1.

Sr. No.	Terms of Reference
1.1	A 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
1.2	Plan for the implementation of the recommendations made for the proposed Unit in the Corporate Responsibility for Environmental Protection (CREP) guidelines.
1.3	Plan for solid wastes utilization.
1.4	Plan for utilization of energy in off gases (coke oven, blast furnace)
1.5	System of coke quenching adopted with full justification.
1.6	Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
1.7	Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
1.8	Details on toxic content using Toxicity Characteristic Leaching Procedure (TCLP), composition and end use of slag.
1.9	100 % dolo char generated in the plant shall be used to generate power.
1.10	Fourth Hole fume extraction system shall be provided for SAF.WHR system shall be installed to recover sensible heat from flue gases of EAF. Provision for installation of jigging and briquetting plant to utilise the fines generated in the process.
1.11	No tailing pond is permitted for Iron ore slimes. Dewatering and filtration system shall be provided.
1.12	Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
1.13	Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be submitted.
1.14	Action plan to limit the particulate matter emission from all the stacks below 30 mg/Nm3 shall be furnished.
1.15	Action plan for 100 % solid waste utilization shall be submitted.
1.16	PM (PM10 and P2.5) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM10 to be carried over.

Sr. No.	Terms of Reference
1.17	Iron ore/coal linkage documents along with the status of environment clearance of iron ore and coal mines, if applicable.
1.18	Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact, if applicable.
1.19	Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials, if applicable.

Standard Terms of Reference for conducting Environment Impact Assessment Study for Mineral beneficiation and information to be included in EIA/EMP report

1. Statutory compliance

Sr. No.	Terms of Reference
1.1	The proposed project shall be given a unique name in consonance with the name submitted to other Government Departments etc. for its better identification and reference.
1.2	Vision document specifying prospective long term plan of the project shall be formulated and submitted.
1.3	Latest compliance report duly certified by the Regional Office of MoEF&CC for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s) for the expansion projects shall be submitted.

2. Details of the Project and Site

Sr. No.	Terms of Reference
2.1	The project proponent needs to identify minimum three potential sites based on environmental, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sites in this regard shall be submitted.
2.2	Executive summary of the project indicating relevant details along with recent photographs of the proposed site (s) shall be provided. Response to the issues raised during Public Hearing and the written representations (if any), along with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed.
2.3	Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and for expansion projects, status of implementation shall also be submitted.

Sr. No.	Terms of Reference
2.4	The geographical coordinates (WGS 84) of the proposed site (plant boundary), including location of ash pond along with topo sheet (1:50,000 scale) and IRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/River and high tide level from the sea shall be specified, if the site is located in proximity to them.
2.5	Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure, roads etc. shall be provided.
2.6	Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement shall be provided.
2.7	Present land use (including land class/kism) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land acquisition and litigation, if any, should be provided.
2.8	If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided along with copies of relevant documents.
2.9	The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report.
2.10	Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.
2.11	Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of required fill material; its source, transportation etc. shall be submitted.

3. Ecology biodiversity and Environment

Sr. No.	Terms of Reference
3.1	A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land be acquired and developed and detailed plan submitted.
3.2	Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as

Sr. No.	Terms of Reference
	proposed), migratory routes / wildlife corridor, if any, within 10 km of the project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden of the State or an officer authorized by him.
3.3	A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on potentially mineable mineral deposit shall be submitted.
3.4	The water requirement shall be optimized (by adopting measures such as dry fly ash and dry bottom ash disposal system, air cooled condenser, concept of zero discharge) and in any case not more than that stipulated by CEA from time to time, to be submitted along with details of source of water and water balance diagram. Details of water balance calculated shall take into account reuse and re- circulation of effluents.
3.5	Water body/Nallah (if any) passing across the site should not be disturbed as far as possible. In case any Nallah / drain is proposed to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of proposed diversion shall be furnished duly approved by the concerned Department of the State.
3.6	It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways.
3.7	Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted
3.8	Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea.
3.9	Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed project and commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water.
3.10	Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished.In addition, wherever ground water is drawn, PP shall submit detailed plan of Water charging activity to be undertaken.
3.11	Feasibility of near zero discharge concept shall be critically examined and its details submitted.

Sr. No.	Terms of Reference
3.12	Optimization of Cycles of Concentration (COC) along with other water conservation measures in the project shall be specified.
3.13	Plan for recirculation of ash pond water and its implementation shall be submitted.
3.14	Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored also include heavy metals. A provision for long-term monitoring of ground water table using Piezometer shall be incorporated in EIA, particularly from the study area.
3.15	Hazards Characterization: Past incidents of hazard events within 10km radius of project area with detailed analysis of causes and probability of reoccurrence

4. Environmental Baseline study and mitigation measures

Sr. No.	Terms of Reference
4.1	One complete season (critical season) site specific meteorological and AAQ data (except monsoon season) as per latest MoEF&CC Notification shall be collected along with past three year's meteorological data for that particular season for wins speed analysisand the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM10, PM2.5, SO2, NOx, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration the upwind direction, pre-dominant downwind direction, other dominant directions, habitation and sensitive receptors. There should be at least one monitoring station each in the upwind and in the pre - dominant downwind direction at a location where maximum ground level concentration is likely to occur.
4.2	In case of expansion project, air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations as identified/stipulated shall be submitted to assess for compliance of AAQ Standards (annual average as well as 24 hrs).
4.3	A list of industries existing and proposed in the study area shall be furnished.
4.4	Cumulative impacts of all sources of emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail. Details of the Model used and the input data used for modelling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The windrose and isopleths should also be shown on the location map. The cumulative study should also include impacts on water, soil and socio-economics.
4.5	Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.

Sr. No.	Terms of Reference
4.6	Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.
4.7	Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished. The Ministry's Notification dated 02.01.2014 regarding ash content in coal shall be complied. For the expansion projects, the compliance of the existing units to the said Notification shall also be submitted
4.8	Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.
4.9	For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted.
4.10	Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished.

