Ministry of Environment, Forest and Climate Change
Impact Assessment Division
(Industry-1 Sector)

Date of zero draft MoM sent to Chairman: 22/12/2021
Approval by Chairman: 28/12/2021
Uploading on PARIVESH: 28/12/2021

Summary record of the Forty Ninth (49th) meeting of Re-Constituted Expert Appraisal Committee (REAC) held on 16-17th December, 2021 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) Notification, 2006.

The Forty Ninth (49th) meeting of the Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environment Appraisal of Industry-1 Sector Projects was held on **16-17th December, 2021** in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the ongoing Corona Virus Disease (Covid-19) pandemic. The list of EAC attendees is as follows:

S. No.	Name	Position	16/12/2021	17/12/2021
1.	Dr. Chhavi Nath Pandey	Chairman	Present	Present
2.	Dr. Kawaljeet Singh, Director, CPPRI.	Member	Present	Present
3.	Dr. Siddharth Singh,	Member	Present	Present
4.	Dr. Jagdish Kishwan	Member	Present	Present
5.	*Dr. Tejaswini Ananth Kumar*	*Member*	*Absent*	*Absent*
6.	Dr. G.V. Subramanyam	Member	Present	Present
7.	Shri. Ashok Upadhyaya	Member	Present	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present	Present
9.	*Dr. Sanjay Deshmukh*	*Member*	*Absent*	*Absent*
10.	Prof. S.K. Singh	Member	Present	Present
11.	*Dr. R. Gopichandran*	*Member*	*Absent*	*Absent*
12.	Shri Jagannadha Rao Avasarala	Member	Present	Present
13.	Shri. J.S. Kamyotra	Member	Present	Present
Officials from MoEF&CC				
14.	Shri. Sundar Ramanathan	Member Secretary	Present	Present
15.	Dr. Sandeepan B.S.	Scientist 'B'	Present	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 48th meeting held during 11-12th November, 2021 were confirmed by the EAC as already uploaded on PARIVESH. It was apprised to the EAC that Competent Authority has extended the tenure of the Expert Appraisal Committee (EAC) of Industry 1 sector by three months beyond 12/11/2021 (or) until reconstruction of new EAC, whichever is earlier.

16th December, 2021

49.1 Expansion of steel manufacturing unit by addition of Induction Furnaces (Steel Ingots/Billets- 1,04,000 TPA and Tor Steel/TMT Bars- 75,000 TPA by **M/s. Shree Balaji Pigments (Pvt.) Ltd.** located at Industrial Extension Area, Near HatliMorh, **Kathua District, Jammu & Kashmir** [Online Proposal No. IA/JK/IND/233770/2020, File No. J/11011/10/2021/IA.II(I)] – **Environment Clearance – regarding**

49.1.1 M/s. Shree Balaji Pigments Private limited has made an online application vide proposal no. IA/JK/IND/233770/2020 dated 23/11/2021 along with copy of EIA/EMP report and Form-2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (Ferrous and Non/ferrous) under Category "B" of the schedule of the EIA Notification, 2006 and attracts general condition due to interstate boundary of Punjab fall within 2.9 km from project site. Hence, the project is appriased as Category 'A' at central level.

Details submitted by Project proponent

49.1.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	ToR validity
28/12/2020*	Issued standard Terms of Reference	Standard Terms of Reference	09/01/2021	08/01/2025

**Note – Project proponent applied for EC on 28/12/2020 in pursuance to the Order dated 12/02/2020 of Hon'ble NGT in O.A.No. 55 of 2019.*

49.1.3 The project of M/s. Shree Balaji Pigments Private limited located in HatliMorh, Kathua District, Jammu & Kashmir State is for expansion of Steel Manufacturing Unit by addition of Induction Furnaces (Steel Ingots/Billets- 1,04,000 TPA and ToRSteel/TMT Bars - 75,000 TPA.

49.1.4 Environmental Site Settings:

<table>
<tr><th>S No</th><th>Particulars</th><th>Details</th></tr>
<tr><td>i.</td><td>Total land</td><td>3.0 Acres or 12140.57 m^2 (1.2 hectare)
Industrial land</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. Dated 7/10/2014</td><td>Existing project area is 1.2 ha and in possession of M/s. Shree Balaji Pigments Private Limited. Proposed expansion will be carried out within existing project area. No additional land is required for proposed expansion project.</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Project Site: Nil

Study Area:
<table>
<tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Kathua</td><td>0.40 km</td><td>SSW</td></tr>
</table></td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site.</td><td>
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>32°23'08.61"N</td><td>75°32'58.21"E</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>S No</th><th>Particulars</th><th>Details</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>B</td><td>32°23'06.75"N</td><td>75°32'55.88"E</td></tr>
<tr><td>C</td><td>32°23'07.10"N</td><td>75°32'56.08"E</td></tr>
<tr><td>D</td><td>32°23'08.11"N</td><td>75°32'56.88"E</td></tr>
<tr><td>E</td><td>32°23'86.61"N</td><td>75°32'58.21"E</td></tr>
</table>
</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>368 m above mean sea level</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No forest land is involved.</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> Nil

Study area:
<table>
<tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Ravi river</td><td>2.3 km</td><td>SSE</td></tr>
<tr><td>Magar Nala</td><td>0.68 km</td><td>East</td></tr>
<tr><td>Jasrota Left Canal</td><td>1.27 km</td><td>NNE</td></tr>
</table>
</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area.</td><td>Nil</td></tr>
</table>

49.1.5 Project proponent has established and operating a Rolling Mill with a capacity of 1x10.5 TPH for manufacturing of TOR steel and TMT bars with a capacity of 75,000 TPA after obtaining requisite consents from Jammu and Kashmir Pollution Control Board. Consent to Establish was obtained on 20/03/2010. The rolling mill has valid Consent to operate under Air and Water act obtained from J&K Pollution Control Board vide lr no. SPCB/digital/1906877625 dated 02/07/2019 and is valid up to March, 2024.

49.1.6 Implementation status of the CTO:

Facilities	As per CTO renewal dated 20/03/2010	Implementation Status as on 23/11/2021
Tor Steel and TMT Bars	75,000 TPA	75,000 TPA

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

S No	Name	Existing Units		Proposed Units		After Expansion	
		Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
1.	Steel Ingots/ Billets	Nil	Nil	Induction Furnace- 1x30 TPH	1,04,000	Induction Furnace- 1x30 TPH	1,04,000
2.	Tor Steel /TMT Bars	Rolling Mill 1x10.5 TPH	75,000	Nil	Nil	Rolling Mill 1x10.5 TPH	75,000

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

S No	Raw material	Quantity required per annum in TPA			Source	Distance from Site	Mode of transportation
		Existing	Expansion	Total			
1.	Steel Ingots/ Billets (TPA)	79, 500	Nil	79, 500	Open market	100 Km	By Road
2.	MS Scrap (TPA)	Nil	1,12,500	1,12,500			
3.	Ferro/alloys (TPA)	Nil	1,900	1,900			

49.1.9 The total water requirement of the project is estimated at 60.0 KLD. Domestic water requirement is 9.0 KLD and for cooling purposes is 51.0 KLD. The daily requirement of water will be met through the Ground Water, for which concurrence from J&K Small Scale Industries Development Corporation Limited has been obtained vide letter no. SICOP/EMK/1149 dated 13/09/2019.

49.1.10 The total power requirement for the proposed project is estimated as 13187.50 KW. The demand of electricity will be sourced from Power Development Department J&K.

49.1.11 Baseline Environmental Studies:

Period	10/12/2020 to 10/03/2021
AAQ parameters at 8 locations (min and max)	PM_{10}= 76.3 to 98.6 µg/m^3 $PM_{2.5}$= 32.1 to 56.9 µg/m^3 SO_2= 9.1 to16.8 µg/m^3 NO_2= 22.1 to 33.6 µg/m^3 CO= 0.46 to 0.59 mg/m^3
Incremental GLC Level	PM= 0.89 ug/m^3(at 74 m in SE) SO_2= 1.49 ug/m^3(at 74 m in SE) NO_2= 1.49 ug/m^3(at 74 m in SE)
Groundwater quality at 8 locations	pH: 7.40.to 7.68 TotalHardness:174 to 194 mg/l Fluorides: not detected Chlorides: 30.2 to 50.2mg/l TDS: 296 to 326 mg/l Heavy metals are within the limits.
Surfacewater quality at 2 locations	**Ravi river near Madhopur** pH = 7.46/7.77 TDS = 345/352 mg/l. Total hardness = 304/310 mg/l. DO = 4.8 to 5.4 mg/l. All the heavy metals were not detectable.
Noiselevels Leq (Day and Night), at 8 locations	Noise levels in day time 45.2 dB (A) to 67.4 dB (A) and at night time 32.4 dB (A) to 62.8 dB (A).

<table>
<tr><td>Traffic assessment studyfindings</td><td>Traffic study has been conducted at two points;
Point A: On NH-44 is approximately 0.35km from the plant site and
Point B: At link road of project site from NH- 44 which is approximately 0.30 km from the plant site.

Transportation of raw material, fuel & finished product will be done 100% by road

Existing PCU is 896 PCU/hr at point A and 400 PCU/hr at point B and existing level of service (LOS) is:
<table>
<tr><td>Road</td><td>V (Volume in PCU/hr)</td><td>C (capacity in PCU/hr)</td><td>V/C ratio</td><td>LOS</td></tr>
<tr><td>Point A</td><td>896</td><td>5400</td><td>0.16</td><td>A</td></tr>
<tr><td>Point B</td><td>400</td><td>1800</td><td>0.22</td><td>B</td></tr>
</table>
PCU load after proposed project will be 950 PCU/hr (896+54) at point A and 454 PCU/hr (400+54) and Level Of Service (LOS) will be:
<table>
<tr><td>Road</td><td>V (Volume in PCU/hr)</td><td>C (capacity in PCU/hr)</td><td>V/C ratio</td><td>LOS</td></tr>
<tr><td>Point A</td><td>950</td><td>5400</td><td>0.17</td><td>A</td></tr>
<tr><td>Point B</td><td>454</td><td>1800</td><td>0.22</td><td>B</td></tr>
</table>
It is therefore concluded that with unit operation there will be marginal increase on said roads but LOS of road will remain the same.</td></tr>
<tr><td>Flora and fauna</td><td>None of reported species in study area belongs to Rare, Endangered or Threatened category, and as per Wild Life (Protection) Act, 1972, no Schedule/I species were found in the study area.</td></tr>
</table>

49.1.12 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

S No	Waste	Source	Quantity	Disposal
1.	APCD Dust	Induction Furnace	0.76 TPD	will be sent to TSDF for final disposal.
2.	Sludge from Waste Water Treatment	STP	0.72 kg/d	Composted and used as manure in horticulture.
3.	Furnace Slag	Induction Furnace	17.24 TPD	Will be supplied to manufacturers of cement concrete blocks, pavers & tiles under proper agreement.
4.	Used Oil	DG sets	0.5 Kl/Annum	Will be sent to authorized recyclers.

49.1.13 Public Consultation:

Details of advertisement given	13/06/2021 'State Times'.
Date of public consultation	10/07/2021
Venue	Community centre, Kathua, 500 m away from the project site
Presiding Officer	Additional Deputy Commissioner
Major issues raised	i. Employment ii. Pollution from the Unit iii. Plantation

Action Plan as per MoEF& CC O. M. dated 30/09/2020

S. No.	Activity	Environmental Aspects	UOM	Qty	Rate (Rs)	Amount (Rs)	Location	Timeline
1	Providing and fixing of 3-seater cement concrete benches	Health	Set	30	5500	165000	25 benches from Hatli More to Mehtabpur Village and 25 from Hatli more to Kathua City	5 set of benches per month from the issues of EC and total coverage will be in 6 months
2	Providing Bio Toilets	Hygiene and Public health	Set	15	85000	1275000	Hatli more to Hatli Village	With the average of 2 per months starting from the issuance of EC
3	Upgradation of rural area crematory	Health & Pollution control	Nos	6	250000	1500000	In the rural area as per the need of the locality	Within 2 years after grant of EC
4	Paved road at village	Infrastructure	Sqft	1000	100	100000	In the rural area as per the need of the locality	Within one year of grant of EC
5	Community Centre	Infrastructure	Set	1	300000	300000	In the backward area location as per suitability of the inhabitants	
6	Tree Plantation & its upkeep in common land along with safety guard	Aesthetic & Pollution control	Nos	2800	536	1500000	Hatli more to Hatli Village	400 trees each year for 7 years beginning first monsoon after grant of EC
7	Water cooler with RO having cooling capacity 25 ltr, Stainless steel	Hygiene and Health	Nos	4	75000	300000	2 from Hatli more to village Mehtabpur and 2 from Hatli more to Kathua city	Within 6 months after grant of EC.
8	Repair & tiles work in boy and girl toilets in Govt. Schools	Infrastructure	Sqft	4500	60	270000	To be identify as per the actual need after the proper survey	Within 6 months after grant of EC.
9	Providing Benches and Smart classes in Govt School Consist having Internet facility computer, projector, classroom board	Infrastructure	School	5	100000	500000	To be identify as per the actual need after the proper survey	Within 1 year after grant of EC.

S. No.	Activity	Environmental Aspects	UOM	Qty	Rate (Rs)	Amount (Rs)	Location	Timeline
10	Shelter at Public movement area like a regular bus stoppage etc.	Resource conservation	Nos	10	60000	600000	To be identify as per the actual need after the proper survey	Within 6 months after grant of EC.
	TOTAL					**6510000**		

49.1.14 The capital cost of the project is Rs. 65.69 Crores including the cost of expansion and the capital cost for environmental protection measures is proposed as Rs 110 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 12.2 Lakhs. The proposed project will provide employment to total 200 number of people. The details of cost for environmental protection measures is as follows:

S. No.	Title	Capital Cost Rs. Lakh	Recurring Cost Rs. Lakh
1	Pollution Control during construction stage (Water, Sprinkler, etc.)	5.0	--
2	Air Pollution Control Measures Bag filters, dust extraction systems, online monitor, etc.	55.8	5.0
3	Water and waste water Management (STP, Sedimentation, Tank, Oil Traps, etc.)	17.0	3.0
4	Rain water harvesting structure	5.0	0.50
5	Solid Waste Management	5.0	0.50
6	Noise Reduction Systems	1.0	0.10
7	Occupational Health, Safety and Risk Management	10.0	1.0
8	Greenbelt development (Plantation and maintenance) & Biological Conservation	4.2	1.6
9	Environmental monitoring Program		
a)	Air Quality Monitoring	1.0	0.50
b)	Noise monitoring	0.5	
c)	Water and waste water monitoring	2.0	
d)	Soil quality monitoring and Solid and hazardous waste quality	1.5	
10	Miscellaneous	7.0	--
	TOTAL	**110 Lakh**	**12.2 Lakh**
Addressed to the issues raised during public hearing		**65 Lakh**	**--**

49.1.15 Greenbelt will be developed in 4006.38 sqm which is about 33.0 % of the total project area. Local and native species will be planted with a density of 2500 trees per hectare. A total of 890 trees will be planted and nurtured in 0.40 ha in June, 2022.

49.1.16 It is submitted by PP that no Violation under EIA, 2006/ Court case/ Show Cause/ direction issued against the proposed project.

49.1.17 Name of the EIA consultant: M/s. Chandigarh Pollution Testing Laboratory/EIA Division [at S No. 102, List of ACOs with their Certificate no. NABET/EIA/1922/RA0146, valid up to 12/02/2022 Rev. 16, November 15, 2021].

Certified compliance report from Regional Office

49.1.18 The Status of compliance of earlier CTO was obtained from J & K Pollution control committee vide letter no. PCC/KTH/21/214 dated on 26/08/2021. As per the said report, project proponent is complying with the prescribed EC conditions.

49.1.19 During the meeting, project proponent submitted written submission on the following points:

- PP submitted that the maximum GLC level for PM_{10}, SOx, and NOx is noted at distance of 74 m in the SE direction instead of WNW direction. The detail has been updated in table at para 49.1.11 above.
- PP given the justification for low noise level below 40dB(A) during night time because of many industries may not be operating during night time. Primarily, adjoining the noise monitoring stations, there is no noise generating machinery. Hence, noise level was reported below 40dB(A) during night.
- PP submitted the revised action plan with physical targets to addressed the issues raised during public hearing. Revised action plan has been updated at para no 49.1.13 above.

Observations of the Committee

49.1.20 The committee noted the following:

i. Project proponent applied for EC on 28/12/2020 in pursuance to the Order dated 12/02/2020 of Hon'ble NGT, Western Zone in O.A.No. 55 of 2019.

ii. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.

iii. The EAC also deliberated on the certified compliance report of JKSPCB, written submissions, public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.

Recommendations of the Committee

49.1.21 In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and general conditions as per the Ministry's Office Memorandum No. 22/34/2018/III dated 9/8/2018 based on project specific requirements.

A. Specific conditions

i. Green belt shall be developed in 33% of the total area with density of 2500 trees/ ha uniformly all along the project boundary. This shall include development of green belt with a width of 20 m within the project site towards Kathua village located at distance of 400 meters from the project site.

ii. Particulate Matter emissions from all the stacks shall be less than 30mg/Nm^3.

iii. All roads shall be made Pucca and a vacuum cleaner shall be deployed to clean the roads.

iv. Rain Water Harvesting shall be carried out as per the action plan submitted in the EIA report.

v. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
vi. 100 % solid waste generated in the facility shall be utilized as committed by the project proponent in the EIA report.
vii. 80 to 85% of the billets shall be charged directly and remaining billets shall be reheated in reheating furnace.
viii. Reheating furnace shall operate on LDO/LSHS. Use of coal and Furnace Oil as a fuel in Reheating Furnace is not permitted.

B. General conditions

I. Statutory compliance:

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii. The project proponent shall carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
iii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
iv. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
v. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
vii. The project proponent shall provide primary and secondary fume extraction system at all heat treatment furnaces.
viii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
ix. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.

ii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

iii. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.

IV. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

i. Used refractories shall be recycled as far as possible.

ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces

iii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same and also estimate carbon sequestration by the plantations.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.

ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and

/ or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

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

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

xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated

conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

49.2 Sponge Iron Plant (4x100 TPD), Induction furnace (2x12T+1x12T), Rolling Mill (90,000 TPA) and 18 MW power plant [6 MW WHRB, 2 MW Coal char based and 10 MW Coal based] of **M/s. Jharkhand Ispat Private Limited** located at Hesla, P.O. Argada, **District Ramgarh, Jharkhand** [Online Proposal No. IA/JH/IND/236898/2020, File No. J-11011/41/2013-IA-II(I)]– **Environment Clearance as per S.O. 804(E) dated 14/03/2017 – regarding.**

49.2.1 M/s. Jharkhand Ispat Private Limited has made an online application vide proposal no. IA/JH/IND/236898/2020 dated 15/11/2021 along with copy of EIA/EMP report, Form – 2 and Certified compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and attracts provisions of S.O. 804 (E) issued by MoEF&CC dated 14/03/2017 for the projects under Violation.

49.2.2 The aforesaid proposal was recommended for grant of ToR by the EAC – Violation and accordingly ToR was accorded on 9/11/2020. The proposal for EC is being appraised by the sectoral EAC. With the prior consent of the Chairman, EAC – Industry 1 sector, Shri K. Gowrappan, Environment Expert has been co/opted for appraisal of the instant proposal consideration. However, he could not attend the meeting and his comments/views on Damage Assessment and Remediation Plan was received by email on 16/12/2021.

Details submitted by Project proponent

49.2.3 The details of the ToR are furnished as below:

Date of Application	Consideration	Details	Date of Accord	ToR Validity
PP made online application dated 25/04/2018 to (Industry-1). Later on, PP requested the MoEF&CC on 27/11/2019 to transfer the proposal made in EAC (Industry-1) to EAC (Violation) as 'Lateral Proposal Entry' as per MoEF&CC Office Memorandum dated 09/09/2019.	31st EAC (Violation) held on 28th Feb, 2020, 33rd EAC (Violation) held on 18-19th May, 2020, 36th meeting of EAC (Violation) held on 21.09.2020	Terms of Reference recommended	09/11/2020	08/11/2024

49.2.4 The project of M/s. Jharkhand Ispat (P) Ltd (JIPL) located in village-Hesla, P.O. -Argada, Ramgarh District, Jharkhand is for enhancement of Production of Sponge Iron from 0.06

to 0.12 million tons per annum (MTPA), Production of 0.108 MTPA Billets, production of 0.09 MTPA Rolled products along with 18 MW Captive Power Plant (WHRB – 6 MW & AFBC – 12 MW).

49.2.5 Environmental Site Settings:

<table>
<tr><th>S No</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>1</td><td>Total land</td><td>14.38 ha
[Private:14.38 ha]</td><td>Land Use: Industrial</td></tr>
<tr><td>2</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014.</td><td>The existing units is installed in 25.54 Acres (10.34 Ha.) of land which is owned by JIPL. Company has taken adjacent land area of 10 Acres (4.04 Ha.) on 30 years lease. Thus, the total land after expansion will be 14.38 ha and total land is under possession of JIPL.</td><td></td></tr>
<tr><td>3</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Project Site: Nil

Study area:<table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Argada Vilage</td><td>0.08 km</td><td>NW</td></tr><tr><td>MahuwaTand</td><td>0.26</td><td>East</td></tr></table></td><td>No R&R is involved.</td></tr>
<tr><td>4</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^{0}39’00.0”N</td><td>85^{0}27’48.8”E</td></tr><tr><td>B</td><td>23^{0}38’53.5”N</td><td>85^{0}27’42.8”E</td></tr><tr><td>C</td><td>23^{0}38’50.3”N</td><td>85^{0}27’45.0”E</td></tr><tr><td>D</td><td>23^{0}38’44.0”N</td><td>85^{0}27’39.4”E</td></tr><tr><td>E</td><td>23^{0}39’46.1”N</td><td>85^{0}27’54.3”E</td></tr><tr><td>F</td><td>23^{0}38’51.2”N</td><td>85^{0}27’55.5”E</td></tr><tr><td>G</td><td>23^{0}38’53.5”N</td><td>85^{0}27’52.9”E</td></tr><tr><td>H</td><td>23^{0}38’57.4”N</td><td>85^{0}27’54.9”E</td></tr></table></td><td></td></tr>
<tr><td>5</td><td>Elevation of the project site</td><td>335 m above mean sea level</td><td></td></tr>
<tr><td>6</td><td>Involvement of Forest land, if any</td><td>No involvement of Forest land.</td><td></td></tr>
<tr><td>7</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: No water bodies within the project site.

Study area<table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>River Damodar</td><td>0.3 km</td><td>South</td></tr></table></td><td>HFL Details for the Site: The project site level is 335 meters above MSL which is higher than the HFL (316.68 meters) of River Damodar reported on 09/1976 at G&D Site, CWC, Naisarai, Ramgarh</td></tr>
</table>

S No	Particulars	Details	Remarks
			Cantt as per Letter obtained from Dept of Water Resources, CWC, Damodar Division.
8	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil. However, following forests are existing in the study area: PF at 5.0km (SW), PF at 5.5km (NNE), PF at 8.4km (South), PF at 9.2 km (NNW).	

49.2.6 Chronology of exiting NOC/ Clearances:

S No	Date	NOC/ Clearance	Detail
1.	31/07/2003	NOC*	Issued by Jharkhand State pollution Control Board (JSPCB) for Sponge Iron Plant: 200 MT/day (DRI Kiln: 2x100 TPD)
2.	06/11/2006	NOC**	Issued by JSPCB for another Sponge Iron unit: 200 MT/day (DRI Kiln: 2x100 TPD) and MS Billets: 240 TPD (IF: 2x12 T with Billet Caster)
3.	24/12/2011	CTO	Issue by JSPCB for Sponge Iron/ 4x100 TPD, M.S. Billet/240 TPD.
4.	10/12/2012	CTO*** renewal	Issued for Sponge Iron Plant: 200 MT/day (DRI Kiln: 2x100 TPD).
5.	10/10/2020	CTO renewal	Issued for Sponge Iron Plant: 200 MT/day (DRI Kiln: 2x100 TPD) and valid up to 30/09/2021.

Note: * *As the project cost was less than 100 Cr., the environmental clearance as per EIA Notification, 1994 was not required.*

** *PP has been committed Violation under EIA Notification 14th September, 2006. CTO was granted till 31/12/2011.*

*** *JSPCB directed to PP to give clarification in person to Member Secretary as to why the application for grant of CTO for 2x100 TPD sponge Iron Plant and 240 TPD MS Billets plant installed during 2006 should not be revoked. Thereafter, JSPCB granted CTO only for operation of 2x100 TPD Sponge Iron Plant, installed during the year 2013.*

49.2.7 After revoked the facilities under violation by JSPCB during CTO renewal, PP sought for Environment Clearance for the following:

- M/s. Jharkhand Ispat Private Limited submitted application on 11/01/2013 for grant of ToR to Obtaining Environmental clearance for the enhancement of sponge iron

production from 60,000 TPA to 120,000 TPA and production of 72,000 TPA MS Billets through already installed 2x100 TPD DRI Kiln and 2x12T Induction Furnace under violation; and for the proposed 1x12T Induction furnace for production of 36,000 TPA MS Billets along with installation of additional 300 TPD Rolling Mill for production of 90,000 TPA TMT bars along with 18MW Captive Power Plant (12MW AFBC & 6 MW WHRB), under expansion.

- Proposal was considered in 7th Re-EAC (Industry) held on 04/04/2013 and as the proposal was for violation, MoEF&CC vide letter dated 12/06/2013 directed PP to submit compliance as per OM dated 12/12/2012. Accordingly, PP submitted the Board resolution and credible action to MoEF&CC on 04/01/2014.
- Proposal was considered in 31st Re-EAC (Industry) held on 08/01/2015 and again considered on 1st meeting of EAC held on 20/11/2015 and ToR for the project was recommended, subsequently MoEF&CC granted the ToR on 08/01/2016.
- After conducting the public hearing on 06/05/2017 final EIA submitted on 25/04/2018. EDS was issued by MoEF&CC dated 17/01/2019 mentioned "the proposal is involved violation under the provisions of EIA notification, 2006. Therefore, PP was requested to make application under violation after issue of such notification for dealing of violation proposals". The proposal is delisted from Ministry's website on 07/06/2019.
- PP requested MoEF&CC to relist the proposal and transfer the same to the violation committee as 'lateral Proposal Entry', as per MoEF&CC Office Memorandum dated 09/09/2019.
- Proposal was considered in 33rd meeting of EAC (Violation) held on 18/05/2020. committee recommended to submit the duly signed hard copy of the following documents:
  a) Revised Form/1 and PFR having details of Violation.
  b) Year/wise production detail s including total cost of the project, prior to September, 2006.
- PP submitted the sought documents by EAC (Violation) to MoEF&CC on 08/09/2020.
- Proposal was considered in 36th meeting of EAC (Violation) held on 21-22nd September, 2020. The EAC, after detail deliberation appraised the instant proposal and confirmed the case to be of violation of the EIA Notification, 2006 and recommended for issuing the ToR. Accordingly, MoEF&CC granted the ToR on 09/11/2020.

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

Sl. No	**Project Details**	**Existing Installed Units**				**Proposed Units**		**Total (Existing + Proposed)**	
		Non/Violating		**Violating Units**					
		Unit	**Prod. (TPA)**	**Unit**	**Prod. (TPA)**	**Unit**	**Prod. (TPA)**	**Unit**	**Prod. (TPA)**
1.	Sponge Iron Plant	2x100 TPD	60,000	2x100 TPD	60,000	--	--	4x100 TPD	120,000
2.	Induction Furnaces	--		2x12T		1x12T		3x12T	
3.	Billet Caster			2strands 6/11m	72,000	1strand 6/11m	36,000	3strand 6/11m	108,000
4.	Rolling Mill	--		--		300 TPD	90,000	300 TPD	90,000
5.	Captive Power Plant	--		--					

Sl. No	Project Details	Existing Installed Units				Proposed Units		Total (Existing + Proposed)	
		Non/Violating		Violating Units					
		Unit	Prod. (TPA)	Unit	Prod. (TPA)	Unit	Prod. (TPA)	Unit	Prod. (TPA)
	AFBC Boiler WHRB					1 4	12 MW 6 MW	1 4	12 MW 6 MW

49.2.9 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.	Item	Requirement MT per Year				Source	Mode of Transport (Distance w.r.t. plant
		Existing (Non/Violating Units)	Existing (Violating Units)	Proposed	Total		
1.	Iron Ore	102,000	102,000	--	204,000	Arya Iron & Steel Co. Pvt. Ltd., Odisha	170 km by Rail 10 km from Railway Siding (Barkhakhana)
2.	Coal	84,000	84,000	70,000	238,000	CCL, Saunda	18 km by Rail 10 km from Railway Siding (Barkhakhana)
3.	Dolomite	3,000	3,000	--	6,000	Local Market	50 km by Road
4.	Scrap/ Revert Scrap	--	16,500	8,250	24,750	Local Market	20 km by Road

49.2.10 Existing water requirement for Non/violating unit: 170 KLD, and Violating unit: 406 KLD, Proposed: 2330 KLD. Total after Expansion: 2906 KLD. Thus, the make-up water requirement for the project is estimated of 2,906 KLD. Permission for drawl of 0.65MGD (2955KLD) from Damodar River has been obtained from Damodar Valley Corporation vide letter no MRO/Tariff Cell/JIPL/66 dated 04/02/2019.

49.2.11 Existing – 10.5 MW (Non-Violating – 0.8 MW & 9.7 MW for violating Units) Proposed – 7.5 MW (Expansion) Total after expansion: 18.00 MW, which will be met from Captive Power Plant. Prior to commissioning of CPP additional power will be sourced from Damodar Valley Corporation (DVC) and JBVNL.

49.2.12 Baseline Environmental Studies:

Period	**01/10/2020 to 31/12/2020**
AAQ parameters at 8 locations (min and max)	$PM_{2.5}$ = 32.6 to 56.5 µg/m^3 PM_{10} = 61.4 to 95.8µg/m^3 SO_2 = 8.2 to 36.8 µg/m^3 NO_2 = 12.8 to 54.8 µg/m^3 CO = 0.66 to 1.45 mg/m^3
Incremental GLC level	PM_{10} = 2.08µg/m^3(at 0.4 km in West) $PM_{2.5}$ = 0.83 µg/m^3(at 0.4 km in West) SO_2 = 1.08 µg/m^3(at 0.4 km in West) NO_x = 0.55µg/m^3(at 0.4 km in West)
Ground water quality at 8 locations	pH: 7.15 to 7.62, Total Hardness: 185 to 235 mg/l, Chlorides: 50.0 to 61.0 mg/l,

<table>
<tr><td></td><td>Fluoride: 0.22 to 0.38 mg/l,
Heavy metals are within the limits</td></tr>
<tr><td>Surface water quality at 8 locations</td><td>pH: 7.42 to 7.68;
DO: 4.61 to 5.20 mg/l
BOD: 6.0 to 10.0 mg/l
COD: 24.0 to 30.0 mg/l</td></tr>
<tr><td>Noise levels Leq (Day and Night)</td><td>45.1 to 69.9 dB(A) for the day time and
34.9 to 56.6 dB(A) for the Night time</td></tr>
<tr><td>Traffic assessment study findings</td><td>Traffic study has been conducted at SH-2 and Major District Road (MDR)-106 which are approximately 0.5 and 3.5 km from the plant site.
Transportation of raw material, fuel & finished product will be done 100% by road.
Existing PCU is 2000.5 PCU/day on MDR-106 and 3591 PCU/day on SH-2. Existing level of service (LOS) is:
<table>
<tr><th>Road</th><th>V (Volume in PCU/Day)</th><th>C (Capacity in PCU/Day)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>MDR</td><td>2000.5</td><td>15000</td><td>0.13</td><td>A</td></tr>
<tr><td>SH-2</td><td>3591</td><td>15000</td><td>0.24</td><td>B</td></tr>
</table>
PCU load after proposed project will be 2135.5 PCU/Day (2000.5+ 135) on MDR-106 and 3726 PCU/Day (3591+135) on SH-2. level of service (LOS) will be:
<table>
<tr><th>Road</th><th>V (Volume in PCU/Day)</th><th>C (Capacity in PCU/Day)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>MDR</td><td>2135.5</td><td>15000</td><td>0.14</td><td>A</td></tr>
<tr><td>SH-2</td><td>3726</td><td>15000</td><td>0.25</td><td>B</td></tr>
</table>
Note:M/s. Jharkhand Ispat Pvt Ltd has submitted an application to East Central Railways, Barkakana vide letter dated 24/08/2021 for starting the work for construction of common user railway siding. In future, on completion of the work, the material will be transported by Railways. This will help in reducing the existing vehicular traffic on MDR-106 for transportation of Raw Material and Product.</td></tr>
<tr><td>Flora and fauna</td><td>There is no Schedule-1 Species of Fauna and Endangered Flora species present in the study area.</td></tr>
</table>

49.2.13 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

SN	Type of Waste	Source Name	Quantity in TPA			Treatment Before Disposal	Mode of Disposal	Agreement Details for Disposal
			Non/ Violating	Violating	Proposed			
1.	Dolochar	DRI Kiln	15,000	15,000	--	--	In/House AFBC Boiler	MOU with Inland Power
2.	Dedusting Dust	DRI Kiln	11,040	11,040	--	--	Sold to Sinter Plant	MOU with NarsinghIspat

SN	Type of Waste	Source Name	Quantity in TPA			Treatment Before Disposal	Mode of Disposal	Agreement Details for Disposal
			Non/ Violating	Violating	Proposed			
3.	Wet Scrapper Sludge	DRI Kiln	1,800	1,800	--	--	Non/hazardous. Land filling	-
4.	Slag	Induction Furnace	--	11,000	5,500	Metal recovery approx. 10%	Remaining slag, crushed and used as aggregate	--
5.	Sludge	Venturi Scrubber	--	2,200 (In dry condition)	1,100 (In dry condition)	--	Sold to Sinter Plant	MOU with Narsingh Ispat
6.	Scale	CCM	--	500	250	--	Sold to Sinter Plant	MOU with Narsingh Ispat
7.	Mill Scales	Rolling Mill	--	--	600	--	Sold to Sinter Plant	MOU with Narsingh Ispat
8.	Fly-ash from WHRB	CPP	--	--	27500	--	Sold to Cement Plant	MOU with Durga Cement
9.	Fly/ash from AFBC	CPP	--	--	41500	--	Sold to Cement Plant	MOU with Durga Cement
10	Bottom Ash from AFBC	CPP	--	--	10500	--	Sold to Brick kiln manufacturing	--

49.2.14 Public Consultation:

Details of advertisement given	01/04/2017
Date of public consultation	06/05/2017
Venue	Panchayat Bhawan, Village and P.O. Marar, Ramgarh District, Jharkhand
Presiding Officer	Additional Collector
Major issues raised	i. Plantation ii. Employment to Locals and adequate wages, iii. Agriculture affected due to pollution iv. Pollution Control Measures, v. Medical Facility and Safe Drinking Water.

Action plan as per MoEF&CC O.M. dated 30/09/2020:

SNo	Activities	Amount in INR		
		1stYear	2ndYear	Total
1	**Community Development**			
	Installation of one number of bore/well based on Solar Pump C:\Users\HP\OneDrive\Desktop\49 EAC\l\NOC Borewell.pdf system along with water storage Tank	3,068,360 [Complete installation of bore/well having pump	--	30,68,360

SNo	Activities	Amount in INR		
		1stYear	2ndYear	Total
	each in Village Hesla and Mahuatand, District: Ramgarh	based on Solar power and water storage tanks]		
	Greenbelt of 15m width, covering an area of 0.45 ha. will be developed along the periphery of the village Argada, District: Ramgarh, Jharkhand	450,000.00 [Greenbelt Development along the periphery of Argada Village]	--	4,50,000
2	**Health Development**			
	Establishment of 16 Bedded Hospital with advance medical facilities with affordable and quality services in village & P.O Marar, District: Ramgarh	4,278,631 [Civil work for two floor building]	8,222,479 [Hospital equipment, Lift, Furniture, Electrification, Air Conditioner, etc]	1,25,01,110
Grand Total in INR				**16,019,470.0**

49.2.15 Existing capital cost of project was 54.12 Cr. (Non/violating + Violating). The capital cost of the proposed project is Rs. 186.63Crores (after proposed expansion total capital cost of the project is Rs 240.75 Crores) and the capital cost for environmental protection measures along with the budget of activities to address Public Hearing Issues is proposed as Rs. 5.7011 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 0.475 Crores. The employment generation from the proposed project / expansion is 394 Nos. The details of cost for environmental protection measures are as follows:

Sl. No.	Description of Item	Existing (Rs. in lakhs)	
		Capital Cost	Recurring Cost/ Year
1	Air Pollution Control/ Noise Management	259.32	15.5
2	Water Pollution Control	68.0	6.0
3	Solid Waste / Hazardous Waste Management	4.0	1.5
4	Environmental Monitoring and Management	11.0	11.0
5	Green Belt Development	49.60	2.0
6	OH & S	18.0	11.5
7	Addressal of Public Consultation concerns	160.19	//
Total		**570.11**	**47.5**

49.2.16 Existing green belt has been developed in 1.54 ha area which is about 10.7 % of the total project area of 14.38 ha with total sapling of 2000 trees (@ 1298 trees/ha). Proposed greenbelt will be developed in 4.22 ha which is about 29.3 % of the total project area. Thus, the total of 5.76 ha area (40 % of total area) will be developed as greenbelt. A 3 m wide

greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 14400 saplings will be planted and nurtured in 5.76 hectares in three years.

