सत्यमेव जयते

File No: IA-J-11011/416/2023-IA-II(IND-I)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division
****

Dated **31/01/2024**

To,

M/s SHIVALI UDYOG I LIMITED
Plot No 3&4 Urla Industrial Area Raipur , RAIPUR, CHHATTISGARH, , 493221
E-mail: shivaliudyogenv@gmail.com

Subject: **Proposed Expansion from Induction furnace, CCM from existing 57600 TPA to 157500 TPA MS Billets along with Hot Charging based steel Rolling Mill facility from 46000 TPA to 126000 TPA and no increase in existing rerolled steel production capacity of 54000 TPA through existing BRF based rolling mill. Total Rerolled Steel Production capacity will be 180000 TPA by M/s Shivali Udyog (I) Pvt. Ltd., located at Plot No.03 and 04, Urla Industrial Area, Raipur, Chhattisgarh – Grant of TOR alongwith PH -Regarding**

Sir/Madam,

This is with reference to your online application for Grant of Terms of Reference vide proposal no. IA/CG/IND1/452675/2023 dated 14.12.2023 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.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO23A1009CG5468769N
(ii) File No.	IA-J-11011/416/2023-IA-II(IND-I)
(iii) Clearance Type	TOR
(iv) Category	A
(v) Project/Activity Included Schedule No.	3(a) Metallurgical Industries (ferrous and non ferrous)
(vi) Sector	Industrial Projects - 1
(vii) Name of Project	Proposed Expansion from Induction furnace, CCM from existing 57600 TPA to 157500 TPA MS Billets along with Hot Charging based steel Rolling Mill facility from 46000 TPA to 126000 TPA and no increase in existing rerolled steel production capacity of 54000 TPA through existing BRF based

	rolling mill. Total Rerolled Steel Production capacity will be 180000 TPA located at Plot No.03 and 04, Urla Industrial Area, Raipur 493221 by M/s. Shivali Udyog (I) Pvt. Ltd. [Consultant: Anacon Labs Pvt. Ltd.]
(viii) Name of Company/Organization	M/s SHIVALI UDYOG I LIMITED
(ix) Location of Project (District, State)	RAIPUR, CHHATTISGARH
(x) Issuing Authority	MoEF&CC
(xii) Applicability of General Conditions	yes
(xiii) Applicability of Specific Conditions	no

3. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (ferrous & non-ferrous) under Category "B" of the schedule of the EIA Notification, 2006 and attracts general condition as the project lies in Urla Industrial Area which is Critically Polluted Area under CEPI – 2018 and therefore appraised at Central Level.

4. The instant Proposal was considered in the 51st EAC Meeting held during during 2-4th January, 2023. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed at https://parivesh.nic.in.

Details submitted by Project proponent

5. The project of M/s. Shivali Udyog (I) Private Limited located at Village- Sarora, Urla Industrial Area, Tehsil & District: Raipur of Chhattisgarh is for expansion of Induction furnace, CCM from existing 57600 TPA to 157500 TPA MS Billets along with Hot Charging based steel Rolling Mill facility from 46000 TPA to 126000 TPA and no increase in existing rerolled steel production capacity of 54000 TPA through existing BRF based rolling mill. Total Rerolled Steel Production capacity will be 180000 TPA.

6. The environmental setting of the proposed project is given at **Annexure-I** and the Unit configuration and capacity is at **Annexure-II**.

7. Existing Water require is 81 m3/day, water requirement is obtained from the surface water source from CSIDC (Industrial Water Supply network.). Total water requirement after expansion is estimated as 185 m3/day out of which 150 m3/day of fresh water requirement will be obtained from the CSIDC and the remaining requirement of 35 m3/day will be met from recycle water. The latest copy of water bill no. is 059314 on dated- 12.10.2023. (Chhattisgarh State Industrial Development Corporation Ltd.).

8. The total power requirement for the proposed expansion project is estimated as 21.6 MW which will be obtained from the State Grid (CSPDCL).

9. The capital cost of the project is Rs. 40.79 Crores and the capital cost for environmental protection measures is proposed as Rs. 3.61 Crores. The employment generation from the expansion is 103.