5. Environmental Management Plan

Sr. No.	Terms of Reference
5.1	EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified.
5.2	A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be prepared. It should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Provision for mock drills shall be suitably incorporated to check the efficiency of the plans drawn.
5.3	The DMP so formulated shall include measures against likely Fires/Tsunami/Cyclones/Storm Surges/ Earthquakes etc, as applicable. It shall be ensured that DMP consists of both On-site and Off-site plans, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan for different possible disasters shall be prepared both in English and local languages and circulated widely.
5.4	Details of fly ash utilization plan as per the latest fly ash Utilization Notification of GOI along

Sr. No.	Terms of Reference
	with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash along with monitoring mechanism.

6. Green belt development

Sr. No.	Terms of Reference
6.1	Detailed scheme for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary not less than 2000 tree per ha with survival rate of more than 85%shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for CO2 and other gaseous pollutants and hence a stratified green belt should be developed.
6.2	Over and above the green belt, as carbon sink, plan for additional plantation shall be drawn by identifying blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months

7. Socio-economic activities

Sr. No.	Terms of Reference
7.1	Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out through a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities.
7.2	Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project.
7.3	If the area has tribal population, it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land.
7.4	A detailed CER plan along with activities wise break up of financial commitment shall be prepared in terms of the provisions OM No. 22-65/2017-IA.III dated 30.09.2020.CER component shall be identified considering need based assessment study and Public Hearing issues. Sustainable income generating measures which can help in upliftment of affected section of society, which is consistent with the traditional skills of the people shall be identified.
7.5	While formulating CER schemes it shall be ensured that an in-built monitoring mechanism for

Sr. No.	Terms of Reference
	the schemes identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the scheme from time to time and dovetail the same with any Govt. scheme(s). CERdetails done in the past should be clearly spelt out in case of expansion projects.
7.6	R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be formulated after a detailed census of population based on socio economic surveys who were dependant on land falling in the project, as well as, population who were dependant on land not owned by them.
7.7	Assessment of occupational health and endemic diseases of environmental origin in the study area shall be carried out and Action Plan to mitigate the same shall be prepared.
7.8	Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conducive environment shall be carried out and precautionary measures like use of personal equipments etc. shall be provided. Review of impact of various health measures undertaken at intervals of two to three years shall be conducted with an excellent follow up plan of action wherever required.

8. Corporate Environment Policy

Sr. No.	Terms of Reference
8.1	Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
8.2	Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
8.3	What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. Details of this system may be given.
8.4	Does the company has compliance management system in place wherein compliance status along with compliances / violations of environmental norms are reported to the CMD and the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

9. Miscellaneous

Sr. No.	Terms of Reference
9.1	All the above details should be adequately brought out in the EIA report and in the presentation to the Committee.
9.2	Details of litigation pending or otherwise with respect to project in any Court, Tribunal etc. shall invariably be furnished.
9.3	In case any dismantling of old plants are envisaged, the planned land use & land reclamation of dismantled area to be furnished.

10. Additional TOR for Coastal Based Thermal Power Plants Projects (TPPs)

Sr. No.	Terms of Reference
10.1	Low lying areas fulfilling the definition wetland as per Ramsar Convention shall be identified and clearly demarcated w.r.t the proposed site.
10.2	If the site includes or is located close to marshy areas and backwaters, these areas must be excluded from the site and the project boundary should be away from the CRZ line. Authenticated CRZ map from any of the authorized agencies shall be submitted.
10.3	The soil levelling should be minimum with no or minimal disturbance to the natural drainage of the area. If the minor canals (if any) have to be diverted, the design for diversion should be such that the diverted canals not only drains the plant area but also collect the volume of flood water from the surrounding areas and discharge into marshy areas/major canals that enter into creek. Major canals should not be altered but their embankments should be strengthened and desilted.
10.4	Additional soil required for levelling of the sites should as far as possible be generated within the site itself in such a manner that the natural drainage system of the area is protected and improved.
10.5	Marshy areas which hold large quantities of flood water to be identified and shall not be disturbed.
10.6	No waste should be discharged into Creek, Canal systems, Backwaters, Marshy areas and seas without appropriate treatment. Wherever feasible, the outfall should be first treated in a Guard Pond and then only discharged into deep sea (10 to 15 m depth). Similarly, the Intake should be from deep sea to avoid aggregation of fish and in no case shall be from the estuarine zone. The brine that comes out from Desalinization Plants (if any) should not be discharged into sea without adequate dilution.
10.7	Mangrove conservation and regeneration plan shall be formulated and Action Plan with details of time bound implementation shall be specified, if mangroves are present in Study Area.

Sr. No.	Terms of Reference
10.8	A common Green Endowment Fund should be created by the project proponents out of EMP budgets. The interest earned out of it should be used for the development and management of green cover of the area.
10.9	Impact on fisheries at various socio economic level shall be assessed.
10.10	An endowment Fishermen Welfare Fund should be created out of CER grants not only to enhance their quality of life by creation of facilities for Fish Landing Platforms / Fishing Harbour / cold storage, but also to provide relief in case of emergency situations such as missing of fishermen on duty due to rough seas, tropical cyclones and storms etc.
10.11	Tsunami Emergency Management Plan shall be prepared wherever applicable and Plan submitted prior to the commencement of construction work.
10.12	There should not be any contamination of soil, ground and surface waters (canals & village pond) with sea water in and around the project sites. In other words necessary preventive measures for spillage from pipelines, such as lining of Guard Pond used for the treatment of outfall before discharging into the sea and surface RCC channels along the pipelines of outfall and intake should be adopted. This is just because the areas around the projects boundaries could be fertile agricultural land used for paddy cultivation.

Standard Terms of Reference for conducting Environment Impact Assessment Study for Metallurgical Industries (ferrous and non ferrous) and information to be included in EIA/EMP report

1.

Sr. No.	Terms of Reference
1.1	The alternate sites considered, the relative merits and demerits and the reasons for selecting the proposed site for the Beneficiation Plant should be indicated.
1.2	Details of the technology and process involved for beneficiation should be given. .
1.3	Location of the proposed Plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant should be justified.
1.4	Treatment of run of mine (ROM) and or of the fines/waste dump should be spelt out.
1.5	Estimation of the fines going into the washings should be made and its management described.
1.6	Details of the equipment, settling pond etc. should be furnished.
1.7	Detailed material balance should be provided.