49.2.17 Summary of violation under EIA, 2006 furnished below:
Company has installed 2x100TPD DRI Kiln and 2x12T Induction Furnace after obtaining NOC from JSPCB on 06.11.2006 and is operating the same till date, without obtaining prior Environmental Clearance as per EIA Notification 2006. The Damage Assessment was carried out for violation period for Construction and Operation Phase. The total amount to be spent on Remediation plan and Natural Resource Augmentation Plan and Community Resource Augmentation Plan will be Rs.562.235 Lakhs. This plan will be implemented in three years after obtaining all necessary clearances. Detail are given as below:

Yearly Budget for implementation of Remediation Plan

SNo	Environment Component	Activity Description	Total Budgetary Provision in Rs.			
			1stYear	2ndYear	3rd Year	Total
1	Land Environment	1.Assistance to farmers by providing seedlings, manure and Bio-fertilizers to villagers of Hesla and Maraar=**Rs.46,000/-** 2.Providing one tractor (Make Mahindra) with hydraulic trolley and Rotavator to be provided to each Nagar panchayat of village Hesla and Maraar **=Rs.34,00,000/-** 3.Providing Bundmaker, Ridger, plough for agriculture purpose to villagers of Hesla and Maraar=**Rs.4,24,500/-**	**19,35,250** (ProvidingTractor, Bundmaker, Ridger, Plough and Seedlings, manure inNagarpanchayat ofHesla)	**19,35,250** (Providing Tractor, Bundmaker, Ridger, Plough and Seedlings, manure in Nagar panchayat of Maraar)	--	**38,70,500**
2	Air Environment	1. Providing four E-Rickshaw (4-seater, Make: Mac Auto) with charger for public transport in each Barkakana, Maraar, Phulsarai and Argada villages **=Rs25,00,000/-** 2. Solar stove, solar street light & solar fan in Argada & Hesala village=**Rs.13,78,000/-**	**12,50,000** (Providing 4E-Ricksaweach inBarkakanaand Maraarvillages)	**12,50,000** (Providing 4E-Ricksaweach in Phulsarai and Argada villages)	**13,78,000** (Solar stove, solar street light & solar fan in Argada & Hesala village)	**38,78,000**
3	WaterEnvironment	1.Drinking water plant (10nos.) including bore well with solar power	**1,68,00,000** (Drinking water plant (10 nos)	**1,02,00,000** (Renovation of Ponds	**69,63,000** (Construction of Covered	**3,39,63,000**

SNo	Environment Component	Activity Description	Total Budgetary Provision in Rs.			
			1stYear	2ndYear	3rd Year	Total
		with water cooler including RO & UV in Argada & Hesala village- **Rs1,50,00,000/-** 2. Sewage treatment plant in village Hesla **Rs 50,00,000/-** 3. Rain water harvesting pit (@Rs.3lakhs/location) at Panchayat office of Hesla, Argada, Barkakana, Manuan, Maraar and Phulsarai villages=**Rs.18,00,000/** 4. Renovation of Ponds (Includes Cleaning/ desiltation, concrete Lining) and construction of wharf and platforms in pond located in each of Argada, Hesla, Manuan, and Maraar villages (Rs.2,500,000x4 +200,000) =**Rs.1,02,00,000/-** 5. Construction of Covered Drainage system along with sewage pits within village Hesla =**Rs.19,63,000**/-	including borewell with solar power with water cooler including RO& UV in Argada & Hesala village & Rainwater Harvesting pit at Panchayat office of Hesla, Argada, Barkakana, Manuan, Maraar and Phulsarai villages)	(Includes Cleaning /desiltation, concrete Lining) and construction of wharf and platforms in pond located in each of Argada, Hesla, Manuan, and Maraar villages)	Drainage system along with sewage pit within village Hesla & Sewage treatment plant in village Hesla)	
4	Noise Environment	1. Providing ENT clinic along with Doctor in Hesla and Argada villages= **Rs 4,86,000/-** 2. Distribution of Hearing aids to the needed Sr. Citizens of the Hesla, Maraar and Argada villages @ 1000x500 person =**Rs.5,00,000/-**	**4,86,000** (Providing ENT specialist Clinic along with Doctor in Hesla and Argada villages)	**5,00,000** (Distribution of Hearing Aids to the needed Sr. Citizens of the Hesla, Maraar and Argada villages)	--	**9,86,000**
5	Biological Environment	1.Funds for conservation of fauna in Phulsarai Protected Forest to the District Forest Office=**Rs.6,10,000/**	**6,10,000** (Funds for conservation of fauna residing in Naisarai Protected forest)	--	--	**6,10,000**
Total			**2,10,81,250**	**1,38,85,250**	**83,41,000**	**4,33,07,500**

Natural Resource Augmentation Plan along with budget

Sl. No.	Proposed Activities	Budget (Rs.)			
		1stYear	2ndYear	3rd Year	Total
1	Installation of Biodegradable waste converter (Make: Reddonatura, Capacity: 75kg/day) in Argada, Manuan and Hesla village	10,00,000 (Argada)	10,00,000 (Manuan)	10,00,000 (Hesla)	30,00,000
2	Cattle food processing plant with veterinary hospital at Hesla villages	10,00,000	5,00,000	--	15,00,000
3	Biogas plant in Manuan, Barkakana and Maraar village	8,00,000 (Manuan)	8,00,000 (Barkakana)	8,00,000 (Maraar)	24,00,000
Total		**28,00,000**	**23,00,000**	**18,00,000**	**69,00,000**

Community Resource Augmentation Plan along with budget

S. No.	Proposed Activities	Budget (Rs.)			
		1stYear	2ndYear	3rdYear	Total
1.	Oxygen plant at Hesla village	30,00,000	30,00,000	16,000	60,16,000

Summary

S.No.	Activity proposed	Year 1	Year 2	Year 3	Total (in Lakhs)
a.	Damage remediation plan	2,10,81,250	1,38,85,250	83,41,000	433.07500
b.	Natural Resources Augmentation plan	28,00,000	23,00,000	18,00,000	69
c.	Community Resources Augmentation plan	30,00,000	30,00,000	16,000	60.16
	Total				**562.23500**

Violation aspect:

In compliance to the specific ToR No. i, the SPCB has undertaken credible action against M/s.JIPL under the provisions of Environment (Protection) Act, 1986, by filing a court case no. 255 of 2021 before the Hon'ble District Court of Ramgarh.

49.2.18 Summary of court cases related to the project are furnished given as below:

Detail	Case1	Case 2	Case 3
Name of the court	High Court of Jharkhand, Ranchi	District Court of Ramgarh	District Court of Hazaribagh
Name of the Sub/court	--	Chief Judicial Magistrate, Ramgarh	Chief Judicial Magistrate, Hazaribagh
Case No.	W.P.(C) No. 1125 of 2014	Complaint case No. 255/2021	Complaint case No. 331/2013
Orders / Directions of the court,	The writ is pending for final disposal. Meanwhile Hon'ble	Case has been filed on 25/03/2021 to initiate credible action against	Case has been filed on 21/12/2013 to initiate credible action against

Detail	Case1	Case 2	Case 3
if any and its relevance with the proposed project	High Court has passed interim order on 24/03/2014 for stay on clause no. 27 of Consent to Operate of JSPCB dated 10/12/2012, allowing the PP to operate the expanded part of unit.	the project proponent and next hearing date is scheduled 07/10/2022.	the project proponent and next hearing date is scheduled 28/01/2022.
Case Details	Writ petition filed against clause no. 27 of Consent to Operate issued by Jharkhand State Pollution Control Board on 10/12/2012 asking the unit to stop the operation of expanded part (2x100TPD DRI Kiln and 240TPD Billet Plant)	Case has been filed for the offence committed u/s 15 of Environment (Protection) Act, 1986 cognizance u/s 19 of Environment (Protection) Act, 1986 in compliance of MoEF&CC TOR letter J/11011/41/2013/IA.II(I) dated 09/11/2020	Case has been filed for the offence committed u/s 15 of Environment (Protection) Act, 1986 cognizance u/s 19 of Environment (Protection) Act, 1986 in compliance of MoEF& CC letter J/11011/41/2013/IA.II(I) dated 12/06/2013

49.2.19 Name of the EIA consultant: M/s. Vardan EnviroNet [S.No. 41 in List of ACOs with their Certificate no. NABET/EIA/1922/RA 0166; valid up to 06/11/2022, Rev. 16, November 15, 2021].

Certified Compliance report from Jharkhand State Pollution Control Board

49.2.20 The Status of compliance of earlier CTO was obtained from Jharkhand State Pollution Control Board vide letter no. 476 dated 05/04/2021 in the name of M/s. Jharkhand Ispat Private Limited. As per inspection report of JSPCB, the PP is complying with the prescribed CTO conditions except management of dolochar generated from DRI kilns.

49.2.21 M/s. Jharkhand Ispat Private Limited has earlier made an online application vide proposal no. IA-JH/IND/212892/2020dated 03/06/2021. The proposal was considered in 40th meeting of the Re/constituted EAC (Industry-I) held on 15-16th July, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee held on 15-16th July, 2021

49.2.22 The Committee noted the following:

i. Water balance diagram for DRI shall be checked and corrected. The water balance diagram for monsoon season shall be submitted and explained.

ii. In transportation study report, the Level of Service (LOS) in MDR/106 is "D" which has to be improved by working out alternate route or by other measures to bring the LOS to at least B.

iii. In Public Hearing Grievances one of the main requirements raised was to reduce dust impact in nearby villages which needs to be addressed by an action plan like providing greenbelt / thick plantation/surrounding nearby villages like Argada, eski, etc. A

detailed study of these areas to be conducted to find out the requirements to mitigate the same and the budgetary provision with specific quantity and period shall be incorporated.

iv. Details of management of effluent and storm water during monsoon to be furnished.

v. Action plan for green belt development needs to be revisited as the density proposed for green belt is 1500 trees per ha which is not as per the CPCB norms.

vi. PM_{10} at site, Argada and Sirka in post project scenario shall exceed 100 µg/m^3 under worst case scenario. No specific EMP has been suggested to bring it down.

vii. AAQ modelling shall be again carried out as same mixing height is used for day and night time which is not correct.

viii. Damage assessment report

a. Lump sum Cost taken for topsoil damage of quantity 25100 cum to be revised by assigning unit cost per cum (i.e. Rs.15 Per cum) against total quantity.

b. Table 13.5 to be revised and damage due to emission of Sox & NO_X during construction to be included. Details of equipment/ machinery operating hours, working hours per day, vehicle lead distance, total open area/ non constructed area under impact of wind erosion and fuel consumption to be included.

c. Emission from all sources and for total production since 2006 to be considered for calculation of impact due to air emission. Emission from material handling, internal transportation, and impact of wind erosion from stockyard to be included for calculation of total impact.

d. Monetary value in Table 13.13 to be corrected as per revised total emission under controlled environment.

e. Rainwater runoff to be revised based on specific land use runoff coefficient for different types of land cover, covering total plot area for both construction and operation period.

f. For compensation of rainwater loss, total cost of construction of RWH structures shall be taken as damage cost. Cost of RWH structure can be referred from respective state guidelines.

g. Table 13.9 to be revised as per standard water requirement of not less than 1 KL per 1 Sqm constructed area for total area of 2.97 ha and water usage for other activities to be included as per water balance table apart from DRI Kiln and induction furnace with CCM for complete operation period since 2006.

h. The damage cost taken for noise to be revised and damage to be calculated as per CPCB guidelines / Noise rules 2000 and NGT directions on same.

i. The damage cost taken for biodiversity and crop damage to be revised as per Indian standards and reference.

j. The damage cost taken against gap plantation to be revised @2500 trees per hectare.

k. The amount allotted against PH grievance as per OM dated 30/09/2020 should be worked out considering Greenbelt / thick plantation for nearby two villages as mentioned above and to be included in the EMP cost.

l. The activities and corresponding cost proposed under Remediation plan, Natural and Community resource augmentation plan to be revisited, and actual cost as per market standards to be included for same. The proposed activity to each village needs to be quantified.

m. The activities under the above shall be specific with time period of 3 years and monitorable.

ix. Argada Village is 200 m from site in west. Raw material yard is located adjacent to boundary facing the village. Hels village is 400 m from site in east. Environmental safeguards to be adopted has not been mentioned.

x. Table number 3.16, 3.17 and 3.18 of EIA report pertaining to analysis of soil samples, land use pattern, villages selected for socio/economic survey needs to be revisited and corrected.

xi. Damodar river is located at a distance of 0.3km from the project site in southern direction. Authenticated HFL details of the river, protection measures to be adopted along river side and impact on riverine ecology has not been submitted.

Recommendations of the Committee held on 15-16th July, 2021

49.2.23 In view of the foregoing and after deliberations, the Committee recommended the proposal to be returned in its present form to address the technical deficiencies enumerated above.

49.2.24 M/s. Jharkhand Ispat (P) Ltd has made an online application vide proposal no. IA/JH/IND/236898/2020 dated 15/11/2021. The proposal was considered in 49th meeting of the Re/constituted EAC (Industry-I) held on 16 - 17th December, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

49.2.25 The Committee noted the following:

i. The proposal was accorded ToR on 9/11/2020 as per the provisions contained under S.O. 804 (E) dated 14/03/2017. As per para 13(3) of the said notification, no consent to operate or occupancy certificate will be issued till the project is granted the environmental clearance for the units under violation.

ii. Violation aspect involved in the instant proposal is "PP had installed 2x100TPD DRI Kiln and 2x12T Induction Furnace without obtaining prior Environmental Clearance as per EIA Notification 2006".

iii. As per the information made available by the proponent i.e. page no.13 of the final EIA report and slide no. 40 of the presentation, the aforementioned units which are under violation are being operated continuously by the proponent without obtaining requisite environment clearance which is not in conformity to the provisions contained under S.O. 804 € dated 14/03/2017. Further, as per the undertaking submitted by the proponent, it has been stated that the violating units are not under operation. Thus, conflicting statements have been made by the proponent and EIA consultant regarding the operation of the violating units since grant of ToR and misled the EAC as well as the Ministry deliberately with a malafide intention to obtain EC.

iv. The court cases reflected at para no. 49.2.18 are not given in s.no. 37 of Form 2 except case no. 255 of 2021.

Recommendations of the Committee

49.2.26 In view of the foregoing and after detailed deliberations, the committee recommended to defer the proposal and sought following additional information from the proponent.

i. Details regarding operation of the violating units namely 2x100TPD DRI Kiln and 2x12T Induction Furnace since from the date of grant of CTE dated 6/11/2006 to till date.
ii. Explanation shall be submitted by the proponent as well as the EIA consultant for suppressing the information in Form 2 regarding the ongoing court cases as reflected at para no. 49.12.8.
iii. Explanation shall be submitted by the consultant regarding suppression of information regarding the operation of violating units at the time of grant of Terms of Reference accorded on 9/11/2020 under the provisions of S.O. 804 (E) dated 14/03/2017.
iv. Action plan for the utilization of dolochar generated from the DRI kiln shall be submitted.

49.3 Expansion of existing Integrated steel plant to final capacity of Sponge Iron –2,054,000 TPA, Billets (Mild & Alloy Steel) / 23,73,566 TPA, Rolled Products – 15,60,000 TPA, Captive Power – 308 MW, Pellets – 30,00,000 TPA, Producer Gas Plant / 96,450 Nm^3/hr, Sinter Plant / 5,90,625 TPA, Blast Furnace / 3,93,750 TPA by **M/s. Shyam Metalics and Energy Limited** located at Village – Pandloi, Block /Lapanga, **District / Sambalpur, Odisha** [Online Proposal No. IA/OR/IND/5330/2008, File No. J/11011/495/2006/IA.II(I)] – **Environment Clearance – regarding**

49.3.1 M/s. Shyam Metalics and Energy Limited has made an online application vide proposal no. IA/OR/IND/5330/2008, dated 15/11/2021 along with copy of EIA/EMP report, Form – 2 and certified compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project cited above. The project activity is listed at schedule no. 3(a), Metallurgical Industries (ferrous & non/ferrous) and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification, 2006.

Details submitted by Project proponent

49.3.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	ToR validity
14/12/2020	27th meeting of EAC held on 30-31th December, 2020	Recommended for grant of ToR	14/01/2021	13/01/2025

49.3.3 The project of M/s. Shyam Metalics and Energy Limited is located at Village/Pandloi, Block Lapanga, Tehsil Rengali, District Sambalpur, Odisha is for expansion of existing integrated steel plant to final capacity of Sponge Iron– 20,54,000 TPA, Billets (Mild & Alloy Steel)/ 23,73,566 TPA, Rolled Products – 15,60,000 TPA, Captive Power/ 308 MW (CFBC/ 188 MW & WHRB/ 120 MW), Pellets/ 30,00,000 TPA, Producer Gas Plant/ 96,450 Nm^3/hr, Sinter Plant/ 5,90,625 TPA, Blast Furnace/ 3,93,750 TPA, Coal Washery/ 10,00,000 TPA, Ferro Alloy/ 2,50,000 TPA, Billet Caster/ 2,00,000 TPA, Bloom Caster/ 3,53,000 TPA, Lime Plant/ 60,000 TPA.