10. It has been reported by PP that, there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.

Deliberations of the Committee

11. The EAC noted the following:

i. The instant proposal is for expansion of Induction furnace, CCM from existing 57600 TPA to 157500 TPA MS Billets along with Hot Charging based steel Rolling Mill facility from 46000 TPA to 126000 TPA and no increase in existing rerolled steel production capacity of 54000 TPA through existing BRF based rolling mill. Total Rerolled Steel Production capacity will be 180000 TPA.

ii. The existing project was accorded combined common consent (CTE/CTO) by C.G. Environment Conservation Board vide letter. no. 1576 and 1579/RO/TS/CECB/2004 Raipur dated 22nd April 2004 for Rolling Mill based on Reheating Furnace with capacity of 1,00,000 TPA along with Copper Wire, Aluminium Wire 70 TPA, Super Annealed Copper Wire and Aluminium Wire 180 TPA, MS Wire, HB Wire, Annealed Wire 39000 TPA, PVC insulated wire and PC wire 2000 TPA. This CTO was renewed from time to time and the last renewal as granted on 28.10.2019 which is valid till 31.03.2024. (CTO Renewal Letter No- 6854/RO/TS/CECBG/20219). The validity of CTO is up to 31.03.2024 (Remarks- No Change Only Renewal). Subsequently unit had obtained Environment Clearance for backward integration with implementation of Induction Furnace (57600 TPA MS Ingot/Billet), CCM and/or 46000 TPA Hot Charging facility based Rerolled steel production and reduction in its Reheating Furnace based Rerolled Steel Production Capacity from 1,00,000 TPA to 56000 TPA. Vide Letter No- 523/S.E.I.A.A., C.G./ E.C./Raipur/ 740 on dated 25.02.2019. The new CTO granted for expansion is renewed on 09.11.2022 and validity of the renewal is till 30.09.2027.

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 existing industrial land of 3.43 Ha was obtained through lease in industrial area.

v. Sarora village is at a distance of 0.3 km in SE direction of the project site along with other sensitive areas exists within the study area of the project site. The EAC is of the opinion that PP shall strictly implement the environmental safeguard measures proposed to minimise the impact due to the project activities on these sensitive areas.

vi. There are various water bodies within the study area of the project site. The EAC is of the opinion that PP shall prepare a plan for conservation of the water bodies.

vii. Existing Water require is 81 m3/day, water requirement is obtained from the surface water source from CSIDC (Industrial Water Supply network.). Total water requirement after expansion is estimated as 185 m3/day out of which 150 m3/day of fresh water requirement will be obtained from the CSIDC and the remaining requirement of 35 m3/day will be met from recycle water. The EAC deliberated on the water requirement and found it satisfactory.

viii. The project falls in Urla Industrial Area which is Critically Polluted Area under CEPI – 2018. The EAC deliberated on the submitted Action Plan to mitigate the pollution and is of the opinion that PP shall strictly implement the same.

ix. The EAC also deliberated on the submitted written representation of project proponent pertaining to greenbelt development and found it satisfactory.

Recommendations of the Committee

12. After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP alongwith Public Hearing in addition to the generic ToRs enclosed at **Annexure-III** read with additional ToRs at **Annexure-IV**.

(i) In pursuance to MoEF&CC OMs dated 31st October, 2019 & 30th December, 2019 issued in compliance of the order of Hon'ble NGT in OA No. 1038/2018 dated 19th August, 2019, the compliance of all the conditions applicable to CEPI shall be implemented as per the submitted plan.

(ii) Sarora village is at a distance of 0.3 km in SE direction of the project site along with other sensitive areas exists within the study area of the project site. Proponent shall prepare appropriate environmental safeguard measures to minimise the impact due to the project activities on these sensitive areas. PP needs to plan to strengthen green belt all around the plant area to reduce the dust pollution.

(iii) There are various water bodies within the study area of the project site. A robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be prepared and included in the EIA/EMP report.