Sr. No.	Terms of Reference
1.8	Sources of raw material and its transportation should be indicated. Steps proposed to be taken to protect the ore from getting air borne should be brought out.
1.9	Management and disposal of tailings and closure plan of the tailing pond, if any after the project is over, should be detailed in a quantified manner.
1.10	The water requirement for the project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should also be indicated.
1.11	A copy of the document in support of the fact that the Proponent is the rightful lessee of the unit should be given.
1.12	All documents including EIA and public hearing should be compatible with one another in terms of the production levels, waste generation and its management and technology and should be in the name of the lessee.
1.13	All corner coordinates of the Unit, superimposed on a High Resolution Imagery/Toposheet should be provided. Such an Imagery of the proposed Unit should clearly show the land use and other ecological features of the study area (core and buffer zone).
1.14	It should be clearly indicated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large,may also be detailed in the EIA Report.
1.15	Issues relating to Safety should be detailed. The proposed safeguard measures in each case should also be provided. Disaster management plan shall be prepared and included in the EIA/EMP Report.
1.16	The study area will comprise of 10 km zone around the Plant.
1.17	Cumulative impact study of both Beneficiation Plant with suggested mitigation measures as per the study should be described.
1.18	Location of Railway siding with its handling capacity and safety measures should be indicated.
1.19	Option to provide only silo for storage of minerals instead of open stacking to avoid fugitive dust should be explored and arrangements finalized justified.

Sr. No.	Terms of Reference
1.20	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
1.21	Details of the land for any Over Burden Dumps outside the lease, such as extent of land area, distance from lease, its land use, R&R issues, if any, should be given.
1.22	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the Project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
1.23	Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
1.24	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
1.25	The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
1.26	A study shall be got done to ascertain the impact of the Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required, should be worked out with cost implications and submitted.
1.27	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
1.28	A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled- I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for

Sr. No.	Terms of Reference
	implementing the same should be made as part of the project cost.
1.29	Proximity to Areas declared as 'Critically Polluted' shall also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB/CPCBshall be secured and furnished to the effect that the proposed activities could be considered.
1.30	Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL. HTL, CRZ area, location of the unit w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
1.31	R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects, should be discussed in the report.
1.32	One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site- specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the unit in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
1.33	Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
1.34	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.

Sr. No.	Terms of Reference
1.35	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be secured and copy furnished. .
1.36	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
1.37	Impact of the project on the water quality, both surface and groundwater should be assessed and necessary safeguard measures, if any required, should be provided.
1.38	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
1.39	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the project. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to the pollution.
1.40	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
1.41	Details of the onsite shelter and facilities to be provided to the workers should be included in the EIA report.
1.42	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area should be be detailed.
1.43	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
1.44	Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
1.45	Public hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan to implement the same should be provided and also incorporated in

Sr. No.	Terms of Reference
	the final EIA/EMP Report of the Project.
1.46	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
1.47	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
1.48	A brief background of the Project, its financial position, Group Companies and legal issues etc should be provided with past and current important litigations if any.
1.49	Benefits of the Project, if the project is implemented should be outlined. The benefits of the projects shall clearly indicate environmental, social, economic, employment potential, etc.
1.50	Besides the above, the below mentioned general points are also to be followed:- a) All documents to be properly referenced with index and continuous page numbering. b) Where data are presented in the report especially in Tables, the period in which the data were collected and the sources should be indicated. c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the project. d) Where the documents provided are in a language other than English, an English translation should be provided. e) The Questionnaire for environmental appraisal of project as devised earlier by the Ministry shall also be filled and submitted. f) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should also be followed. g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation. h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certifiedReport of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project by the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.

Additional Terms of Reference

N/A

Annexure 2

Details of Products & By-products

Name of the product /By-product	Product / By-product	Existing	Proposed	Total	Unit	Mode of Transport / Transmission	Remarks (eg. CAS number)
Pellet	Product	0	487000	487000	Tons per Annum (TPA)	Combination of two or three modes	To be sold in the Market.
Sponge Iron	Product	105500	367000	472500	Tons per Annum (TPA)	Combination of two or three modes	To be sold in the Market.
Ferro Alloys	Product	30156	118400	148556	Tons per Annum (TPA)	Combination of two or three modes	This is Fe-Mn production (Max.) which will be solid in the Market. Other products are Fe-Cr, Fe-Si, Si-Mn etc.

Agenda No. 62.19

64.19 Proposed Expansion cum modification of existing steel plant by capacity enhancement of Iron Ore Beneficiation Plant from 0.6 MTPA to 1.2 MTPA, capacity enhancement of Iron Ore Pellet Plant from 0.6 MTPA to 1.2 MTPA, capacity enhancement of existing Coal Washery from 0.216 MTPA to 0.84 MTPA, change of configuration & capacity of DRI Kilns from (1x500 TPD + 1x350 TPD) to (2x500 TPD) and retention of existing 7x50 TPD DRI Kilns, 3x16 MVA Submerged Arc Furnaces (New) including 1x0.36 MTPA (Throughput) Chrome Ore Beneficiation Plant, 1x30 TPH Chrome Ore Briquette Plant, 1x500 TPD Manganese Ore Sinter Plant, 1x20 TPH Metal Recovery Plant & CLU Converter with 4x15 T Holding Furnace (Induction), 1x1,00,000 TPA capacity PCI Unit (New), 1x10 TPD capacity Oxygen Plant (New), 8x3000 Nm3/Hour capacity Producer Gas Plant (New), change of Captive Power Plant (WHRB) Capacity from 20 MW to 25 MW and retention of existing 8.3 MW CPP (WHRB), change of Captive Power Plant (AFBC) Capacity from 20 MW to 30 MW along with 3,00,000 TPA capacity Paver Blocks & Bricks Manufacturing Unit (New) by M/s Jai Balaji Industries Limited (Unit-I), located at G-1, Mangalpur Industrial Complex, P.O. Baktarnagar, P.S. Raniganj, Dist. Paschim Bardhaman, West Bengal- Consideration of TOR.