49.3.4 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>Total Land: 347.058 Ha.
Land use classification not made available.</td><td></td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014.</td><td>Not made available.</td><td></td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Project Site: Nil

Study area:<table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Ramchandar Nagar</td><td>0.28 km</td><td>East</td></tr><tr><td>Nishanbhanga</td><td>0.05</td><td>South</td></tr></table></td><td>R&R is not required</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site.</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>21°41'4.78"N</td><td>84°2'28.93"E</td></tr><tr><td>B</td><td>21°40'24.71"N</td><td>84°2'49.39"E</td></tr><tr><td>C</td><td>21°39'36.36"N</td><td>84°2'42.91"E</td></tr><tr><td>D</td><td>21°40'1.30"N</td><td>84°2'38.09"E</td></tr><tr><td>E</td><td>21°40'2.10"N</td><td>84°2'26.20"E</td></tr><tr><td>F</td><td>21°39'45.21"N</td><td>84°2'14.29"E</td></tr><tr><td>G</td><td>21°40'0.70"N</td><td>84°1'43.51"E</td></tr><tr><td>H</td><td>21°40'39.58"N</td><td>84° 2'9.19"E</td></tr></table></td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>135 m above mean sea level</td><td></td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any</td><td>Nil</td><td></td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td>Project Site:
5 Small Ponds in the proposed expansion project site.

Study Area:<table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Hirakud Reservoir</td><td>0.67 Km</td><td>NW</td></tr><tr><td>Village Pond</td><td>0.13 km</td><td>South</td></tr></table></td><td></td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserveetc. if any within the study area</td><td>Nil
However, following forests are present within the study area:
Maulabhanja R.F: 2.1 Km (W)
Baighara R.F: 2.6 Km (S)
JharghatiGarpati RF: 4.6 Km (SE)
Kilasama RF: 4.7 Km (S)
Ghichamura RF: 4.9 km (NE)</td><td></td></tr>
</table>

49.3.5 The existing project was accorded environmental clearance vide lr no IA-J-11011/495/2006/IA.II(I)dated 10/12/2008. Subsequently, EC under para 7(ii) was accorded on 21/05/2019 followed by EC amendment on 14/10/2019. Consent for Operate for the existing unit was accorded by Odisha State Pollution Control Board vide lr no. 5128/IND/I/CON/5335; Dt. 26/03/2021, 13045/IND/I/CON/5335; Dt. 27/08/2021, 7994/IND/I/CON/5335; Dt. 22/06/2021. The validity of all CTO is up to 31/03/2023.

49.3.6 Implementation status of the existing ECs:

S No	Facilities envisaged	As per existing ECs	Consent Status (CTE/CFO)		Implementation Status
			As per Existing CTE	As Per Existing CTO	
1.	Sponge Iron	8,00,000 TPA (2x350TPD+2x100 TPD+4x500 TPD)	8,00,000 TPA	8,00,000 TPA (2x350TPD+2x100 TPD+3x500 TPD+ 4x500 TPD)	Implemented
2.	Billet Caster	2,00,000 TPA (1x2,00,000 TPA)	2,00,000 TPA	2,00,000 TPA	Implemented
3.	Rolling Mill	6,60,000 TPA (1x1,00,000 TMT ROD, 1x70,000 TMT Bar Mill, 1x60,000 Structural Mill, 2x2,00,000 Wire Rod Mill, 1x30,000 Pipe Mill)	6,60,000 TPA	4,10,000 TPA (60,000 TPA Rolling Mill 60,000 TPA Structural Mill, 30,000 TPA Pipe Mill, 60,000 TPA TMT Rod Mill, 2,00,000 TPA Wire & Rod Mill)	4,10,000 TPA Implemented and 2,50,000 TPA under implementation
4.	Sinter Plant	--	dropped	--	Not Implemented
5.	MBF	--	dropped	dropped	Not Implemented
6.	Ferro Alloys	2,50,000 TPA (2x6MVA+2x9 MVA+3x11 MVA/Matching capacity for 1,17,000 TPA)	1,63,000 TPA	1,33,000 TPA (3x11 MVA+2x9 MVA+2x6 MVA)	1,33,000 TPA Implemented & 30000 TPA under implementation.
7.	SMS	14,44,286 TPA (EAF 1x80T(18H) hot metal route; IF:15x18T+4x12T+4x8T,IF, with matching LF)	14,44,286 TPA	6,20,080 TPA 4x8 T/Heat,8x18 T/Heat, 4x12 T/Heat	6,20,080 TPA Implemented & 824206 TPA under implementation (80% completed)
8.	Coke Oven	dropped	dropped	dropped	Not Implemented
9.	Pelletization& Beneficiation Plant	12,00,000 TPA (2x6,00,000 TPA)	1,200,000 TPA	1200000 TPA	Implemented
10.	Coal Washery	10,00,000 TPA	10,00,000 TPA	300000 TPA	300000 TPA Implemented and 700000 TPA under implementation
11.	Power Plant	158 MW 2x30MW+1x25MW+73MW (43+30MW)	158 (WHRB 4x55 TPH+ FBC 4x150 TPH+ Mixed Gas	129 MW (25 MW (15 MW WHRB+ 10 MW AFBC), 3x11 MW	29 MW to be Implemented

S No	Facilities envisaged	As per existing ECs	Consent Status (CTE/CFO)		Implementation Status
			As per Existing CTE	As Per Existing CTO	
			Fired Boiler-1x80 TPH)	WHRB, 2x30 MW, 1x11 MW WHRB)	
12.	Bloom Caster	3,53,500 TPA	3,53,500 TPA	3,53,500 TPA	Implemented
13.	Lime Plant	60,000 TPA (1x60,000 TPA)	60,000 TPA	CTO not received	To be Implemented
14.	Producer Gas Plant	48,450 Nm^3/Hr	48,450 Nm^3/Hr	48,450 Nm^3/Hr	Implemented

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

S No	Facilities envisaged	As per existing ECs	Proposed expansion	Total
1.	Sponge Iron	8,00,000 TPA (2x350TPD+2x100 TPD+4x500 TPD)	12,54,000 TPA (4x600 TPD & 7x200 TPD)	20,54,000 TPA (2x350 TPD+ 2x100 TPD+ 4x500 TPD+ 4x600 TPD+ 7x200 TPD)
2.	Billet Caster	2,00,000 TPA (1x2,00,000 TPA)	-	2,00,000 TPA
3.	Rolling Mill	6,60,000 TPA (1x1,00,000 TMT ROD, 1x70,000 TMT Bar Mill, 1x60,000 Structural Mill, 2x2,00,000 Wire Rod Mill, 1x30,000 Pipe Mill)	9,00,000 TPA (Other long product 900000 TPA)	15,60,000 TPA (1x1,00,000 TMT ROD, 1x70,000 TMT Bar Mill, 1x60,000 Structural Mill, 2x2,00,000 Wire Rod Mill, 1x30,000 Pipe Mill, Other long product 900000 TPA)
4.	Sinter Plant	--	5,90,625 TPA (65 m^2)	5,90,625 TPA
5.	MBF	--	3,93,750 TPA (1x450 m^3)	3,93,750 TPA (1x450 m^3)
6.	Ferro Alloys	2,50,000 TPA (2x6MVA+2x9 MVA+3x11 MVA/Matching capacity for 1,17,000 TPA)	-	2,50,000 TPA (2x6MVA+2x9 MVA+3x11 MVA-Matching capacity for 1,17,000 TPA)
7.	SMS	14,44,286 TPA (EAF 1x80T(18H) hot metal route; IF:15x18T+4x12T+4x8T,IF, with matching LF)	9,29,280 TPA (16x20T, & 4x8T)	23,73,286 TPA (1x80T, 15x18T, 4x12T & 4x8T) (16x20T, & 4x8T)
8.	Coke Oven	dropped	-	-
9.	Pelletization& Beneficiation Plant	12,00,000 TPA (2x6,00,000 TPA)	18,00,000 TPA (2x0.3 MTPA+1x1.20 MTPA)	30,00,000 TPA (2x0.9MTPA+1x1.20MTPA**)**
10.	Coal Washery	10,00,000 TPA	-	10,00,000 TPA
11.	Power Plant	158 MW 2x30MW+1x25MW+73MW (43+30MW)	150 MW (70 MW WHRB + 80 MW AFBC)	308 MW 2x30MW+1x25MW+73MW (43+30MW) + (70 MW WHRB + 80 MW AFBC)

S No	Facilities envisaged	As per existing ECs	Proposed expansion	Total
12.	Bloom Caster	3,53,000 TPA	-	3,53,000 TPA
13.	Lime Plant	60,000 TPA (1x60,000 TPA)	-	60,000 TPA
14.	Producer Gas Plant	48,450 Nm^3/Hr	48,000 Nm^3/hr (12x4000 Nm^3/hr)	96450 Nm^3/hr (12x4038 Nm^3/hr +12x4000 Nm^3/hr)

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

S. No.	Raw Material	Quantity (TPA) Total	Source	Distance from site (Kms)	Mode of Transportation
1.	Iron Ore Fines	36,00,000	Kandahar mines &Gandhamardan mines	112.6 km & 153.20 km	Rail
2.	Coal	12,21,800	Talabira Mines of MCL	20 km	Rail
3.	Dolomite Fines	18,000	Local Market	105 km	Rail/Road
4.	Lime Stone	18,000	Local Market	105 km	Rail/Road
5.	Chromite Ore	6,00,000	Jajpur Sukinda Mines	210 km	Road
6.	Quartzite	50,000	Bargarh	105 km	Rail/Road
7.	Coke	1,60,200	Jharsuguda/ Sambalpur	30 km	Rail
8.	Bentonite	12,000	Local Market	105 km	Rail/Road

49.3.9 **Existing water** requirement is **13644 m^3/day**, water requirement is obtained from Hirakud Reservoir and permission for the same has been obtained from Orissa Department of Water Resources for 2446 KLD (11 cusecs) vide letter No. Irr/II/WRC/01/05/1308/WR, dated 13/04/2005. The water **requirement for proposed project** is estimated as **9085 m^3/day**, which will be met from Hirakud Reservoir. Agreement for drawl of 13798.68 m^3/day (3 MGD/ 5.64 Cusec) of water was done for a period of 3 years up to 06/09/2021. PP received the letter from water resources department Govt. of Orissa for renewal of agreement. For additional requirement of 9085 m^3/day, agreement will be done after the statutory clearances.

49.3.10 Existing power requirement of 203.92 MW is obtained from CPP & State grid. The power requirement for the proposed project is estimated as 150 MW which will be met from CPP.

49.3.11 Baseline Environmental Studies:

Period	December/February 2021
AAQ parameters at 8 locations	$PM_{2.5}$= 18.40 to 56.20 μg/m^3 PM_{10}= 30.60 to 93.6 μg/m^3 SO_2= 4.10 to 11.6 μg/m^3 NO_2= 9.10 to 29.1 μg/m^3

<table>
<tr><td>(min and max)</td><td>CO= 0.11 to 2.2 μg/m^3</td></tr>
<tr><td>Incremental GLC level</td><td>$PM_{2.5}$= 5.48 μg/m^3 at 1.2km (SW)
PM_{10}= 9.07 μg/m^3 at 1.2km (SW)
SO_2= 21.4 μg/m^3 at 1.2km (SW)
NO_x= 27.5 μg/m^3 at 1.2km (SW)</td></tr>
<tr><td>Ground water quality at 8 locations</td><td>pH: 7.54 to 6.99,
Total Hardness: 178 to 62 mg/l,
Chlorides: 34.6 to 28.8mg/l &
Fluoride: 1.21 to 0.16mg/l.
Heavy metals are within the permissible limits</td></tr>
<tr><td>Surface water quality at 8 locations</td><td>pH: 7.72 to 6.6,
DO: 8.1 to 6.4 mg/l,
BOD: 2.4 to 2.1 mg/l &
COD: 14.8 to 8.2 mg/l</td></tr>
<tr><td>Noise levels Leq (Day and Night) at 8 Locations</td><td>71.43 to 43.98 dBA for day time and 63.53 to 41 dBA for night time.</td></tr>
<tr><td>Soil at 6 Locations</td><td>pH: 7.18,
N (Nitrogen): 4.6 Milligram/ Kg,
P (Phosphorus): 0.02 Milligram/ Kg,
K (Potassium): 0.05%,
Electric Conductivity: 132.6 Milli siemens/cm</td></tr>
<tr><td>Traffic assessment study findings</td><td>Traffic Study was conducted at 3 Locations: location 1. Near entry gate of Shyam Metalics, NH/200 (3600 PCU/hr) Location 2: Bagbahal Chowk, NH/200 (3600 PCU/hr) (Distance from project site/1.25 km), & Location 3: Near Viraj Steel & Energy, NH/200 (3600 PCU/hr) (Distance from project site/1.1km)
Transportation of raw material, fuel & finished product will be done 20 % by road.

Existing PCU details is given below:
<table>
<tr><th>S No</th><th>Study Location</th><th>Details</th><th>Volume (PCU/hr)</th><th>*Capacity (PCU/hr)</th><th>Existing V/C ratio</th><th>**Level of Service (LOS)</th></tr>
<tr><td rowspan="2">1.</td><td rowspan="2">Near entry gate of project site</td><td>Average Hour Load</td><td>1582</td><td>3600</td><td>0.43</td><td>B</td></tr>
<tr><td>Peak Hourly Load</td><td>1960</td><td>3600</td><td>0.54</td><td>C</td></tr>
<tr><td rowspan="2">2.</td><td rowspan="2">Bagbahal Chowk</td><td>Average Hour Load</td><td>831</td><td>3600</td><td>0.23</td><td>C</td></tr>
<tr><td>Peak Hourly Load</td><td>1060</td><td>3600</td><td>0.29</td><td>D</td></tr>
<tr><td>3</td><td>Near Viraj steel</td><td>Average Hour Load</td><td>1328</td><td>3600</td><td>0.36</td><td>B</td></tr>
</table></td></tr>
</table>

	<table><tr><td></td><td>**&Energy**</td><td>Peak Hourly Load</td><td>2040</td><td>3600</td><td>0.56</td><td>C</td></tr></table> Additional PCU load after proposed project will 29 PCU/hr. Taking worst case i.e. at Near Viraj steel &Energy for Peak Hourly Load 2040 PCU/hr, the addition of 29 PCU/hr will not change the LOS. V=2040+29=2069 V/C=2069/3600=0.57 (LOS/C) Conclusion: The level of service will remain same after including additional traffic due to proposed project.
Flora & Fauna	Python which belongs to the schedule I of fauna is present within the buffer zone. Wildlife Management Plan was approved vide Letter No. 7752/7WL/FD&WLC/147/2020 Dated. 29/09/2020.

49.3.12 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

S. No.	Type of Waste	Source	Total Quantity (TPA)	Method of Disposal
1.	Middling & Rejects	Coal Washery	4,20,000	Captive use in FBC fuel
2.	Ash and Accretion	DRI Kilns	27,74,200	To be used in Brick Manufacturing plant of M/s. Shyam Metalics
	Dolochar		9,42,600	Captive use FBC Boiler fuel
3.	Dedusting dust	Pellet Plant	2,07,000	Reused in Pellet Plant
4.	Return Sinter Fines	Sinter Plant	88,590	Reused in Sinter Plant
5.	BF slag	Blast Furnace	1,18,965	Used in PSC manufacturing plant –Star Cement Raipur & Dalmia Cement, Jharsuguda.
	BF sludge and dust		1,90,000	Reused in Sinter plant
6.	Tar	PGP Plant	15750	Sale to authorized users/Recyclers/Re/processors having valid authorization from SPCB, Odisha or disposed to TSDF
7.	Slag	S M S	3,36,450	Land filling in the nearby abandoned mines
	Dust		51,740	To be used in land filling
8.	Fly Ash	FBC Boiler	3,00,950	Land filling in approved abandoned stone quarry.
9.	Bag House Dust	Ferro alloy plant	35,000	Fe/Mn slag is to be recycled Si/Mn slag is to be used in land

S. No.	Type of Waste	Source	Total Quantity (TPA)	Method of Disposal
	Slag		2,25,000	filling Fe/Cr slag will be used as aggregate in concrete works

Hazardous Waste

S No	Category of Hazardous Waste as per the Schedules I, II & III of these rules	Waste Description	Total Quantity	Mode of Disposal
1.	Schedule/ I Sl. No./ 5.1	Used Oil	20 KLA	Storage in containers over the concrete floor under/ventilated covered shed followed by sale to actual users/Recyclers/Re/processors having valid authorization from SPCB, Odisha or disposed to TSDF
2.	Schedule/ I Sl. No./ 5.2	Wastes/ Residues Containing Oil	15 KLA	
3.	Schedule/ I Sl. No./ 1.4	Phenolic water	27 KLD	To be treated in ETP of 30 KLD Capacity
4.	Schedule/ I Sl. No./ 1.4	Spent resin	6 TPA	Storage in an impervious pit/ containers under well ventilated cover shed followed by co/incineration in CPP/ disposal in authorized hazardous waste incinerator/RAMKY ENVIRO ENGINEERS LIMITED/ Co/processing in authorized cement kiln.
5.	Schedule/ I Sl. No./ 1.4	Tarry residues	2 TPA	Storage in an impervious pit/ containers under well ventilated cover shed followed by co/incineration in CPP/ disposal in authorized hazardous waste incinerator/RAMKY ENVIRO ENGINEERS LIMITED/ Co/processing in authorized cement kiln.
6.	Schedule/ I Sl. No./ 1.4	Discarded containers	15 TPA	Storage in an impervious floor under well ventilated covered shed followed disposal in the Authorized HW Incinerator/ RAMKY ENVIRO ENGINEERS LIMITED/ Co/processing in

S No	Category of Hazardous Waste as per the Schedules I, II & III of these rules	Waste Description	Total Quantity	Mode of Disposal
				authorized Cement Kiln.