(iv) Water requirement of 185 m3/day shall be obtained from the CSIDC (150 m3/day) and the remaining from recycle water (35 m3/day) after obtaining necessary permissions from the Competent Authority.

(v) As committed, PP shall improve the density of plantation and complete the 40% greenbelt by March 2024.

Decision of MoEF&CC

13. The undersigned is directed to inform that Ministry of Environment, Forest and Climate Change has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the Expert Appraisal Committee (Industry-1) hereby **decided to accord above-said specific ToRs with PH,** in addition to the standard ToRs and Sector Specific ToRs as enclosed at **Annexure-III** read with additional ToRs at **Annexure-IV** for carrying out detailed EIA/EMP for the above project.

14. It is requested that the draft EIA Report may be prepared in accordance with the above-mentioned specific ToRs and enclosed generic ToRs and additional ToRs and thereafter further necessary action may be taken for obtaining Environment Clearance in accordance with the procedure prescribed under the EIA Notification, 2006 as amended.

15. The ToRs are valid for a period of four years from date of issue of this letter as per the Ministry's Notification S.O. 751 (E) dated 17/02/2020.

16. This issue with the approval of the Competent Authority.

(Dr. R. B. Lal)
Scientist 'F'/ Director
Tel: 011-20819346
Email- rb.lal@nic.in

Copy To

1. The Principal Secretary Forest, Mahanadi Bhawan, Nawa Raipur, Atal Nagar Chhattisgarh, India.
2. Additional Chief Secretary Forest, Mahanadi Bhawan, Nawa Raipur, Atal Nagar, Chhattisgarh
3. The Director General of Forest, Ministry of Environment, Forest and Climate Change, New Delhi
4. The Principal Chief Conservator of Forests, Principal Chief Conservator of Forests, Government of Chhattisgarh, Medical Road, Raipur-492001
5. The Inspector General of Forests, Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Aranya Bhawan, North Block, Sector-19 Naya Raipur, Atal Nagar, Chhattisgarh – 492002
6. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi -32
7. The Member Secretary, Chhattisgarh State Environment Conservation Board (Pollution Control office), Paryavas Bhavan, North Block Sector-19, Atal Nagar Dist- Raipur Chhattisgarh
8. The Member Secretary, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
9. The District Collector, Raipur District, Chhattisgarh
10. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi.
11. Guard File/Monitoring File/Website/Record File/Parivesh Portal.

Environmental site settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details submitted by PP</th><th>Remarks</th></tr>
<tr><td>I.</td><td>Total land</td><td>3.43 ha [Private: 0.00 ha; Govt: 3.43 ha; Agriculture: 0.00 ha; and Grazing land: 0.00]</td><td>The land is obtained through Lease deed from CSIDC, (Government of Chhattisgarh Undertaking) the land is situated at Industrial Area namely Urla Industrial.</td></tr>
<tr><td>II.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>The existing industrial land of 3.43 Ha was obtained through lease in industrial area, land is diverted land for industrial use</td><td>The land is diverted for Industrial purposes.</td></tr>
<tr><td>III.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Project Site: No

Study Area:<table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Sarora</td><td>300 m</td><td>SE</td></tr></table></td><td>R&R plan is not required</td></tr>
<tr><td>IV.</td><td>Latitude and Longitude of all corners of the project site.</td><td><table><tr><th>Points</th><th>Latitude</th><th>Longitude</th></tr><tr><td>1</td><td>21°17'41.27"N</td><td>81°36'34.49"E</td></tr><tr><td>2</td><td>21°17'44.79"N</td><td>81°36'41.46"E</td></tr><tr><td>3</td><td>21°17'40.40"N</td><td>81°36'43.97"E</td></tr><tr><td>4</td><td>21°17'37.10"N</td><td>81°36'37.10"E</td></tr></table></td><td>Village - Sarora, Urla Industrial Area, Tehsil & District: Raipur of Chhattisgarh</td></tr>
<tr><td>V.</td><td>Elevation of the project site</td><td>284 m above mean sea level</td><td>Almost flat terrain</td></tr>
<tr><td>VI.</td><td>Involvement of Forest land if any.</td><td>No forest land is involved in the project area.</td><td></td></tr>
<tr><td>VII.</td><td>Water body exists within the project site as well as study area</td><td><u>Project Site:</u> No water body in the project site.
<u>Study area:</u><table><tr><th>Sr. No.</th><th>Name</th><th>Distance (Km)</th><th>Direction</th></tr><tr><td>1</td><td>Karun River</td><td>6.2</td><td>W</td></tr></table></td><td></td></tr>
</table>