[Proposal no.: IA/WB/IND1/483007/2024; File No. J-11011/290/2018-IA-II(I)]
[Consultant: Envirotech East Pvt. Ltd.; Valid upto: 12.09.2025]

64.19.1 M/s. Jai Balaji Industries Limited (Unit-I) has made an application online vide proposal no. IA/WB/IND1/483007/2024 dated 2nd August, 2024 along with the application in prescribed format (CAF, Form – I Part A & B), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 2(b) Mineral beneficiation, 3(a) Metallurgical industries (ferrous & non ferrous) and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

64.19.2 Name of the EIA consultant: M/s. Envirotech East Pvt. Ltd. [List of ACOs with their Certificate / Extension Letter vide NABET/EIA/2225/RA 0279; valid upto 12.09.2025, as on August 26, 2024].

Details submitted by Project proponent

64.19.3 The project of M/s Jai Balaji Industries Limited (Unit-I), located at G-1, Mangalpur Industrial Complex, P.O. Baktarnagar, P.S. Raniganj, Dist. Paschim Bardhaman, West Bengal is for expansion cum modification of existing steel plant by capacity enhancement of Iron Ore Beneficiation Plant from 0.6 MTPA to 1.2 MTPA, capacity enhancement of Iron Ore Pellet Plant from 0.6 MTPA to 1.2 MTPA, capacity enhancement of existing Coal Washery from 0.216 MTPA to 0.84 MTPA, change of configuration & capacity of DRI Kilns from (1x500 TPD + 1x350 TPD) to (2x500 TPD) and retention of existing 7x50 TPD DRI Kilns, 3x16 MVA Submerged Arc Furnaces (New) including 1x0.36 MTPA (Throughput) Chrome Ore Beneficiation Plant, 1x30 TPH Chrome Ore Briquette Plant, 1x500 TPD Manganese Ore Sinter Plant, 1x20 TPH Metal Recovery Plant & CLU Converter with 4x15 T Holding Furnace

(Induction), 1x1,00,000 TPA capacity PCI Unit (New), 1x10 TPD capacity Oxygen Plant (New), 8x3000 Nm3/Hour capacity Producer Gas Plant (New), change of Captive Power Plant (WHRB) Capacity from 20 MW to 25 MW and retention of existing 8.3 MW CPP (WHRB), change of Captive Power Plant (AFBC) Capacity from 20 MW to 30 MW along with 3,00,000 TPA capacity Paver Blocks & Bricks Manufacturing Unit (New).

64.19.4 Environmental site settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total Land</td><td>34.8 ha [Private: 34.80 ha]</td><td>-</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>The proposed expansion project will be installed on the available land within the existing plant premises, comprising total 34.8 hectares (86 acres) of land. The land is Industrial in nature which is under the possession of the Company.</td><td></td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Project Site : Village Benipur

Study Area:<table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Asansol City</td><td>20 km</td><td>NW from the Project site</td></tr><tr><td>Durgapur</td><td>19 km</td><td>SE from the project site.</td></tr></table></td><td>No R&R issue involved in the proposed project</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site.</td><td><table><tr><th>POINT</th><th>LATITUDE</th><th>LONGITUDE</th></tr><tr><td>A</td><td>23°36'14.48"N</td><td>87° 8'35.05"E</td></tr><tr><td>B</td><td>23°36'44.45"N</td><td>87° 8'55.69"E</td></tr><tr><td>C</td><td>23°36'36.58"N</td><td>87° 9'6.68"E</td></tr><tr><td>D</td><td>23°36'15.02"N</td><td>87° 8'49.90"E</td></tr></table></td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>88 m to 107 m above mean sea level (AMSL).</td><td></td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No forest land is involved in the project site.</td><td></td></tr>
<tr><td>vii.</td><td>Water body (Rivers, Lakes Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>Project site:
There is no water body within the Project Site.

Study Area:<table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Damodar River</td><td>4.5 km</td><td>SW direction w.r.t. the Project Site</td></tr></table></td><td>As per Annual Flood Report 2021 published by the Irrigation & Waterways Directorate, Govt. of West Bengal, Kolkata, the maximum flood level of River Damodar at Panchet Dam</td></tr>
</table>

S. No.	Particulars	Details	Remarks
			(which is around 40 km from the project site in NW direction) is 129.54 m (425 ft) where as the Above Mean Sea Level of the Project site is above 88 m.
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Not found in the study area.	

64.19.5 The existing project was implemented after getting NOCs from WBPCB in the year 1999, 2001,2001, 2002, 2003, 2004, 2008 and 2009 as per the prevailing notification (in the year 1994) of MoEF&CC, as per which No Environmental Clearance (EC) was required for this project. The project was accorded environmental clearances vide file No. J-11011/290/2018-IA-II(I) dated 28th November, 2022 by MoEF&CC for Expansion of existing Steel Plant by installation of 0.6 MTPA Iron Ore Beneficiation Plant, 0.6 MTPA Pelletization Plant, Sponge Iron Plant with 1x350 TPD + 1x500 TPD DRI Kilns, product mix change of existing 2x7 MVA Submerged Arc furnaces, 4x25 T Induction Furnaces & 40 MW capacity Captive Power Plant. Consent to Operates (CTOs) for the existing units was accorded by West Bengal Pollution Control Board (WBPCB) vide Memo No. 403-WPBA/RED (Bwn)/Cont/2002 dated 31.05.2022. The validity of CTO is up to 31.05.2027. The summary of the existing project along with the permissions obtained are as follows.