49.3.13 Public Consultation:

Details of Advertisement	27th July, 2021
Date of Public consultation	31th Aug, 2021
Venue	At U.P. School Field, Pandloi, District/Sambalpur, State/ Odisha.
Presiding Officer	Additional District Magistrate, Sambalpur.
Major issues raised	i. Education, ii. Health, iii. Drinking water, iv. Environment, v. Livelihood, vi. Employment

Action plan as per MoEF&CC O.M. dated 30/09/2020:

S. No.	Major activities	Year Wise Proposed CER Budget (Rs. In Lakhs)			Total Amount (Rs. In Lakhs)	Total Physical Targets	Physical Target
		1stYear	2ndYear	3rdYear			
A	**Infrastructure Development**						
1	Maintenance of PCC Roads	15.0	15.0	15.0	45.0	3	Meherpada, Ganesh Nagar & Pandloi Villages. Every year 1 Village will be taken up
2	Construction of PCC Road	0.0	35.0	0.0	35.0	1	Construction of PCC from Nishanbhanga to Jharmunda
3	Village Solar Street Lights	3.2	3.2	1.6	8.0	28	3 projects with 28 sets of Solar Streetlights at 3 Village
	Sub Total	18.2	53.2	16.6	88.0		
B	**Health**						
1	Health Camps in Surrounding Villages	8.0	8.0	8.0	24.0	40	8 Camps in a Year concluding the total 40 Camps
	Sub Total	8.0	8.0	8.0	24.0		
C	**Drinking Water**						
1	Purified Drinking Water Facility at Public Places	10.0	10.0	10.0	30.0	5	In total 5 nos of Purified Drinking Water shall be installed at strategic public locations
2	Community based RO Plant	10.0	10.0	10.0	30.0	5	Every year 1 Nos. of RO Plant shall be installed considering Contamination of Drinking Water

S. No.	Major activities	Year Wise Proposed CER Budget (Rs. In Lakhs)			Total Amount (Rs. In Lakhs)	Total Physical Targets	Physical Target
		1stYear	2ndYear	3rdYear			
3	Overhead Water Tank (Solar powered) Supported with RO Plant	35.0	1.5	1.5	38.0	1	1 Overhead Tank within premises for Floating & Commuting population around the plant including maintenance
	Sub Total	55.0	21.5	21.5	98.0		
D	**Livelihood**						
1	Promotion of Income Generation Activities/ Kitchen Garden, Leafplate, Pickle, NTFP etc.	0.0	7.5	7.5	15.0	100	100 interested women beneficiaries within 10 SHG members of nearby GPs shall be trained
2	Promotion of Income Generation Activities/ Mushroom Cultivation, NTFP etc.	0.0	7.5	7.5	15.0	100	100 interested women beneficiaries within 10 SHG members of nearby GP shall be trained
3	Farmers input support for improving the yield for better return	0.0	20.0	20.0	40.0	100	100 interested and selective farmers shall be provided with inputs i.e., 50 Farmers shall be supported
	Sub Total	0.0	35.0	35.0	70.0		
	Grand Total	**81.2**	**117.7**	**81.1**	**280.0**		

49.3.14 Existing capital cost of project was Rs. 1554 Crores. The capital cost of the proposed project is Rs.1205 Crores and the capital cost for environmental protection measures is proposed as Rs 139.40 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 15.61 Crores. The employment generation from the proposed project / expansion is 98 The details of cost for environmental protection measures is as follows:

S No	Environment/ Social Control Measure	Cost of EMP (in crores)					
		Existing		Proposed		Total	
		Capital	Recurring (Per Annum)	Capital	Recurring (Per Annum)	Capital	Recurring (Per Annum)
1.	Air pollution Equipment	27.40	6.90	64.09	3.34	91.49	10.24
2.	Water Pollution Control Machinery & Construction	5.28	0.70	12.92	1.34	18.2	2.04

S No	Environment/ Social Control Measure	Cost of EMP (in crores)					
		Existing		Proposed		Total	
		Capital	Recurring (Per Annum)	Capital	Recurring (Per Annum)	Capital	Recurring (Per Annum)
3.	Rainwater Harvesting	1.03	0.15	2.36	0.23	3.39	0.38
4.	Occupational Health	2.10	0.45	8.30	0.71	10.4	1.16
5.	Green Belt Development	0.90	.10	1.19	0.13	2.09	0.23
6.	Environmental Monitoring	1.12	0.10	1.75	0.22	2.87	0.32
7.	Solid Waste management	3.65	0.44	4.45	0.47	8.1	0.91
8.	Safety & Disaster Management	0.55	0.05	0.49	0.07	1.04	0.12
9.	EMS & Capacity Development	0.87	0.01	0.95	0.20	1.82	0.21
Total		42.90	9.35	96.50	6.26	**139.40**	**15.61**
PH Compliance Cost		**2.8 Crores**					

49.3.15 Existing green belt has been developed in 48.56 ha area which is about 13.99 % of the total project area of 347.058 Ha with total sapling of 121400 Trees. Proposed greenbelt will be developed in 87.01 ha which is about 25.07 % of the total project area. Thus total of 135.57 ha area (39.06% of total project area) will be developed as greenbelt. A 2 x2 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 217500 saplings will be planted and nurtured in 87.01 hectares in 3 years.

49.3.16 There is no court case/ show cause/direction pending or violation under EIA notification 2006, to the project or related activity.

49.3.17 Name of the EIA consultant: M/s. Visiontek Consultancy Services Private Limited [S. No.100, List of ACOs with their Certificate no. NABET/EIA/2023/RA 0209, valid up to 16/12/2023; Rev. 16, November 15, 2021].

Certified compliance report from Regional Office

49.3.18 The status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide letter no. 101/258/EPE/1003 dated 30/08/2021 in the name of M/s. Shyam Metalics & Energy ltd. The action taken report regarding the partial/non/complied condition was submitted to regional officer MoEF&CC, Bhubaneswar dated 08/09/2021. MoEF&CC

(RO), Bhubaneswar evaluated the same and has issued letter dated 12/09/2021. The details of the observations made by RO and the present status as furnished by the proponent are as follows:

S No	Non/ compliances reported if any	Corrective action taken	Comments of IRO
1.	It is viewed that regular maintenance of the garland drains should be carried out (Specific Condition No. xiii).	Garland drains arc constructed around the dumps to arrest silt and sediment flows. The drains are connected to a settling tank and accumulated water is being used for dust: suppression and plantation. De/silting of garland drains is carried out at regular intervals.	PP submitted they have maintained garland drains. **Remarks of IRO**: the condition is complied with.
2.	The project authorities need to improve housekeeping within the plant premises and a lot of unused scraps within the premises need to be cleared. (Specific Condition No. xvii)	PP has engaged a road sweeping machine to clean all the concrete roads. A housekeeping team has been formed to look after all the issues in different depts. Regular cleaning works of all the areas inside the plant is being carried out by housekeeping team, Now the housekeeping has been comparatively improved. PP have engaged two tractors to collect and shift all the unused scraps to SMS unit to reuse in induction furnaces. Mobile water sprinklers arc provided for periodic water sprinkling on haul roads, loading and unloading points, etc. Regular water sprinkling is being carried out by four dedicated mobile water tankers of 20 KL each at fugitive dust emission sources to control dust emissions.	PP has made improvement in the house keeping and maintenance of cleanliness within the plant premises. **Remarks of IRO**: the condition is complied with
3.	The project authority need to submit detail information on various solid wastes generated, disposed of recycled and reused by the plant (Specific Condition No. xviii).	The project authorities have submitted information on generation and utilization of solid waste.	**Remarks of IRO**: the condition is complied with.
4.	The project authorities may undertake extensive plantations within and outside the industrial premises along the road for checking and disbursement of dust and fugitive emission in consultation with the concerned DFO (Specific Condition No. xx).	Till 2020/21 we have planted 210657 numbers of saplings. We have planned to plant around 125000/150000 numbers of saplings in the coming 2/3 years. Phase wise plantation is being carried out within and outside the industrial premises along the road for checking and disbursement of dust and fugitive emission. The density of plantation is maintained at around 2500 plants per ha.	PP has submitted information on the green belt development to the IRO, Bhubaneshwar
5.	Details on the action taken with respect to conservation of flora and fauna may be intimated to this Regional Office (Specific Condition No. xxi).	Thick plantation using local flora species is being carried out on safety zone, along transport toads and on inactive dumps. Fencing of the plant boundary area is being carried out to avoid inadvertent entry of persons/animals.	PP submitted that local species have been taken up for plantation. **Remarks of the IRO**: the condition may be treated as complied

S No	Non/ compliances reported if any	Corrective action taken	Comments of IRO
6.	The detailed information on recommendation made on Corporate Responsibility for Environmental Protection (CREP) for steel sector should be submitted along with the budgetary provision to this office (Specific Condition No. xxiv).	An amount of Rs. 11.7 Cr. earmarked for CREP shall be implemented within four years. Detailed year wise action plan for implementation of CREP has been submitted and. will be implemented within 3 years from the date of project execution.	PP submitted information on CREP to the IRO, Bhubaneshwar **Remarks of IRO**: condition is complied with
7.	The progress made with regard to establishment of ITI may please be intimated to this office (Specific Condition No. xxv).	Under CSR activities the things will be carried on as and when administrations intimate us about the acquisition of land for ITI.	It is submitted that the project authorities should expedite the matter regarding establishment/ of ITI. As establishment of ITI would facilitate local youth in enhancement of their technical skills and employment opportunity, time bound action plan should be prepared for implementation of the stipulated condition and establishment of ITI in consultation with the concerned state Government authorities. **Remarks of IRO**: the condition may be treated as 'Assured to comply'.
8.	The detailed information on the socio/economic development activities carried out long with the budgetary provisions should be submitted to this office (General Condition No. x).	The detailed information on CSR activities along with budgetary allocation has been Submitted.	PP submitted requisite information on CSR activities. **Remarks of IRO**: the condition is complied with

49.3.19 The proposal was considered in 49th meeting of Re-Constituted Expert Appraisal Committee (Industry-1) held on 16-17th December, 2021. The EAC observation and recommendation is given as below:

Observations of the Committee

49.3.20 The Committee noted the following:

i. Contradicting statements have been made in the EIA report as well as the presentation made before the EAC regarding the land details for the existing and expansion project.
ii. Land use break up for the project site and the acquisition status as per MoEF&CC Office Memorandum dated 7/10/2014 along with the requisite supporting documents have not been made available.
iii. As per the KML file, existing plant site covered by a haze. No explanation is made available by the proponent in this regard.

iv. As per IRO report, project proponent is yet to comply with the provisions contained in Corporate Responsibility for Environmental Protection (CREP) and setting up of Industrial Training Institute (ITI) although the EC for the existing project was accorded on 10/12/2008.
v. Hirakud water reservoir is located at 0.67 km from the project site. High Flood Level (HFL) data for the Hirakud water reservoir has not been made available from the concerned Competent Authority.
vi. Location of AAQ monitored stations are not as per wind rose diagram. These need to be corrected and one more month data should be collected for accurate modelling of PM, SO_2 and NOx.
vii. There are 5 ponds inside the project area. PP has not explained the fate of these ponds after the expansion project implementation.
viii. 13644 KLD water is required for existing plant. 9085 KLD water shall be needed for expansion. Permission for existing requirement is available from Hirakud Dam. The permission for expansion project is yet to be received.
ix. PM_{10} in AAQ is 93.6 $\mu g/m^3$ and incremental concentration shall be 9.07 $\mu g/m^3$. This would result in exceeding PM_{10} norm beyond the National Ambient Air Quality Standards (NAAQs).
x. Expenditure towards Environment Management Plan needs to be revisited as the amount earmarked for the same is too low.
xi. Traffic assessment study has been carried out wrongly as the results of the study is not in proportionate to quantum of materials transportation.
xii. Quantum of materials to be transported through rail and the capacity of the captive railway siding facility has not been made available.
xiii. 450 m^3 Blast Furnace is proposed. Pollution control and energy recovery facilities provided with BF have not been explained.
xiv. Electric Arc Furnace (EAF) of 80T capacity is proposed. No mention about type of furnace and fume extraction system to be adopted.
xv. 120 MW WHRB from DRI configuration is low. It should be 144 MW. PP has not given Kiln wise break up of WHRB generation.
xvi. Incremental Ground Level Concentration for SO_2 and NOx are reported to be 21.4 $\mu g/m^3$ and 27.5 $\mu g/m^3$ respectively. Reasons for reporting such high GLCs has not been made available. AAQ modeling has not been properly carried out and needs to be revisited.
xvii. Technological details of Producer Gas Plant and reasons for proposing 12 modules of Producer Gas Plant (PGP) has not been made available.
xviii. Coal Washery reject dewatering has not been considered.
xix. There are too many modules for Pellet plants and too many modules of DRI Kilns are proposed which are likely to be resulting in drastic increase in pollution load levels.
xx. Sinter Plant of 65 m^2 has not been provided with MEROS technology and sinter cooler waste heat recovery.
xxi. Action plan to address the issues raised during public hearing is not in conformity to the MoEF&CC O.M. dated 30/09/2020.
xxii. Quality of the EIA report is extremely poor and does not address the significant environmental concerns arising out of the proposed expansion project.

Recommendations of the Committee

49.3.21 In view of the foregoing and after detailed deliberations, the committee recommended to return the proposal in its present form to address the shortcomings enumerated at 49.3.20. Further, the Committee warned the EIA consultant for submission of poor quality of EIA report and advised to improve upon the quality of EIA report.

49.4 Expansion of Karakhendra Steel Plant from 0.127 MTPA to 0.606 MTPA Crude Steel capacity with installation of 121 MW CPP by **M/s. Rungta Mines Limited** located at village Karakhendra & Karakolha, **District Keonjhar, Odisha** [Online Proposal No. IA/OR/IND/201273/2016, File No. J/11011/230/2016/IA.II(I)] – **Environment Clearance – regarding.**

49.4.1 M/s. Rungta Mines Limited has made an online application vide proposal no. IA/OR/IND/201273/2016 dated 04/03/2021 along with copy of EIA/EMP report and Form-2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above.

49.4.2 The proposal was considered in 32nd meeting of Reconstituted Expert Appraisal Committee (Industry- 1) held on 15-17th March, 2021. The committee recommended the proposal for grant of Environment Clearance subject to the stipulation of environment safeguards. The said recommendation is subject to submission of stage I forestry clearance as the proposal involves diversion of forest land of 7.875 ha in proposed expansion area. Subsequently, Ministry vide letter dated 08/04/2021 informed the proponent to submit Stage I Forest Clearance for diversion of 7.875 ha forest land.

49.4.3 In response to the letter dated 08/04/2021, M/s. Rungta Mines Limited vide letter dated 24/11/2021 along with the revised feasibility report with addendum EIA report and informed that they would like to partially withdraw the expansion proposal by withdrawing the expansion area of 106.621 acres (43.15 ha) including 7.875 ha of forest land along with some facilities proposed on it. Hence, PP now propose to only retain the existing area of 13.20 acres (5.34 ha) and 17.68 acres (7.15 ha) expansion area. Thus, total area for revised proposal would be 12.5 ha. Due to change in scope of the project, the proposal was referred back to the EAC by the Ministry. The details of the units withdrawn and proposed by the PP is furnished as below:

Sl. No.	**Plant Facilities**	**Units**	**Annual production/ configuration**				
			Recommended by the EAC in its meeting held on 15-17th March, 2021			**To be withdrawn**	**Requested for grant of EC**
(a)	**(b)**	**(c)**	**(d) As per EC dated 7/08/2019**	**(e) Proposed expansion**	**(f)=(d)+(e) Total**	**(g) Proposed withdrawal**	**(h)**
1.	Sponge Iron Plant						
	(i)1x600 TPD	TPA		308,850	308,850	308,850	Nil
	(ii)1x600 TPD	TPA		308,850	308,850	308,850	Nil
	Sub-Total	**TPA**		617,700	**617,700**	617,700	Nil
2.	Pellet Plant	TPA		1,800,000	1,800,000	1,800,000	Nil
3.	Sinter plant	TPA		554,400	554,400	554,400	Nil

	(1x60 sq.mtr)						
4.	Coke oven plant (4 batteriesx70,000 TPA)	TPA		280,000	280,000	280,000	Nil
5.	Blast furnace (1x380 cum)	TPA		372,400	372,400	372,400	Nil
6.	**Steel Melting Shop**						
6.1	IF configuration	-	2 nos. X15T	5 nos. X 15 T	7 nos. X15T	3x15 T	4x15 T
	LRF configuration	-	1 no. X 20T	3 nos. X 20 T	4 nos. X 20T	1x20 T	3x20 T
6.2	IF-LRF production	TPA	126,720	479,655	606,375	317,625	288,750
6.3	CCM-1 (Billets/ Bloom/ Slab)	TPA	124,186(1X2 Strand)	45,599(1X 1 Strand)	169,785 (1X3 Strand)	311,273 (1X3 Strand)	282,975 (1x4 strand)
6.4	CCM-2 (Billets/ Bloom/ Slab)	TPA	-	424,463(1 X4 Strand)	424,463 (1X4 Strand)		
	Total (6.3+6.4)	**TPA**	124,186	470,062	594,248	311,273	282,975
7	Rolling Mill (flat/ round/ wire rod/ structural mill/ others)						
7.1	Rolling Mill-1	TPA	121,702	93,898	215,600	**337,313**	245,000
7.2	Rolling Mill-2	TPA	-	366,713	366,713		-
	Total (7.1+7.2)	**TPA**	121,702	460,611	**582,313**	**337,313**	**245,000**
8	DI Pipe	TPA		84,000	84,000	84,000	Nil
9	Oxygen plant	TPD		120	120	110	10
10	CPP						
10.1	WHRB based CPP	MW		68	68	68	Nil
10.2	AFBC/ CFBC based CPP	MW		53	53	33	20
	Total	MW		121	121	101	20
10.3	TG	MW		2X42 + 1X22 +1X15	2X42 + 1X22 +1X15	2X42 + 1X22 (Revised to 1X20) +1X15	Revised to 1X20
11	Producer Gas Plant	Nm^3/hr		45,000	45,000	40,000	5,000
12	Slag separation plant *	TPH					30
13	Brick plant*	Bricks/ hr					2500

** are not covered under ambit of EIA Notification 2006 & its amendments but being proposed for solid waste recycling*

49.4.4 The title for the revised proposal would be *"Enhancement of capacity of existing IF/LRF (126,720 to 288,750 TPA); CCM (124186 TPA to 282975 TPA) & rolling mill (121,702 to 245,000 TPA), 20 MW Power Plant, 5000 Nm^3/hr producer gas plant, oxygen plant (10 TPD), a slag separation plant (30 TPH) and a brick plant (2500 bricks/hr) by M/s. Rungta Mines Limited located at Karakhendra, Village, Barbil Tehsil, Keonjhar District, Odisha*". The salient features of the revised proposal are furnished in the paragraphs given below.

Details submitted by Project proponent

49.4.5 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
14/11/2019	13th meeting of EAC held on 23-24th Nov 2019	Terms of Reference	02/01/2020	01/01/2024
15/06/2020	20th meeting of EAC held on 25-26th June 2020	Amendment TOR	13/07/2020	

49.4.6 The project of M/s. Rungta Mines Limited located at Karakhendra Village, Barbil Tehsil, Keonjhar District, Odisha State is for enhancement of capacity of existing IF/LRF (126,720 to 288,750 TPA); CCM (124186 TPA to 282975 TPA) & rolling mill (121,702 to 245,000 TPA) with addition of only 2x15 T IF and 2x20 T LRF, 20 MW Power Plant, 5000 Nm^3/hr producer gas plant, oxygen plant (10 TPD), a slag separation plant (30 TPH) and a brick plant (2500 bricks/hr).