S. No.	Particulars	Details submitted by PP				Remarks
		2	Chhokra Nala	5.10	ENE	
		3	Dumar Talao	5.02	SW	
		4	Burha Talao	6.58	SSE	
		5	Raja Talao	6.7	SE	
		6	Macchi Tariya Lake	3.85	SSE	
		7	Handi Lake	5.85	S	
		8	Swami Vivekanand Sarovar (Budha Talab)	6.89	SSE	
		9	Maharajband Lake	7.48	S	
		10	Naya lake	3.64	S	
		11	Khushalpur Lake	7.25	S	
VIII.	Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area	NIL				The site is located at Urla Industrial Area which is Critically Polluted area as per CEPI – 2018.

ANNEXURE-II

The unit configuration and capacity of existing and proposed project:

S. No.	Product	Existing		Proposed Addition		Proposed Capacity after expansion	
		Config-ration	Capacity	Configuration	Capacity	Configuration	Capacity
1	MS Ingot/ Billet	Induction Furnaces 12 MT X 2 Nos. with CCM	57600	Existing 12 MT X 2 Nos Induction Furnace with CCM will be augmented to 15 MT X 2 Nos and an additional 15 MT X 1 Nos Induction furnace with 15 MT LRF will be implemented	99,900	Induction Furnaces 15 MT X 3 Nos. with CCM along with a 15 Ton LRF	**157500**
2	Rerolled Steel product	Hot Charging based Rerolling Mill	46000	The existing rolling mill will be optimized to meet the additional requirement	80000	Rolling Mill of about 25 TPH	126000
		Billet Reheating Furnace based Rerolling Mill	54000	No change	NIL	Proposed to reduce production thru Billet Reheating Furnaces facility.	54000
	Total Rerolled Steel Production		**100000**	-	**80000**		**180000**

ANNEXURE-III

Standard ToR in line with Appendix III of the EIA, 2006.

applicable to Proposals Under Industry-1 Sector

Preliminary requirements:

i. 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.

ii. 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.

Structure of EIA/EMP report

Executive Summary

i. Table of Contents of the EIA report including list of tables/figures/annexures/abbreviations/symbols/notations.

ii. Point wise compliance to the ToR issued by MoEF&CC.

iii. Executive Summary
   I. Introduction
      i. Name of the project along with applicable schedule and category as per EIA, 2006.
      ii. Location and accessibility
   II. Project description
      i. Resource requirements (Land; water; fuel; manpower)
      ii. Operational activity
      iii. Key pollution concerns
   III. Baseline Environment Studies
      i. Ambient air quality
      ii. Ambient Noise quality
      iii. Traffic study
      iv. Surface water quality
      v. Ground water quality
      vi. Soil quality

vii. Biological Environment
viii. Land use
ix. Socio-economic environment

IV. Anticipated impacts
i. Impact on ambient air quality
ii. Impact on ambient noise quality
iii. Impact on road and traffic
iv. Impact on surface water resource and quality
v. Impact on ground water resource and quality
vi. Impact on terrestrial and aquatic habitat
vii. Impact on socio-economic environment

V. Alternative analysis

VI. Environmental Monitoring program
i. Ambient air, noise, water and soil quality
ii. Emission and discharge from the plant
iii. Green belt
iv. Social parameters

VII. Additional studies
i. Risk assessment
ii. Public consultation
iii. Action plan to address the issues raised during public consultation as per MoEF&CC O.M. dated 30/09/2020

VIII. Project benefits

IX. Environment management plan
i. Air quality management plan
ii. Noise quality management plan
iii. Solid and hazardous waste management plan
iv. Effluent management plan
v. Storm water management plan
vi. Occupational health and safety management plan
vii. Green belt development plan
viii. Socio-economic management plan
ix. Project cost and EMP implementation budget.