S. No.	Obtained Certificate Name	Date of Issue	Reference Number	Name of Units	Obtained from
1	No Objection Certificate (NOC)	08-12-1999	Memo No. 2174-51/WPB-NOC/40/99	1st Rotary Kiln - Sponge Iron – 50 MT/Day & By Product – 15 MT/Day (Total Fixed Capital Investment: Rs. 484.59 Lacs.)	West Bengal Pollution Control Board
2	Consent to Establish (NOC) for Expansion Unit	20-04-2001	Memo No. 218/2N-2184/2001	2nd Rotary Kiln – Additional Sponge Iron - 50 MT/Day (Total Fixed Capital Investment: Rs. 310.52 Lacs.)	West Bengal Pollution Control Board

S. No.	Obtained Certificate Name	Date of Issue	Reference Number	Name of Units	Obtained from
3	Consent to Establish (NOC)	27-07-2001	Memo No. 626/2N-2328/2001	3rd & 4th Rotary Kiln - Sponge Iron – 100 MT/Day & By Product-Coalchar – 15 MT/Day (Total Fixed Capital Investment: Rs. 854.60 Lacs.)	West Bengal Pollution Control Board
4	Consent to Establish (NOC) for Expansion Unit	29-01-2002	Memo No. 1126-2N-2517/2001	5th & 6th Rotary Kiln - Sponge Iron – 100 MT/Day & By Product-Coalchar – 15 MT/Day (Total Fixed Capital Investment: Rs. 498 Lacs.)	West Bengal Pollution Control Board
5	Consent to Establish (NOC)	21-10-2003	Memo No. 3458-2N-448/2003	7th Rotary Kiln – Sponge Iron - 1500 MT/Month & By Product-Coalchar – 450 Kgs/Month (Total Fixed Capital Investment: Rs. 293.92 Lacs.)	West Bengal Pollution Control Board
6	Consent to Establish (NOC) for Existing Unit	24-07-2003	Memo No. 3122-2N-133/2003	12 MW Captive Power Plant (Total Fixed Capital Investment: Rs. 4600 Lacs.)	West Bengal Pollution Control Board
7	Consent to Establish (NOC) for Expansion Unit	11-10-2004	Memo No. 9420-2N-579/2003	Ferro Manganese – 1298 Ton/MonthSilico Manganese – 1215 Ton/MonthM.S. Ingot/Billet – 19800 Ton/Month, andCoal washery- Fresh Coal – 18000 Ton/Month (Total Fixed Capital Investment: Rs. 1634.80 Lacs.)	West Bengal Pollution Control Board
8	Consent to Establish (NOC) for change in ownership of the industry followed by change in name and style of the industry	11-11-2008	Memo No. 32-WPBA/RED (Bwn)/Cont. (332)/02	--	West Bengal Pollution Control Board

S. No.	Obtained Certificate Name	Date of Issue	Reference Number	Name of Units	Obtained from
9	Consent to Establish (NOC) for Expansion Unit	11-02-2009	Memo No. 84-2N-75/2008(E)	One no. 30 TPH AFBC Boiler for 6.3 MW additional Power generation (The Gross Capital Investment: Rs. 1500 Lacs.)	West Bengal Pollution Control Board
10	Environment Clearance (EC)	28.11.2022	File No. J-11011/290/2018-IA-II(I)	Expansion of existing Steel Plant by installation of 0.6 MTPA Iron Ore Beneficiation Plant, 0.6 MTPA Pelletization Plant, Sponge Iron Plant with 1x350 TPD + 1x500 TPD DRI Kilns, product mix change of existing 2x7 MVA Submerged Arc furnaces, 4x25 T Induction Furnaces & 40 MW capacity Captive Power Plant	MoEF&CC

64.19.6 Implementation status of existing EC/CTE:

Sl. No.	Facilities	Units	EC Details	Implementation Status as on 29.04.2024	Production as per CTO
1	Sponge Iron Plant	7x50 TPD DRI Kilns	-	Under Operation	1,05,500 TPA Sponge Iron
2	Ferro Alloy Plant	2x7 MVA Submerged Arc Furnaces	MoEF&CC File No. J-11011/290/2018-IA-II(I) dated 28th November, 2022	Under Operation	Either Fe-Mn - 30,156 TPA (capacity optimized) or Fe-Cr – 24,000 TPA (capacity optimized) or Silico-chrome 15,840 TPA (capacity optimized) or Fe-Si – 11,220 TPA or

Sl. No.	Facilities	Units	EC Details	Implementation Status as on 29.04.2024	Production as per CTO
					Si Mn- 29,160 TPA Total Ferro-Alloys production will never cro 30,156 TPA
3	Captive Power Plant (WHRB)	8.3 MW	-	Under Operation	8.3 MW
4	Captive Power Plant (AFBC)	10 MW	-	Under Operation	10 MW
5	Coal Washery	1x50 TPH	-	Under Operation	2,16,000 TPA

64.19.7 The unit configuration and capacity of existing and proposed project is given as below:

Sl. No.	Facility	As per the obtained EC dated 28.11.2022		Proposed Modification / capacity enhancement		Ultimate after Modification / capacity enhancement		Remarks
		Config.	Cap. (TPA)	Config.	Cap. (TPA)	Config.	Cap. (TPA)	
1	Sponge Iron	1x 500 TPD + 1x350 TPD *** The existing 7X50 TPD shall be phased out after the implementation of the proposed project)**	2,80,500	2x500 TPD (Config change) + 7x50 TPD (Existing to be retained)	1,92,000 (Enhancement)	2x500 TPD + 7x50 TPD (Existing to be retained)	4,72,500	Change of configuration & capacity from (1x500 + 1x350) to (2x500 TPD) and Existing 7x50 TPD DRI Kilns to be retained.
2	SAF (Ferro Alloys)	2x7 MVA	Either Fe-Mn - 30,156 TPA (capacity optimized) or Fe-Cr – 24,000 TPA (capacity optimized) or Silico-chrome	3x16 MVA (New) along with 1x0.36 MTPA (Throughput) Chrome Ore Beneficiation Plant, 1x30 TPH Chrome Ore Briquette Plant, 1x500 TPD Manganese Ore Sinter Plant, 1x20	Either Fe-Mn - 1,18,400 TPA or Fe-Cr – 89,600 TPA or Silico-chrome 54,300 TPA or Fe-Si - 40,500 TPA or Si Mn - 87,500 TPA or	2x7 MVA + 3x16 MVA (New) along with 1x0.36 MTPA (Throughput) Chrome Ore Beneficiation Plant, 1x30 TPH Chrome Ore Briquette Plant, 1x500 TPD Manganese Ore Sinter	Either Fe-Mn - 1,48,556 TPA or Fe-Cr – 1,13,600 TPA or Silico-chrome 70,140 TPA or Fe-Si – 51,720 TPA or Si Mn- 1,16,660 TPA or	Addition of New 3x16 MVA Submerged Arc Furnaces along with 1x0.36 MTPA (Throughput) Chrome Ore Beneficiation Plant, 1x30 TPH Chrome Ore Briquette Plant, 1x500 TPD Manganese Ore