49.4.7 Environmental site settings:

<table>
<tr><th>SNo</th><th>Particulars</th><th colspan="5">Details as per revised proposal in ADS</th></tr>
<tr><td>i.</td><td>Total land</td><td colspan="5">12.5 ha [30.88 Acres]
[Industrial: 5.34 ha
Private: 7.15 ha]</td></tr>
<tr><td></td><td></td><td>Sl. No.</td><td>Description</td><td>Existing acres</td><td>Revised additional acres</td><td>Proposed Area (acres)</td></tr>
<tr><td></td><td></td><td>1.</td><td>Plant & facilities</td><td>4</td><td>9.68</td><td>13.68</td></tr>
<tr><td></td><td></td><td>2.</td><td>Stock yard (raw materials)</td><td>1</td><td>0</td><td>1.0</td></tr>
<tr><td></td><td></td><td>3.</td><td>Stock yard (wastes)</td><td>0.4</td><td>2.1</td><td>2.5</td></tr>
<tr><td></td><td></td><td>4.</td><td>Green belt</td><td>4.356</td><td>5.834</td><td>10.19</td></tr>
<tr><td></td><td></td><td>5.</td><td>Administration building</td><td>0.01</td><td>0</td><td>0.01</td></tr>
<tr><td></td><td></td><td>6.</td><td>Water reservoir</td><td>3</td><td>0</td><td>3.0</td></tr>
<tr><td></td><td></td><td>7.</td><td>Roads</td><td>0.434</td><td>0.066</td><td>0.50</td></tr>
<tr><td></td><td></td><td></td><td>Total</td><td>13.2</td><td>17.68</td><td>30.88</td></tr>
<tr><td>ii.</td><td>Land acquisition Details as per MoEF&CC O.M. dated 7/10/2014</td><td colspan="5">Acquired: 7.87 ha
Land under acquisition: 4.63 ha. It has been reported that land acquisition for 4.63 ha is under process.</td></tr>
</table>

SNo	Particulars	Details as per revised proposal in ADS
iii.	Existence of habitation & involvement of R&R, if any.	No habitation in the proposed site. No R&R is involved
iv.	Latitude and Longitude of the project site	**Plant & Facilities:** **Latitude:** 22°8'10' to 22°8'28'' N **Longitude:** 85°24'45'' to 85°25'09'' E
v.	Elevation of the Project site	450-469 m AMSL
vi.	Involvement of Forest land if any.	Nil
vii.	Water body exists within the project site as well as study area	**Project Site**: Nil **Study area:** **Water Body** / **Distance** / **Direction** Betlata Nala / 3.0 km / ESE Karo River / 5.1 km / West
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil

49.4.8 The existing project was accorded environmental clearance vide letter. no J/11011/230/2016/IA.II(I) dated 07/08/2019. Consent to Operate for the existing unit (over an area of 13.20 Acres) was accorded by Odisha State Pollution Control Board vide letter no. 5584/IND/I/CON/6645 dated 31.03.2021. The validity of CTO is up to 31/03/2022.

49.4.9 Implementation status of the existing EC:

Sl. No.	Plant Facilities	Units	Annual production as per EC dated 07/08/2019	implementation status	Production as per CTO dated 31.03.2021
1	**Steel Melting Shop** 2x15T, LRF 1x20 T	TPA	126,720	Operational	126,720
2	Billets/ Bloom/ Slab caster (2 strand)	TPA	124,186	Operational	124,186
3	Rolling Mill (flat/ round/ wire rod/ structural mill/ others)/1	TPA	121,702	Operational	121,702

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

Sl No	Plant Equipment / Facility	Existing Units		Proposed Units		Final (Existing + Proposed)	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity
1	**Steel Melting Shop**						

Sl No	Plant Equipment / Facility	Existing Units		Proposed Units		Final (Existing + Proposed)	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity
1.1	IF/LRF	2x15T IF & 1x20 T LRF	126,720	2x15T IF & 1x20 T LRF	46,530	2x15T IF & 1x20 T LRF	173,250 TPA,
1.2	IF/LRF	--	--	(2x15T IF & 2x20 T LRF)	115,500	(2x15T IF & 2x20 T LRF)	115,500 TPA
	Total		**126,720**		**162,030**		**288,750**
2.0	CCM/1 (Billets/ Bloom/ Slab)	1x2 Strand	124,186	1x3 Strand	158,789 TPA	1x3 Strand	282,975 TPA
3.0	Rolling Mill (flat/ round/ wire rod/ structural mill/ others)	--	121,702		123,298 TPA		245,000 TPA
4.0	Oxygen plant	--	--	--	10 TPD	--	10 TPD
5.0	Captive Power plant						
5.1	AFBC/ CFBC based CPP	--	--	--	20 MW		20 MW
5.2	TG	--	--	--	20 MW		20 MW
6	Producer Gas Plant	--	--	--	5,000 Nm^3/hr		5,000 Nm^3/hr
7	Slag separation plant & sand making plant*	--	--	--	30 TPH	--	30 TPH
8	Brick plant*	--	--	--	2500 Bricks/hr	--	2500 Bricks/hr

** Facilities are not covered under ambit of EIA Notification 2006 & its amendments but being proposed for solid waste recycling*

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

S. No	Raw Material	Quantity required (TPA)	Source	Distance from site (kms)	Mode of Transportation
1	DRI	2,94,119	2,57,377 TPA from Karakolha sponge iron plant, balance open market	0.5-50	Road
2	Pig Iron	43,940	Kamanda steel plant of RML/ open market	35	Road
3	Steel Scrap	15,693	Rourkela/ Raigarh	150	Road, Rail

S. No	Raw Material	Quantity required (TPA)	Source	Distance from site (kms)	Mode of Transportation
4	Fuel oil requirement	1,577	Nearest depot	40	Road
5	Coal for PGP	16,614	Imported or domestic through e/auction, commercial purchase, etc.	340	Road, Rail
6	Coal for CPP	1,60,588	through e/auction, commercial purchase, etc.	340	Road, Rail
7	Limestone	16,800	Raigarh, Rourkela, open market sources		
8	Cement for own brick plant	9,808	from Company's plant proposed at Chaliyama steel plant of the company	70	Road, Rail

49.4.12 The water requirement for the revised project is estimated as 2,619 m^3/day, which will be obtained from ground and surface water. The permission for drawl of ground water of 50 m^3/day water is obtained from CGWA vide letter no. 21/4/1439/OR/IND/2017/303, dated 8/08/2020 and Surface water of 5.98 cusec water (14631 m^3/day) is obtained from Irrigation Department vide Lr. No. 26308/WR, dated 21/11/2019.

49.4.13 The power requirement for the revised project is estimated as 42 MW, out of which 20 MW will be available from CPP, 16 MW from the Karakolha sponge iron plant and balance from state electricity board grid.

49.4.14 Baseline Environmental Studies:

Period	01/03/2019 to 31/05/2019
AAQ parameters at 9 Locations (Min and max)	$PM_{2.5}$= 23.4 to 44.3 μg/m^3 PM_{10}=40.6 to 73.4 μg/m^3 SO_2= 6 to 15.3 μg/m^3 NO_2 = 7.9to 20.4 μg/m^3 CO= 0.12 to 0.788 μg/m^3
Incremental GLC level	PM_{10}= 1.71 μg/m^3 (Level at 1.6 km in ENE Direction) SO_2= 3.575 μg/m^3 (Level at 4 km in E Direction) NOx=1.985 μg/m^3 (Level at 4 km in E Direction)
Groundwater quality at 13 locations	pH:6.6 to 7.5, Total Hardness:44 to 316mg/l, Chlorides:9 to79 mg/l, Fluoride: BDL to 0.22mg/l. Heavy metals are within the limits.
Surface water quality at 12 locations	pH:6.8 to 7.9; DO:6.7 to 7.3mg/land BOD:10 to 15 mg/l COD from 14 to 32 mg/l
Noise levels Leq (Day and Night)	50.19 to 66.41 for the day time and 36.50 to 65.22 for the Night time.
Traffic assessment study	**For revised proposal:**

<table>
<tr><td>Findings</td><td>

Traffic study has been conducted at SH 10B which is approximately 0.9 km from the plant site.
Transportation of raw material, fuel & finished product will be done 100% by road.
Existing PCU is 483 PCU/hr on SH10B and existing level of service (LOS) is:

<table>
<tr><td>Road</td><td>V (Volume in PCU/hr)</td><td>C (Capacity in PCU/hr)</td><td>Existing V/C Ratio</td><td>LoS</td></tr>
<tr><td>SH10B</td><td>483</td><td>1250</td><td>0.386</td><td>B</td></tr>
</table>

PCU load after proposed project will be 483 (Existing) + 15 (Additional) PCU/hr and level of service (LOS) will be:

<table>
<tr><td>Road</td><td>V (Volume in PCU/hr)</td><td>C (Capacity in PCU/hr)</td><td>Existing V/C Ratio</td><td>LoS</td></tr>
<tr><td>SH10B</td><td>498</td><td>1250</td><td>0.398</td><td>B</td></tr>
</table>
** Note: Capacity as per IRC/64/1990 Guide line for capacity for roads in rural areas*

Conclusion: The level of service will be B after including additional traffic due to proposed project.
</td></tr>
<tr><td>Flora and fauna</td><td>Three Schedule/I fauna i.e. sloth bear, elephant and Indian rock python are found within the study area.
A “Site Specific Conservation Plan” has been prepared with respect to Karakhendra Steel Plant approved by PCCF (WLW) vide letter no / 5861/1WL/EC/industry/SSP/128/2018 dated 23/06/2018.</td></tr>
</table>

49.4.15 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

S No	Source	Type of Waste	Quantity generated (TPA)	Management
1	SMS (IF/LRF/Caster Route)	BF dust/ Ferrous dust	6,690	Used for levelling of land
		Slag	58,312	100% utilized in proposed brick making plant & road making
2	SMS (Caster)	Mill Scale	5,775	Sold to cement manufacturers, iron oxide pellet manufacturers, etc
3	Rolling Mill (TMT/ Round / Wire Rod / Structural/ Flat/ others)	Reject	2,250	100% Reused in SMS
		Mill Scale	2,750	Sold to cement manufacturers, iron oxide pellet manufacturers, etc

S No	Source	Type of Waste	Quantity generated (TPA)	Management
4	Producer gas plant	Ash	5,981	100% reused for brick manufacturing (in/house)
		Coal Tar	830	100% Sold
5	Captive power plant	Ash	95,113	100% reused for brick manufacturing (in/house & outhouse), embankment construction, land levelling etc.
	TOTAL		**1,77,701**	

49.4.16 Public Consultation:

Details of advertisement given	08/01/2021
Date of public consultation	11/02/2021
Venue	Khata No. 70/7, Plot no. 185, 185/703 & 703/980 (Near OPTCL LILO Switching Station) in village Karakhendra & Karakhola, Keonjhar
Presiding Officer	Dr. Uddhaba Chandra Majhi, Project Director, DRDA Shri Puskar Chandra Behera, Regional Officer, OSPCB
Major issues raised	i. Employment opportunity ii. Health care facility iii. Water supply iv. Road maintenance v. Pollution and control measures

Action plan as per MoEF&CC O.M. dated 30/09/2020:

S No	Activity required as raised during public hearing		Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	Agricultural yield improvement program	**Target**	Training program for 50 farmers in Karakhendra Village	Grant to trained farmers for agricultural activity in Karakhendra				
		Budget	100,000	150,000				**250,000**
2	Soil testing	**Target**	1 sample per trained farmer					
		Budget	150,000					**150,000**
3	6 bedded health centre in Karakhendra Steel Plant with full time doctor & other staff	**Target**	Building construction	Equipment and making operational	50% Running cost (1 doctor, 2 nurses, 1 compounder, 5 support staff, medicines & overheads)	50% Running cost (1 doctor, 2 nurses, 1 compounder, 5 support staff, medicines & overheads)	50%Running cost (1 doctor, 2 nurses, 1 compounder, 5 support staff, medicines & overheads)	

S No	Activity required as raised during public hearing		Year 1	Year 2	Year 3	Year 4	Year 5	Total
		Budget	2,000,000	1,500,000	1,740,000	1,740,000	1,740,000	**8,720,000**
4	Ambulance on call (already provided in Karakhendra)	**Target**	Running cost (driver, attendant, petrol, R&M)	Running cost (driver, attendant, petrol, R&M)	Running cost (driver, attendant, petrol, R&M)	Running cost (driver, attendant, petrol, R&M)	Running cost (driver, attendant, petrol, R&M)	
		Budget	420,000	420,000	420,000	420,000	420,000	**2,100,000**
5	Training to local youth will be arranged by the company prior to recruitment with students from Karakhendra, Karakolha, Belkundi, Nalda, Dalki, Barajamda, etc.	**Target**	10 students to ITI	10 students to ITI	10 students to ITI	10 students to ITI	10 students to ITI	
		Budget	120,000	120,000	120,000	120,000	120,000	**600,000**
6	Develop one park / children/ provide mini stadium	**Target**			Annual maintenace/ upkeep cost of renovates playground in Karakolha	Annual maintenace/ upkeep cost of renovates playground in Karakolha	Upgrade facilities at play ground to mini stadium	
		Budget			20,000	20,000	100,000	**140,000**
7	Solar street lights	**Target**	20 lights in Karakhendra village				20 lights in Dalki village	
		Budget	160,000				240,000	**400,000**
8	Construction of drain along main arterial road of the village	**Target**	In Karakhendra (200 m)				In Dalki (240 m)	
		Budget	200,000				240,000	**440,000**
10	Distribution of plants to villagers annually (2,000 saplings are planned for distribution)	**Target**	In Karakhendra				In Dalki	
		Budget	100,000				100,000	**200,000**
11	Help the SHG groups, development and promotion of their business	**Target**	5 groups in Karakhendra				2 groups in Dalki	
		Budget	250,000				100,000	**350,000**
12	Repairing of roads inside village	**Target**	In Karakhendra (200 m)					
		Budget	2,000,000					**2,000,000**

S No	Activity required as raised during public hearing		Year 1	Year 2	Year 3	Year 4	Year 5	Total
13	Regular water sprinkling	**Target**	1 water tanker, driver, fuel	Operating cost	Operating cost	Operating cost	Operating cost	
		Budget	696,000	132,000	143,000	154,000	165,000	**1,290,000**
14	Drinking water (Provision of new borewell) and repairing of water pipe line using maintenance manpower from project	**Target**	In Karakhendra (1 Bore well)				In Dalki (1 Borewell)	
		Budget	60,000				60,000	**120,000**
15	Educational facilities of the children	**Target**	Books for 25 students in Karakolha Village	Books for 25 students in Karakhendra Village	Books for 25 students in Belkundi Village	Books for 25 students in Nalda Village	Books for 25 students in Dalki Village	
		Budget	25,000	25,000	25,000	25,000	25,000	**125,000**
17	Old age pension scheme for Sr. citizens from Karakhendra, Karakolha, Belkundi, Nalda, Dalki, Barajamda, etc.	**Target**	15 persons	15 persons	15 persons	15 persons	15 persons	
		Budget	90,000	90,000	90,000	90,000	90,000	**450,000**
18	College bus will also be provided	**Target**	Contractual Operation with driver, helper, petrol, R&M	Contractual Operation with driver, helper, petrol, R&M	Contractual Operation with driver, helper, petrol, R&M	Contractual Operation with driver, helper, petrol, R&M	Contractual Operation with driver, helper, petrol, R&M	
		Budget	516,000	546,000	576,000	600,000	660,000	**2,898,000**
	GRAND TOTAL		**6,887,000**	**2,983,000**	**3,134,000**	**3,169,000**	**4,060,000**	**20,233,000**

49.4.17 Existing capital cost of project was Rs. 85 crores. The capital cost of the revised proposed expansion project is Rs.165 Crores and the capital cost for environmental protection measures is proposed additional as Rs. 3.92 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 1.26 Crores (for expansion). The employment generation from the proposed project / expansion is 360. The details of cost for environmental protection measures are as follows:

Description	Capital Cost, Rs lakhs			Recurring Cost, Rs lakhs		
	Sanctioned as perEC dt. 7/8/2019	Revised Additional	Total	Sanctioned as per EC dt. 7/8/2019	Revised Additional	Total
Air Pollution Control	85.00	260	345.00	27.77	75.68	103.45
Water Pollution Control	27.60	0	27.60	2.20	9.07	11.27

Description	Capital Cost, Rs lakhs			Recurring Cost, Rs lakhs		
	Sanctioned as perEC dt. 7/8/2019	**Revised Additional**	**Total**	**Sanctioned as per EC dt. 7/8/2019**	**Revised Additional**	**Total**
Noise Pollution Control	5.00	0	5.00	1.27	1.38	2.65
Env. Monitoring AndManagement	145.10	33.9	179.00	28.68	20.45	49.13
Occupational Health	2.00	86	88.00	2.57	10.53	13.10
Green Belt	4.41	5.9	10.31	1.55	8.23	9.78
Others, Overheads (3% of Dep., Energy, R&M & Interest), etc.	/	7	7.00	12.18	1.3	13.48
Total	**269.11**	**392.8**	**661.91**	**76.22**	**126.64**	**202.86**

49.4.18 Greenbelt will be developed in 4.12 ha which is about 33% of the total project area. A 3-5 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as green belt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total 5000 no. of saplings planted and 5600 no of sapling will be planted and nurtured in 4.12 hectares in 2 years.

49.4.19 The proponent has reported that there is no violation under EIA Notification, 2006/ court case/ show cause/ direction related to the project or related activity under consideration.

49.4.20 Name of EIA consultant: The EIA report was originally prepared by the M/s. Min Mec Consultancy Pvt. Ltd. and thereafter the report was revalidated by the M/s. Centre for Envotech and Management Consultancy Pvt Limited. Addendum to the EIA report was submitted on 24/11/2021.
M/s. Centre for Envotech and Management Consultancy Pvt Limited [S.No. 99, List of ACOs with their Certificate no. NABET/EIA/1821/SA 0126 and valid up to 17/12/2021 Rev. 16, November 15, 2021].

Certified compliance report from Regional Office

49.4.21 The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar *vide* letter no 101/1001/17/EPE, dated 18/02/2021 in the name of M/s. M/s.Rungta Mines Ltd. The Action taken report regarding the partially complied condition was submitted to Regional Officer MoEF&CC, vide letter no. RML/KKSP-641/499/20-21 dated 10.03.2021. Thereafter, the reviewed closure report has been issued on 09.06.2021 vide letter 101-100117/EPE. The details of the observations made by RO in the report dated 18.02.2021 and closure report dated 09.06.2021 along with its present status as furnished by the PP is given as below.