EIA/EMP Report

1. Introduction

i. Background about the project
ii. Need of the project
iii. Purpose of the EIA study
iv. Scope of the EIA study

2. Project description

A. Site Details

i. Location of the project site covering village, Taluka/Tehsil, District and State.

ii. Site accessibility

iii. 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).

iv. 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.

v. Environment settings of the site and its surrounding along with map.

vi. 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.

vii. 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.

viii. 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.

ix. 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.

x. Type of land, land use of the project site needs to be submitted.

xi. 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.

xii. 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.

xiii. 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.

xiv. A detailed report covering all aspects of Fire Safety Management and Fire Emergency Plan shall be submitted.

xv. Details of drone survey for the site, needs to be included in report and presented before the EAC during appraisal of the project.

B. Forest and wildlife related issues (if applicable):

i. Status of Forest Clearance for the use of forest land shall be submitted.

ii. 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.

iii. 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.

iv. 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.

C. Salient features of the project

i. Products with capacities in **Tons per Annum** for the proposed project.

ii. If expansion project, status of implementation of existing project, details of existing/proposed products with production capacities in Tons per Annum.

iii. Site preparatory activities.

iv. List of raw materials required and their source along with mode of transportation.

v. Other than raw materials, other chemicals and materials required with quantities and storage capacities.

vi. Manufacturing process details along with process flow diagram of proposed units.

vii. Consolidated materials and energy balance for the project.

viii. Total requirement of surface/ ground water and power with their respective sources, status of approval.

ix. Water balance diagram

x. Details of Emission, effluents, hazardous waste generation and mode of disposal during construction as well as operation phase.

xi. Man-power requirement.

xii. Cost of project and scheduled time of completion.

xiii. In case of expansion projects, project proponent shall submit structural stability certificate showing whether existing structure withstand for proposed expansion activity.

xiv. 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. 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.

c. 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.

d. 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.

3. Description of the Environment

i. Study period

ii. Approach and methodology for data collection as furnished below.

Attributes	Sampling		Remarks
	Network	Frequency	
A. Air Environment			
Micro-Meteorological • Wind speed (Hourly) • Wind direction • Dry bulb temperature • Wet bulb temperature • Relative humidity • Rainfall • Solar radiation • Cloud cover	Minimum 1 site in the project impact area	1 hourly continuous	• IS 5182 Part 1-20 • Site specific primary data is essential • Secondary data from IMD, New Delhi

Attributes	Sampling		Remarks
	Network	Frequency	
• Environmental Lapse Rate			• CPCB guidelines to be considered.
Pollutants • $PM_{2.5}$ • PM_{10} • SO_2 • 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

Attributes	Sampling		Remarks
	Network	Frequency	
			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.
B. Noise			
• Hourly equivalent noise levels	At least 8-12 locations	As per CPCB norms	-
C. 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.		

Attributes	Sampling		Remarks
	Network	Frequency	
• Microalgae/microalgal bloom			
For River Bodies • Total Carbon • pH • Dissolved Oxygen • Biological Oxygen Demand • Free NH4 • Boron • Sodium Absorption Ratio • Electrical Conductivity • TDS	• 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.		
D. Traffic Study			
• Type of vehicles • Frequency of vehicles for transportation of materials • Additional traffic due to proposed project • Parking arrangement	-		
E. Land Environment			
Soil • Particle size distribution • Texture • pH • Electrical conductivity • Cation exchange capacity • Alkali metals • Sodium Absorption Ratio (SAR)	Soil samples be collected as per BIS specifications		

Attributes	Sampling		Remarks
	Network	Frequency	
• Permeability • Water holding capacity • Porosity			
Land use/Landscape • Location code • Total project area • Topography • Drainage (natural) • Cultivated, forest, plantations, water bodies, roads and settlements	-		
E. Biological Environment			
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) **Terrestrial** • Vegetation-species list, economic importance, forest produce, medicinal value • Importance value index (IVI) of trees • Fauna • Avi fauna	• 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.		