Sl. No.	Facility	As per the obtained EC dated 28.11.2022		Proposed Modification / capacity enhancement		Ultimate after Modification / capacity enhancement		Remarks
		Config.	Cap. (TPA)	Config.	Cap. (TPA)	Config.	Cap. (TPA)	
			15,840 TPA (capacity optimized) or Fe-Si – 11,220 TPA or Si Mn- 29,160 TPA Total Ferro-Alloys production will never cross 30,156 TPA	TPH Metal Recovery Plant (capacity enhancement through Modification) & CLU Converter with 4x15 T Holding Furnace (Induction)	Titanium Slag - 36,000 TPA with Pig Iron - 20,000 TPA)	Plant, 1x20 TPH Metal Recovery Plant (capacity enhancement through Modification) & CLU Converter with 4x15 T Holding Furnace (Induction)	Titanium Slag - 36,000 TPA with Pig Iron - 20,000 TPA)	Sinter Plant, 1x20 TPH Metal Recovery Plant (capacity enhancement through Modification) & CLU Converter with 4x15 T Holding Furnace (Induction)
3	Oxygen Plant	-	-	1x10 TPD	10 TPD	1x10 TPD	10 TPD	Addition of New 1x10 TPD Oxygen Plant
4	Captive Power Plant (WHRB) new	**** The existing 8.3 MW WHRB shall be phased out after the implementation of the proposed project.**	20 MW	-	25 MW	-	33.3 MW	Change of Captive Power Plant (WHRB) Capacity from 20 MW to 25 MW and existing 8.3 MW CPP to be retained.
5	Captive Power Plant (AFBC)	-	20 MW	-	30 MW	-	40 MW	Change of Captive Power Plant (AFBC) Capacity from 20 MW to 30 MW
6	Coal Washery	1x50 TPH	2,16,000	1x150 TPH (Capacity enhancement through modification)	8,40,000	1x150 TPH (Capacity enhancement through modification)	8,40,000	Capacity enhancement through modification from 0.216 MTPA to 0.84 MTPA.
7	I/Ore Beneficiation Plant	0.6 MTPA	6,00,000	1 MTPA	12,00,000	1.2 MTPA	12,00,000	Capacity enhancement from 0.6 MTPA to 1.2 MTPA .

Sl. No.	Facility	As per the obtained EC dated 28.11.2022		Proposed Modification / capacity enhancement		Ultimate after Modification / capacity enhancement		Remarks
		Config.	Cap. (TPA)	Config.	Cap. (TPA)	Config.	Cap. (TPA)	
8	Pellet Plant	0.6 MTPA	6,00,000	1.2 MTPA	6,00,000	1.2 MTPA	12,00,000	Capacity enhancement from 0.6 MTPA to 1.2 MTPA.
9	Producer Gas Plant	-	-	8x3000 Nm^3/Hour	24000 Nm^3/Hour	8x3000 Nm^3/Hour	24000 Nm^3/Hour	New Producer Gas Plant
10	SMS (Induction)	4x25 T (Dropped)	3,30,000 (Dropped)	-	-	-	-	**Dropped**
11	PCI Unit	-	-	1x1,00,000 TPA	1,00,000 TPA	1,00,000 TPA	1,00,000 TPA	New PCI Unit
12	Paver Blocks & Bricks Manufacturing Unit	-	-	1x3,00,000 TPA	3,00,000 TPA	1x3,00,000 TPA	3,00,000 TPA	New Unit
(Note: In the last EC dated 28.11.2022 the Company had declared that the existing 7x50 TPD DRI Kilns and existing 8.3 MW WHRB shall be phased out after the implementation of the proposed DRI Kilns. Now, for the overall sustainability of the project the Company has planned to retain the existing 7x50 TPD DRI Kilns along with 8.3 MW WHRB based Captive Power Plant in the proposed expansion project. In the meantime its efficiency level shall be optimized by adopting energy conservation measures besides reducing the pollutants emissions through more stringent control measures).								

64.19.8 The details of the raw material requirement for the proposed project along with its source and mode of transportation is given as below:

Sl. No	Raw Material	Annual Requirement (in TPA)				Source
		Existing	Under Implementation / To be implemented	Proposed	Total	
Iron Ore Beneficiation Plant (1.2 MTPA)						
1	Iron Ore Fines	-	-	18,40,000	18,40,000	Orissa, Barbil
Pellet Plant (1.2 MTPA)						
1	Iron Ore Concentrate	-	-	12,00,000	12,00,000	In house plant
2	Lime Stone	-	-	48,000	48,000	Katni
3	Bentonite	-	-	8,400	8,400	Local Market
Sponge Iron Plant (4,72,500 TPA Sponge Iron)						
1	Pellet	1,84,770	-	5,28,230	7,13,000	In House
2	Washed Coal	-	-	4,20,000	4,20,000	In House
3	Coal	1,05,600	-	-	1,05,600	Imported