Sl. No.	Non-Compliance details	Observation of RO (abridged)	Condition no.			Response by PP
			EC date	Specific	General	
1	CSR activity	It is recommended that PAs also take activities such as "procurement of ambulance fitted with necessary equipments for emergency health care and referential services, construction of village roads/culverts in villages Karakhendra, Karakolha, electricity provision in village, playground in villages Belkundi, Mahakud Basti, Karakolha, Mundasahi, Belkundi Talasaahi, Nalda Karakhendra and Uliburu.	15.01.2018	iii		Ambulance fitted with necessary equipment for emergency health care has already been provided CC Road has been constructed from Magan Sahi Munda Basti to Magan Sahi end, Karakhendra Panchayat Electricity provided in Karakhendra village Playground had been developed in Belkundi Village **Updated Status : complied**
2	Green belt	PAs may inform the area wise plantation with area covered and details of plantation for last three years with species planted.		iv		Total plant area is 13.20 acres. The plantation is being carried out in 33% of the area i.e. 4.356 acres. The plantation is being with done local species in three rows. Species planted are Neem, Mango, Siris, Jamun,Champa & Saguan **Updated Status : complied**
3	Monitoring	PAs may inform the expenditure earmarked towards environmental protection measures and implementation plan		v		Capital (269.11 lakhs) and recurring cost (**76.22 lakhs)** earmarked for EMP **Updated Status : complied**

Sl. No.	Non-Compliance details	Observation of RO (abridged)	Condition no.			Response by PP
			EC date	Specific	General	
4	Statuary clearance	As per NOC from CGWA, the NOC is valid from 19.06.2018 to 18.06.2020. PAs may inform whether they have applied for renewal for their NOC and intimate about the status of the same.			17	Renewed NOC has already been obtained from CGWA vide Letter No. CGWA/NOC/IND/REN/1/2021/5857 **Updated Status : complied**
5	Monitoring	PAs do not have any display board for disclosure to the public			23 v	Display board has already installed in front of the Main Gate of the plant **Updated Status : complied**
6	Monitoring	PAs have not informed the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work			23 viii	This project is 100% self-financed and therefore no loan has been taken from the banks. Thus, financial closure and financial approval from any authorities is not required. Further, we wish to submit that construction work has been started on 01.04.2018 and shall be completed by 31.03.2021.

49.4.22 It was apprised to the EAC that Ministry is in receipt of a public representation on 14/12/2021 against the instant expansion project. The representative claims that despite no clearance by the Ministry for expansion of the steel plants, the EAC has included the Company case for expansion of their steel plant. This is in contravention of the Indian Forest Act, 1927 and various judgements of the Hon'ble Supreme Court wherein it has been laid down that no non-forest activity can be permitted in the forest area without prior clearance from the forest department. Further, it is stated no document relating to the proposal are shown in Parivesh.

Observations of the Committee

49.4.23 The Committee noted the following:

i. As per the revised proposal submitted by the proponent, expansion proposal involves *Enhancement of capacity of existing IF/LRF (126,720 to 288,750 TPA); CCM (124186 TPA to 282975 TPA) & rolling mill (121,702 to 245,000 TPA), 20 MW Power Plant, 5000 Nm^3/hr producer gas plant, oxygen plant (10 TPD), a slag separation plant (30 TPH) and a brick plant (2500 bricks/hr) by M/s. Rungta Mines*

Limited located at Karakhendra Village, Barbil Tehsil, Keonjhar District, Odisha". Remaining facilities envisaged under the expansion project have been dropped.

ii. Following are the salient features of the revised proposal:

Description	**Proposal recommended during 15-17th March, 2021**	**Revised proposal**	**Remarks**
Villages	Karakhendra & Karakolha	Karakhendra	reduction in village
Area	55.65 ha	12.5 ha	reduction in land
Present status of land	Under acquisition, under forest clearance process	7.87 ha in possession, 4.63 ha under acquisition	No FC required in existing or rev. expansion area
Products	Steel, sponge iron, pellets, etc	Steel	Less transportation
Working days	Existing- 330, Proposed- 355	Same	-
Manpower	1340	360	-
Project Cost	Rs. 1983.69 crores	Rs. 165 crores	Reduction
EMP cost	Capex- Rs. 19.73 Cr annual- Rs. 4.71 Cr	Capex- Rs. 3.92 Cr annual- Rs. 1.26 Cr	-
Water requirement, KLD	Existing - 105 Additional - 15,484 Total - 15,589 Fresh- 15,305, Treated-284	Existing - 105 Additional - 2,514 Total - 2,619 Fresh- 2,571, Treated-48	Reduction
Source of water	Karo river (4.7 km aerially, west), ground water (drinking) & harvested rain water	No change	-
Power requirement, MW	Existing - 20 Additional - 108 Total - 128	Existing - 20 Additional - 22 Total - 42	Reduction
Power source	Captive Power Plant 121 MW(including 53 MW AFBC/CFBC)	Captive Power Plant 20 MW CPP, & Karakolha sponge iron division	Less CPP, less pollution

iii. As per the revised proposal, there is no involvement of forest land. Hence, clearance under the provisions of Forest Conservation Act, 1980 will not be required. Further, the Committee also noted that 4.63 ha of private land is yet to be acquired by the proponent.

iv. The EAC deliberated on the revised feasibility report, addendum to EIA EMP report, certified compliance report of RO dated 18/02/2021 & 09/06/2021, public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.

v. EAC deliberated upon the points raised in the public representation and observed that there are no irregularities regarding the consideration of the proposal and the same is being appraised as per the provisions of EIA Notification, 2006.

Recommendations of the Committee

49.4.24 In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22/34/2018/III dated 09/08/2018 based on project specific requirements.

A. Specific conditions

i. 2571 KLD water shall be drawn from Karo River located at 4.7 km from plant site. No ground water abstraction is permitted.
ii. Particulate matter emissions from stacks shall be less than 30 mg/Nm^3. Necessary retrofitting work shall be carried out in APCDs of old plant to reduce PM emissions to less than 30 mg/Nm^3 within two years from the date of EC.
iii. Govt. Of Odisha has allocated 6.72 cusec and 5.98 cusec of water from Karo river for Karakolha Steel plant and Karakhendra Steel plant respectively. The raw water shall be brought to the plant in separate pipe lines, treated in respective plants and distributed in the process. The treatment of water and sludge management shall be carried out by Karakolha steel plant.
iv. Rain Water Harvesting shall be carried out as per the action plan submitted in the EIA report.
v. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
vi. 100 % solid waste generated in the facility shall be utilized as committed by the project proponent.
vii. 80 to 85% of the billets shall be charged directly and remaining billets shall be reheated in reheating furnace.
viii. Green belt shall be developed in 33% of the total area with density of 2500 trees/ ha uniformly all along the project boundary.
ix. All internal and connecting road to the Highway shall be black topped/ concreted with suitable load in term of Million Standard Axle (MSA) as per IRC guideline

B. General conditions

I. Statutory compliance:

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as two Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

v. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

vi. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

vii. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.

viii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

ix. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

iii. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March, 2012 (applicable to IF/EAF) as amended from time to time.

iv. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

IV. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

i. Used refractories shall be recycled as far as possible.

ii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.

ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

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

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

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

xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

49.5 Proposed Expansion of Existing Sponge Iron Plant (0.18 MTPA DRI Plant and 22 MW CPP) to Integrated Steel Plant (0.5775 MTPA Steel Capacity with 109 MW CPP) in Karakolha

Sponge Iron division by **M/s. Rungta Mines Limited** located at villages Karakhendra & Karakolha, **District Keonjhar, Odisha.** [Online Proposal No. IA/OR/IND/59204/2016; File No. J/11011/229/2016-IA.II(I)] – **Environment Clearance – regarding.**

49.5.1 M/s. Rungta Mines Limited has made an online application vide proposal no. IA/OR/IND/59204/2016 dated 05/03/2021 along with copy of EIA/EMP report and Form-2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above.

49.5.2 The proposal cited above was considered in 32nd meeting of Reconstituted Expert Appraisal Committee (Industry/ 1) held on 15-17th March, 2021. The committee recommended the proposal for grant of Environment Clearance subject to the stipulation of environment safeguards. The said recommendation is subject to submission of stage I forestry clearance as the proposal involves diversion of forest land of 17.62 ha in proposed expansion area. Subsequently, Ministry vide letter dated 08/04/2021 informed the proponent to submit Stage I Forest Clearance for diversion of 17.62 ha ha forest land.

49.5.3 In response to the letter dated 08/04/2021, M/s. Rungta Mines Limited vide letter dated 23/11/2021 along with the revised feasibility report with addendum EIA report informed that they would like to partially withdraw the expansion area of 135.17 acres (54.7 ha) including 17.62 ha of forest land along with some facilities proposed on it. Hence, PP now propose to only retain the existing area of 25.149 acres (10.18 ha). Due to change in scope of the project, the proposal was referred back to the EAC by the Ministry. The details of the units withdrawn and proposed by the PP is furnished as below:

Sl	**Plant Facilities**	**Units**	**Annual production/ configuration**				
			Recommended by the EAC in its meeting held on 15-17th March, 2021			**To be withdrawn**	**Requested for grant of EC**
(a)	**(b)**	**(c)**	**(d) As per EC dated 28/08/2018**	**(e) Proposed expansion**	**(f)=(d)+(e) Total**	**(g) Proposed withdrawal**	**(h)**
1.	**Sponge Iron Plant**		**-**				
	(i) 5x100 TPD	**TPA**	**180,000**	**77,377**	**257,377**	-	**257,377**
	(ii) 1x600 TPD	TPA	-	308,850	308,850	308,850	Nil
	Sub-Total	**TPA**	180,000	**386,227**	**566,227**	**308,850**	**257,377**
2.	Pelletisation Plant	TPA	-	1,800,000	1,800,000	1,800,000	Nil
3.	Steel Melting Shop	TPA	-	577,500	577,500	577,500	Nil
3.1	Steel Melting via IF route		-				
	IF Configuration		-	5 X 20 T	5 X 20 T	5 X 20 T	Nil
	LRF configuration		-	3 X 25 T	3 X 25 T	3 X 25 T	Nil
3.2	CCM (2X4 strands) - billets/ bloom/ slab caster	TPA	-	565,950	565,950	565,950	Nil
4.	Rolling Mill-1 (TMT/Flat/Round/Wire Rod/ Structural Mill/others)	TPA	-	217,350	217,350	217,350	Nil
	Rolling Mill-2 (TMT/Flat/Round/Wire Rod/ Structural Mill/others)	TPA	-	326,025	326,025	326,025	Nil
	Sub-Total	**TPA**	**-**	**543,375**	**543,375**	**543,375**	Nil
5.	Silicon Manganese Alloy	TPA	-	32,000	32,000	32,000	Nil

Sl	Plant Facilities	Units	Annual production/ configuration				
			Recommended by the EAC in its meeting held on 15-17th March, 2021			To be withdrawn	Requested for grant of EC
(a)	(b)	(c)	(d) As per EC dated 28/08/2018	(e) Proposed expansion	(f)=(d)+(e) Total	(g) Proposed withdrawal	(h)
	Plant (2 nos. X 9 MVA)						
6.	Captive Power Plant						
6.1	WHRB based CPP	MW	10	20	30	20	**10**
6.2	AFBC/ CFBC based CPP	MW	12	67	79	67	**12**
	Sub-Total	MW	22	87	109	87	**22**
6.3	TG		1X 22 MW	1X 57+ 2X15 MW	1X22+1X 57+2X15 MW	1X 57+ 2X15 MW	**1X 22 MW**
7.	Producer Gas Plant	Nm^3/hr	-	45,000	45,000	45,000	-

49.5.4 The title for the revised proposal would be *"Expansion of existing Sponge Iron Plant (180,000 TPA DRI Plant) to (257,377 TPA DRI Plant) with existing 22 MW CPP and 1x22 MW TG by M/s. Rungta Mines Limited located at village Karakolha, District Keonjhar, Odisha*". The salient features of the revised proposal are furnished in the paragraphs given below.

Details submitted by Project proponent

49.5.5 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of Accord	ToR validity
18/06/2019	8th meeting of EAC held on 26th June 2019	Terms of Reference	18/07/2019	17/07/2023
11/06/2020	20th meeting of EAC held on 25/26th June 2020	Amendment in TOR	13/07/2020	

49.5.6 The project of M/s. Rungta Mines Limited located at village Karakolha, District Keonjhar, Odisha is for expansion of existing Sponge Iron Plant (180,000 TPA DRI Plant) to (257,377 TPA DRI Plant) with existing 22 MW CPP and 1x22 MW TG.

49.5.7 Environmental site settings:

SNo	Particulars	Details as per revised proposal in ADS
i.	Total land	10.18 ha (Industrial use/ 10.18 ha) **Land Use:**

Sl. No.	Description	Area (ha)
1.	Plant & facilities	3.22
2.	Stock yard (raw materials & wastes)	2.43
3.	Green belt	3.36
4.	Administration building	0.08
5.	Water reservoir	0.97

<table>
<tr><th>SNo</th><th>Particulars</th><th>Details as per revised proposal in ADS</th></tr>
<tr><td></td><td></td><td><table>
<tr><td>6.</td><td>Roads</td><td>0.12</td></tr>
<tr><td></td><td>Total</td><td>10.18</td></tr>
</table></td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M dated 7/10/2014</td><td>Existing project area is 10.18 ha and proposed expansion comes within existing project area which is in possession of the company. No additional land is required for proposed expansion.</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>No R&R is involved.</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td>Plant &Facilities:
Latitude: 22°07'47.36" to 22°08'03.65" N
Longitude: 85°25'15.80" to 85°25'15.80" E</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>465 - 477 m AMSL</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>Nil</td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td>Project Site: Nil

Study area:<table>
<tr><td>Water Body</td><td>Distance</td><td>Direction</td></tr>
<tr><td>Betlata Nala</td><td>2.0 km</td><td>East</td></tr>
<tr><td>Karo River</td><td>5.1 km</td><td>West</td></tr>
</table></td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/ national park /wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td>Nil</td></tr>
</table>

49.5.8 The existing project was accorded Environmental Clearance vide lr. no. J/11011/229/2016/IA.II (I) dated 28/08/2018. Consent to Operate for the existing unit (over an area of 25.149 Acres) was accorded by Odisha State Pollution Control Board vide letter no. 5774/IND/I/CON/2836 dated 06/04/2021. The validity of CTO is up to 31/03/2023.

49.5.9 Implementation status of the existing EC dated 28/08/2018:

Sl. No.	Facilities	Units	As per EC dated 28/08/2018	As per CTO dated 06/04/2021
1.	Sponge Iron Plant			
	5x100 TPD	TPA	180000	Under operation
2	WHRB based CPP	MW	10	Under operation
	CFBC based CPP	MW	12	Under operation
	TG	MW	1x22 MW	Under operation

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

S. No	Plant Equipment/ Facility	Existing Units		Proposed Units		Final (Existing + Proposed)	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity
1	Sponge Iron Plant	5x100 TPD	180,000 TPA	5x100 TPD	77,377	5x100 TPD	257,377
2	Captive Power Plant	WHRB	10 MW	--	--	WHRB	10 MW
		CFBC	12 MW	--	--	CFBC	12 MW
		TG	22 MW	--	--	TG	22 MW

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

S No	Raw Material	Quantity(TPA)	Source	Distance from site (kms)	Mode of Transportation
1	Iron Ore/ Fines/ concentrate	416,950	OMC/ other Pvt. Mines	40	Road, Rail
2	Dolomite	12,868	Rourkela/ Raigarh	150	Road, Rail
3	Coal	215,159	Imported/ domestic open market (e/auction/ open market)	340	Road, Rail
	Total	**3,446,886**			

49.5.12 The water requirement for the revised project is estimated as 1998 m^3 /day, out of which 1920 m^3/day of freshwater requirement will be obtained from the Surface & Ground Water and the permission for drawl of ground water of 550 m^3/day water is obtained from CGWA vide letter no. 21/4(117)/SER/CGWA/2009/792, dated 01/05/2018 and allocation of Surface water of 16441 m^3 /day water is obtained from Department of water resources vide Lr. No. 26303/WR, dated 21/11/2019.

49.5.13 The power requirement for the revised project is estimated at 5.9MW, which will be obtained from in/house Power Plant.

49.5.14 Baseline Environmental Studies:

Period	01/03/2019 to 31/05/2019
AAQ parameters at 9 Locations (Min and max)	$PM_{2.5}$= 23.4 to 44.3µg/m^3 PM_{10}=40.6 to 73.4 µg/m^3 SO_2= <6.0to15.3µg/m^3 NO_2 = 7.9to 20.4 µg/m^3 CO= 0.12 to 0.788 mg/m^3
Incremental GLC level	PM =0.011 µg/m^3(Level at 1.8 km in ESE Direction) SO_2=0.271 µg/m^3(Level at 4 km in E Direction) NOx=0.154 µg/m^3(Level at 4 km in E Direction)

<table>
<tr><td>Groundwater quality at 11 locations</td><td>pH: 6.6 to 7.5,
Total Hardness:44 to 316 mg/l,
Chlorides:7 to79mg/l,
Fluoride: BDL to0.22mg/l.
Heavy metals are within the limits.</td></tr>
<tr><td>Surface water quality at 12 locations</td><td>pH:6.8 to7.9;
D O:6.7 to7.3mg/l,
BOD:10 to 15 mg/l,
CODfrom14 to 32 mg/l</td></tr>
<tr><td>Noise levels Leq (Day and Night)</td><td>50.19 to 66.41 dB(A) forthedaytimeand36.50 to 65.22 dB(A) for the Night time.</td></tr>
<tr><td>Traffic assessment study findings</td><td>For revised proposal:
• Traffic study has been conducted at SH 10B which is approximately 0.7 km from the plant site.
• Transportation of raw material, fuel & finished product will be done 100% by road.
• Existing PCU is 483 PCU/hr on SH10B and existing level of service (LOS) is:
<table><tr><th>Road</th><th>V (Volume in PCU/hr)</th><th>C (Capacity in PCU/hr)</th><th>Existing V/C Ratio</th><th>LoS</th></tr><tr><td>SH10B</td><td>483</td><td>1250</td><td>0.39</td><td>B</td></tr></table>
• PCU load after proposed project will be 483 (Existing) + 17 (Additional) PCU/hr and level of service (LOS) will be:
<table><tr><th>Road</th><th>V (Volume in PCU/hr)</th><th>C (Capacity in PCU/hr)</th><th>Existing V/C Ratio</th><th>LoS</th></tr><tr><td>SH10B</td><td>500</td><td>1250</td><td>0.4</td><td>B</td></tr></table>
* Note: Capacity as per IRC/64/1990 Guide line for capacity for roads in rural areas

Conclusion: The level of service will be B after including additional traffic due to proposed project.</td></tr>
<tr><td>Flora and fauna</td><td>Sloth bear, Python and elephant are the three Schedule-I species found in study area.