Attributes	Sampling		Remarks
	Network	Frequency	
• Rare and endangered species • Sanctuaries / National park / Biosphere reserve • Migratory routes			
F. 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		

iii. 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

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

i. 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			

ii. Impact on ambient air quality (Sources; Embedded control measures; Assessment; Mitigation measures; 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.

iii. Impact on ambient noise quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

iv. Impact on traffic (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

v. Impact on soil quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

vi. Impact on land use (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

vii. Impact on surface water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

viii. Impact on ground water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

ix. Impact on terrestrial and aquatic habitat (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

x. Impact on socio-economic environment (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

xi. Impact on occupational health and safety (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

5. Analysis of Alternatives (Technology & Site)

i. No project scenario
ii. Site alternative
iii. Technical and social concerns
iv. Conclusion

6. Environmental Monitoring Program

i. Details of the Environment Management Cell
ii. Performance monitoring schedule for all pollution control devices shall be furnished.
iii. 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.
    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
iv. Action plan for **post-project environment monitoring matrix**:

Activity	**Aspect**	**Monitoring Parameter**	**Location**	**Frequency**	**Responsibility**
Construction phase					
Operation phase					

7. Additional Studies

i. 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.

ii. 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.
iii. Implementation status/measures adopted for avoiding the generation of single used plastic waste.
iv. 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.
v. Public consultation details (Entire proceedings as separate annexure along with authenticated English Translation of Public Consultation proceedings).
vi. 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.
vii. 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**		**Year of implementation (Budget in INR)**			**Total Expenditure (Rs. in Crores)**
	Name of the Activity	**Physical Targets**	**1st**	**2nd**	**3rd**	

viii. Risk assessment
- Methodology
- Hazard identification
- Frequency analysis
- Consequence analysis
- Risk assessment outcome

ix. Emergency response and preparedness plan

8. Project Benefits

i. Environment benefits
ii. Social infrastructure
iii. Employment and business opportunity
iv. Other tangible benefits

9. Environment Cost Benefit Analysis

i. Net present value
ii. Internal rate of return

iii. Benefit cost ratio
iv. Cost effectiveness analysis

10. Environment Management Plan (Construction and Operation phase)

i. Air quality management plan
ii. Noise quality management plan
iii. Action plan for hazardous waste management
iv. Action plan for solid waste management
v. Action plan for e-waste management.
vi. Action plan for plastic waste management.
vii. Action plan for construction and demolition waste management.
viii. Effluent management plan
ix. Storm water management plan
x. Rain water harvesting plan
xi. Plan for maximum usage of waste water/treated water in the Unit
xii. Occupational health and safety management plan
xiii. 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 %.
xiv. Socio-economic management plan
xv. Wildlife conservation plan (In case of presence of schedule I species)
xvi. Total capital cost and recurring cost/annum for environment pollution control measures shall be included.

11. Conclusion of the EIA study

12. In addition to the above, any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

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Standard ToRs FOR METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)[3(a)]

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.
2. Plan for the implementation of the recommendations made for the proposed Unit in the Corporate Responsibility for Environmental Protection (CREP) guidelines.
3. Plan for solid wastes utilization.
4. Plan for utilization of energy in off gases (coke oven, blast furnace)
5. System of coke quenching adopted with full justification.
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.
7. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
8. Details on toxic content using Toxicity Characteristic Leaching Procedure (TCLP), composition and end use of slag.
9. 100 % dolo char generated in the plant shall be used to generate power.
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.
11. No tailing pond is permitted for Iron ore slimes. Dewatering and filtration system shall be provided.
12. Emission/effluent norms as per G.S.R 894 (E) dated 4/12/2019 [EPA Rules 1986].
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.
14. Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be submitted.
15. Action plan to limit the particulate matter emission from all the stacks below 30 mg/Nm3 shall be furnished.
16. Action plan for 100 % solid waste utilization shall be submitted.
17. PM (PM_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.

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Signature Not Verified

Digitally Signed by : Dr R B Lal
Member Secretary, MoEFCC (EC)

Date: 31/01/2024