Sl. No	Raw Material	Annual Requirement (in TPA)				Source
		Existing	Under Implementation / To be implemented	Proposed	Total	
4	Dolomite	8,080	-	23,120	31,200	Local Market
Producer Gas Plant (24,000 Nm^3/Hr)						
1	Coal	-	-	1,05,600	1,05,600	Local Market
Captive Power Plant (Existing - 10 MW + Proposed - 30 MW) (AFBC)						
1	Dolo Char	40,800	-	1,16,700	1,57,500	In House
2	Coal	17,875	-	57,125	75,000	Local Market
3	Washery Reject	1,05,000	-	3,15,000	4,20,000	In House
Ferro Alloy plant (2x7 MVA + 3x16 MVA) : Ferro-Manganese						
1	Manganese Ore	66,340	-	2,60,000	3,26,340	Barbil
2	Coke	13,820	-	54,260	68,080	Local Market
3	Dolomite	9,515	-	37,350	46,865	Jaipaiguri
Ferro Alloy plant (2x7 MVA + 3x16 MVA) : Silico - Manganese						
1	Manganese Ore	49,570	-	1,48,750	1,98,320	Barbil
2	Quartz	5,445	-	16,340	21,785	Rajasthan / MP
3	Coke	10,600	-	31,790	42,390	Local Market
4	Dolomite	4,355	-	13,070	17,425	Jaipaiguri
5	Fe-Mn slag	14,580	-	43,740	58,320	In house
Ferro Alloy plant (2x7 MVA + 3x16 MVA) : Ferro - Silicon						
1	Quartz	21,385	-	77,170	98,555	Rajasthan / MP
2	Scrap	4,160	-	15,000	19,160	Local Market
3	Coke	14,255	-	51,450	65,705	Local Market
Ferro Alloy plant (2x7 MVA + 3x16 MVA) : Ferro - Chrome						
1	Chrome Briquette	49,370	-	1,84,290	2,33,660	Local Market
2	Friable	8,710	-	32,520	41,230	Orissa
3	Lam Coke	5,410	-	20,200	25,610	Local Market
4	Anthracite Coal	1,585	-	5,910	7,495	Local Market
5	Quartz	1,850	-	6,900	8,750	Rajasthan / MP
6	Magnesite	1,585	-	5,910	7,495	Local Market
Ferro Alloy plant (2x7 MVA + 3x16 MVA) : Silico - Chrome						
1	Chrome Chips	9,950	-	34,125	44,075	Mines in Orissa
2	Coke	6,510	-	22,310	28,820	Local Market
3	Charcoal	11,200	-	38,390	49,590	Local Market
4	Quartz	22,970	-	78,750	1,01,720	Rajasthan / MP

64.19.9 Daily water requirement for the entire project after expansion will be around 3450 m^3/day (Existing Units – 850 Cu.m/day, Proposed Units - 2600 Cu.m/day), out of which fresh water requirement is 2450 m^3/day and recycle water is 1000 m^3/day. The water will be sourced from ADDA supply. No ground water shall be extracted.

64.19.10 The total power requirement after expansion will be estimated as 96 MW (Existing Units – 18.3 MW & Proposed Units - 77.7 MW) which will be sourced from 73.3 MW capacity Captive Power Plant & rest 22.7 MW from India Power Corporation Ltd. / DVC / WBSEDCL.

64.19.11 The capital cost of the proposed expansion project is Rs. 1225 Crores. The employment generation from the proposed project during operational phase will be 900 persons.

64.19.12 It is reported that there is no violation under EIA, 2006/court case/show cause/direction related to the project under consideration.

64.19.13 Proposed Terms of Reference: [Baseline data collection period: 1st March,2024 to 31st May,2024 (Summer Season)]

Attributes	**Sampling**		Parameters
	No. of Stations	**Frequency**	
A. Air			
a. Meteorological Parameters	1	Continuous on 24-hourly basis	Temperature, Relative Humidity, Atmospheric Pressure, Wind Speed, Wind Direction, Rainfall.
b. AAQ Parameters	8	Twice in a week	PM_{10}, $PM_{2.5}$, SO_2, NO_2 & CO
B. Noise	10	Once (Day & Night)	L_{eq} [dB (A)]
C. Water			
a. Surface Water	10	Once in the study period	Physical, Chemical & Biological
b. Ground Water	9	Once in the study period	Physical, Chemical & Biological
D. Land			
a. Soil Quality	4	Once in the study period	Physical and Chemical
b. Land Use	Study Area	Once in the study period	Land use using Satellite Imagery
E. Biological			
a. Aquatic	Study Area	Once in the study period	Enlist local Flora and Fauna
b. Terrestrial	Study Area	Once in the study period	Enlist local Flora and Fauna

Attributes	Sampling		Parameters
	No. of Stations	Frequency	
F. Socio-economic Parameters	Study Area	Based on Latest census data and sample survey	Population & Infrastructure Facilities

Deliberation by the Committee

64.19.14 The Committee noted the following:

i. The instant proposal is for expansion cum modification of existing steel plant by capacity enhancement of Iron Ore Beneficiation Plant from 0.6 MTPA to 1.2 MTPA, capacity enhancement of Iron Ore Pellet Plant from 0.6 MTPA to 1.2 MTPA, capacity enhancement of existing Coal Washery from 0.216 MTPA to 0.84 MTPA, change of configuration & capacity of DRI Kilns from (1x500 TPD + 1x350 TPD) to (2x500 TPD) and retention of existing 7x50 TPD DRI Kilns, 3x16 MVA Submerged Arc Furnaces (New) including 1x0.36 MTPA (Throughput) Chrome Ore Beneficiation Plant, 1x30 TPH Chrome Ore Briquette Plant, 1x500 TPD Manganese Ore Sinter Plant, 1x20 TPH Metal Recovery Plant & CLU Converter with 4x15 T Holding Furnace (Induction), 1x1,00,000 TPA capacity PCI Unit (New), 1x10 TPD capacity Oxygen Plant (New), 8x3000 Nm3/Hour capacity Producer Gas Plant (New), change of Captive Power Plant (WHRB) Capacity from 20 MW to 25 MW and retention of existing 8.3 MW CPP (WHRB), change of Captive Power Plant (AFBC) Capacity from 20 MW to 30 MW along with 3,00,000 TPA capacity Paver Blocks & Bricks Manufacturing Unit (New).

ii. The existing project was implemented after getting NOCs from WBPCB in the year 1999, 2001,2001, 2002, 2003, 2004, 2008 and 2009 as per the prevailing notification (in the year 1994) of MoEF&CC, as per which No Environmental Clearance (EC) was required for this project. The project was accorded environmental clearances vide file No. J-11011/290/2018-IA-II(I) dated 28th November, 2022 by MoEF&CC for Expansion of existing Steel Plant by installation of 0.6 MTPA Iron Ore Beneficiation Plant, 0.6 MTPA Pelletization Plant, Sponge Iron Plant with 1x350 TPD + 1x500 TPD DRI Kilns, product mix change of existing 2x7 MVA Submerged Arc furnaces, 4x25 T Induction Furnaces & 40 MW capacity Captive Power Plant. Consent to Operates (CTOs) for the existing units was accorded by West Bengal Pollution Control Board (WBPCB) vide Memo No. 403-WPBA/RED (Bwn)/Cont/2002 dated 31.05.2022. The validity of CTO is up to 31.05.2027.

iii. The EAC took into consideration the drone survey of the project site and kml file on the Google Earth presented by the project proponent along with DSS of the project site on PARIVESH and made following deliberations accordingly.

iv. The total project area is 34.8 ha which is under the possession of the Company. The expansion will take place within the existing land.

v. The nearest industrially developed town is Raniganj and Andal, which are located at around 2.5 km in north-west direction and 6.0 km in south-east direction respectively w.r.t. the project site along with other sensitive areas within the study area of the project site. The EAC is of the opinion that PP shall prepare and include in the EIA/EMP Report

the environmental safeguard measures to minimise the impact of the project activities on these sensitive areas.

vi. There are around 10 nos. of ponds nearby project location. Damodar River is at a distance of 4.5 km in SW direction from the project site. The EAC is of the opinion that water bodies shall not be disturbed. Mitigation measures w.r.t. safeguarding the water bodies shall be prepared and submitted.

vii. The total water requirement after expansion will be will be around 3450 m^3/day (Existing Units – 850 Cu.m/day, Proposed Units - 2600 Cu.m/day), out of which fresh water requirement is 2450 m^3/day and recycle water is 1000 m^3/day. The water will be sourced from ADDA supply. The EAC is of the opinion that PP shall obtain necessary permission in this regard. No ground water shall be extracted.

Recommendations of the Committee

64.19.15 After deliberations, the Committee **recommended** the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study alongwith Public Hearing in addition to the generic ToRs enclosed at **Annexure-1** read with additional ToRs at **Annexure-2**:

(i) The nearest industrially developed town is Raniganj and Andal, which are located at around 2.5 km in north-west direction and 6.0 km in south-east direction respectively w.r.t. the project site along with other sensitive areas within the study area of the project site. Proponent shall prepare appropriate environmental safeguard measures to minimise the impact of the project activities on these sensitive areas.

(ii) There are around 10 nos. of ponds nearby project location. Damodar River is at a distance of 4.5 km in SW direction from the project site. The PP shall include in the EIA/EMP report suitable steps /conservation plan along with contouring (close intervals), Run -off calculations, disposal etc. 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 prepared and included in EIA/EMP Report.

(iii) Water requirement of 3450 m^3/day is proposed to be obtained from ADDA supply (2450 m^3/day) and recycled water (1000 m^3/day). PP shall obtain necessary water permission from the Competent Authority. No ground water abstraction is permitted.

(iv) PP shall provide a digital display board for displaying environmental parameters at the main gate of the company.

(v) PP shall submit distance authentication certificate and map from the SPCB certifying that the proposed project area do not fall within CPA/SPA. The certificate shall also bear the geographical coordinates of the proposed project site.

(vi) PP shall prepare an action plan for improving the housekeeping of the plant premises.

(vii) PP shall prepare a time-bound action plan for improving the conditions of roads within the plant premises.

(viii) Annual Wind Rose diagram must be provided. Data may be obtained from secondary sources such as IMD, for this purpose.

(ix) The "input" parameters used for the AAQ modelling must be given in the E.I.A. Report.

(x) The "mixing height" and the "inversion height" must be reported without any ambiguity, in the E.I.A. Report.

(xi) CO sensors with alarm systems must be installed inside the Plant at strategic locations.

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ADDITIONAL AGENDA

64.20 Consideration of the following items by the EAC for discussion:

i. Harmonisation of the Environmental Clearance Conditions developed for the industrial sectors covered under Industry-1 sector Draft Harmonized EC conditions by CSIR-NEERI

ii. Standardisation of ToR and EC conditions for Pellet Plants subsequent to MoEFCC notification S.O.2215(E) dated 07-06-2024

Introduction

64.20.1 The MS (Ind-1) sector briefed the Committee that the Ministry had engaged CSIR-NEERI to standardise and harmonise the EC conditions with a view to bring in standardisation in asessement of compliance, remove redundant conditions, improve ease of monitoring by RO MoEFCC, and exclude immeasurable/ unconnected conditions.

64.20.2 The Committee was also apprised that the MoEFCC is working to include Standard ToR and EC conditions into the Parivesh Portal in respect of new sectors covered under the EIA Notification 2006. In this regard, the MoEFCC vide notification dated S.O.2215(E) dated 07-06-2024 have segregated Pellet Plants into a new category, and the same are listed at S.No.2(c) of the schedule of the EIA Notification, 2006. Previously, the Pellet plants were covered under S.No.3(a) of the EIA Notification 2006. Vide revent notification, all standalong Pellet plants have been categorised a Category B projects, and to be appraised at State Level.

64.20.3 Accordingly, the MoEFCC is now working to include the Standard ToR and EC conditions in PARIVESH portal itself for smooth and speedy appraisal of Pellet plant projects.

Deliberations of the Committee

The matter related to harmonization of EC conditions and Standardisation of ToR and EC conditions was taken up by the EAC of the Ind-1 sector.

64.20.4 The CSIR-NEERI representative, Shri Ankit, Senior Scientist made a detailed presentation on harmonisation of EC conditions before the Committee to explain the background of the work