A “Site Specific Conservation Plan” has been prepared with respect to 20 MW (8MW WHRB + 12 MW AFBC) Power Plant within existing premises of Sponge Iron Plant (5x100 TPD) at Karakolha approved by PCCF (WLW) vide letter no /5863/ 1WLEC/Industry/SSP/58/2018 dated 23/06/2018.</td></tr>
</table>

49.5.15 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

Sl. No.	Source	Type of Waste	Quantity generated (TPA)	Management
1	Sponge Iron	Char	46,328	100% reused in CFBC boiler

Sl. No.	Source	Type of Waste	Quantity generated (TPA)	Management
	Plant (DRI Plant)	ESP dust	9,730	Sent to iron oxide pellet manufacturers or iron ore sinter manufacturers for reuse
		Bag Filter Dust, scrapper etc.	3,139	
		Kiln Accretion	1,287	100% used for road making
		Coal Fines	30,885	100% Utilized in CPP
2	Captive Power Plant (AFBC/CFBC)	Bottom & Fly ash Generation	70,794	100% reused in brick making, block making, road making, embankment making, filling, leveling, sold to other cement plant, etc
		Total	**1,62,163**	

49.5.16 Public Consultation:

Details of advertisement given	08/01/2021
Date of public consultation	11/02/2021
Venue	Khata No. 70/7, Plot no. 185, 185/703 & 703/980 (Near OPTCL LILO Switching Station) in village Karakhola, Keonjhar
Presiding Officer	Dr. Uddhaba Chandra Majhi, Project Director, DRDA
Major issues raised	i. Employment opportunity ii. Health care facility iii. Water supply iv. Road maintenance v. Pollution control measures

Action plan as per MoEF&CC O.M. dated 30/09/2020:

Sl.	Activity requirement raised during public hearing		Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	Agricultural yield improvement program	**Target**	Training program for 50 farmers in Karakolha Village	Grant to trained farmers for agricultural activity in Karakolha				
		Budget	100,000	150,000				250,000
2	Soil testing	**Target**	1 sample per trained farmer					
		Budget	150,000					150,000
3	6 bedded health center in Karakhendra Steel Plant with full time doctor & other staff	**Target**			50% Running cost (1 doctor, 2 nurses, 1 compounder, 5 support	50% Running cost (1 doctor, 2 nurses, 1 compounder, 5 support	50%Running cost (1 doctor, 2 nurses, 1 compounder, 5 support	

Sl.	**Activity requirement raised during public hearing**		**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
					staff, medicines & overheads)	staff, medicines & overheads)	staff, medicines & overheads)	
		Budget			1,740,000	1,740,000	1,740,000	5,220,000
4	Ambulance on call (already provided in Karakolha plant)	**Target**	Running cost (driver, attendant, petrol, R&M)	Running cost (driver, attendant, petrol, R&M)	Running cost (driver, attendant, petrol, R&M)	Running cost (driver, attendant, petrol, R&M)	Running cost (driver, attendant, petrol, R&M)	
		Budget	420,000	420,000	420,000	420,000	420,000	2,100,000
5	Training to local youth will be arranged by the company prior to recruitment with students from Karakhendra, Karakolha, Belkundi, Nalda, Dalki, Barajamda, etc.	**Target**	10 students to ITI	10 students to ITI	10 students to ITI	10 students to ITI	10 students to ITI	
		Budget	120,000	120,000	120,000	120,000	120,000	600,000
6	Develop one park / children/ provide mini stadium	**Target**		Renovate play ground in Karakolha village				
		Budget		200,000				200,000
7	Solar street lights	**Target**	20 lights in Karakolha village		20 lights in Belkundi village	20 lights in Nalda village		
		Budget	160,000		160,000	160,000		480,000
8	Construction of drain along main arterial road of the village	**Target**	In Karakolha (240 m)		In Belkundi (350 m)	In Nalda (400 m)		
		Budget	240,000		350,000	400,000		990,000
9	Avenue plantation	**Target**		Both side of the road of Mahanta Basti towards Karakolha Plant	Maintenance cost	Maintenance cost	Maintenance cost	
		Budget		200,000	20,000	20,000	20,000	260,000
10	Distribution of plants to villagers annually (2,000 saplings are planned for distribution)	**Target**	In Karakolha		In Belkundi	In Nalda		
		Budget	100,000		100,000	100,000		300,000

Sl.	Activity requirement raised during public hearing		Year 1	Year 2	Year 3	Year 4	Year 5	Total
11	Help the SHG groups, development and promotion of their business	**Target**	5 groups in Karakolha		3 groups in Belkundi	6 groups in Nalda		
		Budget	250,000		150,000	300,000		700,000
12	Repairing of roads inside village	**Target**	In Karakolha (240 m)					
		Budget	2,400,000					2,400,000
13	Regular water sprinkling	**Target**	1 water tanker, driver, fuel	Operating cost	Operating cost	Operating cost	Operating cost	
		Budget	696,000	132,000	143,000	154,000	165,000	1,290,000
14	Drinking water (Provision of new bore-well) and repairing of water pipe line using maintenance manpower from project	**Target**	In Karakolha (1 Borewell)		In Belkundi (1 Borewell)	in Nalda (1 Borewell)		
		Budget	60,000		60,000	60,000		180,000
15	Educational facilities of the children	**Target**	Books for 25 students in Karakolha Village	Books for 25 students in Karakhendra Village	Books for 25 students in Belkundi Village	Books for 25 students in Nalda Village	Books for 25 students in Dalki Village	
		Budget	25,000	25,000	25,000	25,000	25,000	125,000
16	Jahira Mandap (Room of 12 x12 Ft with Varandah of 15 x12 Ft.) at Karakolha	**Target**	Construction	Maintenance, electricity etc.	Maintenance, electricity etc.	Maintenance, electricity etc.	Maintenance, electricity etc.	
		Budget	600,000	30,000	30,000	30,000	30,000	720,000
17	Old age pension scheme for Sr. citizens from Karakhendra, Karakolha, Belkundi, Nalda, Dalki, Barajamda, etc.	**Target**	15 persons	15 persons	15 persons	15 persons	15 persons	
		Budget	90,000	90,000	90,000	90,000	90,000	450,000
18	Bus facilities already provided for the student of Karakolha& nearby villages since 01.02.2021.	**Target**	Contractual Operation with driver, helper, petrol, R&M	Contractual Operation with driver, helper, petrol, R&M	Contractual Operation with driver, helper, petrol, R&M	Contractual Operation with driver, helper, petrol, R&M	Contractual Operation with driver, helper, petrol, R&M	

Sl.	Activity requirement raised during public hearing		Year 1	Year 2	Year 3	Year 4	Year 5	Total
		Budget	516,000	546,000	576,000	600,000	660,000	2,898,000
	GRAND TOTAL		**5,927,000**	**1,913,000**	**3,984,000**	**4,219,000**	**3,270,000**	**19,313,000**

49.5.17 Existing capital cost of project was Rs. 90 crores. The capital cost of the revised proposed expansion project is Rs. 0.50 Crores and the capital cost for environmental protection measures is additional Rs. 2.5 lakhs (for expansion). The annual recurring cost towards the environmental protection measures is proposed as Rs 0.20 lakhs (for expansion). The employment generation from the proposed expansion is 51. The details of cost for environmental protection measures is as follows:

Description	Capital Cost, Rs Lakhs			Recurring Cost, Rs Lakhs		
	Sanctioned as per previous EC	Additional	Total	Sanctioned as per previous EC	Additional	Total
Air Pollution Control	243	2.4	245.4	38.61	0.10	38.71
Water Pollution Control	18	0	18	3.67	--	3.67
Noise Pollution Control	5	0	5	1.27	--	1.27
Env. Monitoring And Management	12	0	12	6.18	--	6.18
Occupational Health	7	0.10	7.1	2.62	0.10	2.72
Green Belt	0	0	0	1.24	--	1.24
Others	1.5	0	1.5	2.35	--	2.35
Overheads (3% of Dep., Energy, R&M & Interest)				10.02	--	10.02
Total	**286.5**	**2.5**	**289.0**	**65.95**	**0.20**	**66.15**

49.5.18 Greenbelt will be developed in 3.36 ha which is about 33% of the total project area. A 3-5 m wide greenbelt, consisting of at least 3 tiers around plant boundary has been developed as greenbelt and green cover as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species have been planted with a density of 2500 trees per hectare. Total no. of 8400 saplings planted and nurtured in 3.36 hectares.

49.5.19 The proponent has reported that there is no violation under EIA Notification, 2006/ court case/ show cause/ direction related to the project or related activity under consideration.

49.5.20 Name of EIA consultant: The EIA report was originally prepared by the M/s. Min Mec Consultancy Pvt. Ltd. and thereafter the report was revalidated by the M/s. Centre for

Envotech and Management Consultancy Pvt Limited. Addendum to the EIA report was submitted on 23/11/2021.
M/s. Centre for Envotech and Management Consultancy Pvt Limited [S.No. 99, List of ACOs with their Certificate no. NABET/EIA/1821/SA 0126 and valid up to 17/12/2021 Rev. 16, November 15, 2021].

Certified compliance report from Regional Office

49.5.21 The status of compliance of EC was obtained from Regional Office, Bhubaneswar vide letter no. 101/1002/17/EPE dated 11/03/2021 in the name of M/s. Rungta Mines Ltd. The details of the observations made by RO in the report dated 11/03/2021 and closure report dated 12/07/2021 along with its present status as furnished by the PP is given below:

S No	Non/ Compliance details	Observation of RO (abridged)	Condition no.			Response by PP
			EC date	Specific	General	
1	Greenbelt	The implementation status of developing additional 5% green belt	28.08.2018		iii	5% greenbelt works out as 0.509 ha. Against this, 2.41 ha has been planted along road from Karakolha plant to SH/108 and 2.0 ha has been planted
			15.01.2018	3		
2	Document submission	Delay in action taken report submission,	15.01.2018		iv	submitted
		Activities under WLCP	15.01.2018	1		Vehicle to PCCF office: Rs 17.84 lakhs, Fuel & maintenance Rs 3.58 lakhs, deposit into CAMPA fund under process
		Funds towards environment protection	15.01.2018	4		Rs. 52 lakhs for environmental monitoring, bag filter, STP, CAAQMS, Occupational health, Water sprinkling, Electricity charges, Manpower cost (STP Maintenance), Plantation, etc for last three years
		water quality monitoring report from the Piezometer	15.01.2018		2/ii	Water quality monitoring for Piezometer completed by Mitra S.K. Lab & results submitted

S No	Non/ Compliance details	Observation of RO (abridged)	Condition no.			Response by PP
			EC date	Specific	General	
3	Pollution control & monitoring	Emission higher than norms occasionally from stack	15.01.2018		1/i	Closure and sealing of safety cap ensuring no leakage
		Installation of CAAQ monitoring system in the fourth locations.	15.01.2018		1/iii	4 CAAQMS installed
		initiate the process of providing mobile or stationary vacuum cleaners	15.01.2018		3/v	vacuum cleaner provided
		Raw material found outside shed	15.01.2018		3/viii, 4/iii	As per practice, raw material unloaded outside shed is shifted under shed using dozers
		Pond to be desilted	15.01.2018		4/iv	work completed
		heat stress analysis for workers working in high temperature zone	15.01.2018		10	Heat stress analysis for worker is completed and submitted

49.5.22 It was apprised to the EAC that Ministry is in receipt of a public representation on 14/12/2021 against the instant expansion project. The representative claims that despite no clearance by the Ministry for expansion of the steel plants, the EAC has included the companies case for expansion of their steel plant. This is in contravention of the Indian Forest Act, 1927 and various judgements of the Hon'ble Supreme Court wherein it has been laid down that no non-forest activity can be permitted in the forest area without prior clearance from the forest department. Further, it is stated no document relating to the proposal are shown in Parivesh.

Observations of the Committee

49.5.23 The Committee noted the following:

i. As per the revised proposal submitted by the proponent, expansion proposal involves *Expansion of existing Sponge Iron Plant (180,000 TPA DRI Plant) to (257,377 TPA DRI Plant) with existing 22 MW CPP and 1x22 MW TG by M/s. Rungta Mines Limited located at village Karakolha, District Keonjhar, Odisha*". Remaining facilities envisaged under the expansion project have been dropped.

ii. As reported, the expansion in the existing Sponge Iron Plant is proposed to be carried out through the following ways:

- Using superior quality of Non- Coking Coal.
- When the input coal quality is improved (by using South African coal/ washed coal), the specific consumption of coal reduces to 0.75 T/T of DRI as compared to 1.62 T/T in conventional kilns under operation in the country.
- Optimization of operations through automation, control of feed air, etc.

iii. Following are the salient features of the revised proposal:

Description	**Proposal recommended during 15-17th March, 2021**	**Revised proposal**	**Remark**
Villages	Karakolha & Karakhendra	Karakolha	reduction in village
Area	64.88 ha	10.18 ha	reduction in land
Present status of land	Under acquisition, under forest clearance process	100% in possession & industrial use, operational	No FC required
Products	Steel, ferro alloys, sponge iron & pellets	Sponge Iron	Less transportation
Working days	Existing- 330, Proposed- 355	Same	-
Manpower	1444	51	-
Project Cost	Rs. 1678 crores	Rs. 0.50 crores	Reduction
EMP cost	Capex- Rs. 23 Cr annual- Rs. 4.6 Cr	Capex- Rs. 2.5 L annual- Rs. 0.2 L	-
Water requirement, KLD	Existing - 760 Additional - 13,687 Total - 14,447 Fresh- 13,974, Treated-473	Existing - 760 Additional - 1,238 Total - 1,998 Fresh- 1,920, Treated-78	Reduction
Source of water	Karo river (5.1 km aerially, west), ground water (drinking) & harvested rain water	No change	-
Power requirement, MW	Existing - 5 Additional - 104 Total - 109	Existing - 5 Additional - 0.9 Total - 5.9	Reduction
Power source	Captive Power Plant 109 MW	Captive Power Plant 22 MW	Less CPP, less pollution

iv. As per the revised proposal, there is no involvement of forest land. Hence, clearance under the provisions of Forest Conservation Act, 1980 will not be required.

v. The EAC deliberated on the revised feasibility report, addendum to EIA EMP report, certified compliance report of RO dated 11/03/2021 and 12/07/2021, public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.

vi. EAC deliberated upon the points raised in the public representation and observed that there are no irregularities regarding the consideration of the proposal and the same is being appraised as per the provisions of EIA Notification, 2006.

Recommendations of the Committee

49.5.24 In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22/34/2018/III dated 09/08/2018 based on project specific requirements:

A. Specific conditions

i. 1920 KLD water shall be drawn from Karo River located at 5.1 km from plant site. No ground water abstraction is permitted except for domestic consumption.
ii. Particulate matter emissions from stacks shall be less than 30 mg/Nm^3. Necessary retrofitting work shall be carried out in APCDs of old plant to reduce PM emissions to less than 30 mg/Nm^3 within two years from the date of EC.
iii. Govt. Of Odisha has allocated 6.72 cusec and 5.98 cusec of water from Karo river for Karakolha Steel plant and Karakhendra Steel plant respectively. The raw water shall be brought to the plant in separate pipe lines, treated in respective plants and distributed in the process. The treatment of water and sludge management shall be carried out by Karakolha steel plant.
iv. Rain Water Harvesting shall be carried out as per the action plan submitted in the EIA report.
v. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
vi. 100 % solid waste generated in the facility shall be utilized as committed by the project proponent.
vii. Green belt shall be developed in 33% of the total area with density of 2500 trees/ ha uniformly all along the project boundary.
viii. All internal and connecting road to the Highway shall be black topped/ concreted with suitable load in term of Million Standard Axle (MSA) as per IRC guidelines.

B. General conditions

i. **Statutory compliance:**

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other

Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

ii. **Air quality monitoring and preservation**

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as four Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.

vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

viii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

iii. **Water quality monitoring and preservation**

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

iv. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.

v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

iv. **Noise monitoring and prevention**

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

v. **Energy Conservation measures**

i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

vi. **Waste management**

i. Used refractories shall be recycled.

ii. Kitchen waste shall be composted or converted to biogas for further use.

vii. **Green Belt**

i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

viii. **Public hearing and Human health issues**

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.

iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

ix. **Environment Management**

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.

ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

x. **Miscellaneous**

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

49.6 Greenfield project for a DRI based Steel plant to produce Sponge Iron 198,000TPA; Mild Steel Billets 345,800TPA; Rerolled Steel Products through Hot Charging and through Reheating Furnace 342,144TPA; Ferro Alloys 35,000 TPA and/ or Pig iron 70,000 TPA from 9 MVA x 2Nos SAF; Captive Power of 20MW (12MW through WHRB and 8MW through AFBC); Pipes 150,000 TPA; Galvanizing products 100,000 TPA; and Fly Ash Bricks 34,600TPA by **M/s. Gauri Ganesh Ispat Private Limited** located at Village Madhi, Tehsil Tilda, **District Raipur, Chhattisgarh** [Online Proposal No.

IA/CG/IND/239481/2021; File No.: IA/J/11011/486/2021/IA/II(IND/I)] – **Prescribing of Terms of Reference – regarding.**

49.6.1 M/s. Gauri Ganesh Ispat Private Limited has made an application online vide proposal no. IA/CG/IND/239481/2021dated 18/11/2021, the application in prescribed format (Form/I), 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 S.No. Project Activity 3(a) Metallurgical Industries (ferrous & non-ferrous) & 1(d) Thermal Power Plant under Category "**A**" of the schedule of the EIA Notification, 2006 and appraised at central level.

Details submitted by Project proponent

49.6.2 The project of M/s. Gauri Ganesh Ispat Private Limited is located in Village- Madhi, Tehsil-Tilda, District- Raipur Chhattisgarh state for setting up a Greenfield project for a DRI based Steel plant to produce Sponge Iron 198,000 TPA; Mild Steel Billets 345,800 TPA; Rerolled Steel Products through Hot Charging and through Reheating Furnace 342,144 TPA; Ferro Alloys 35,000 TPA and/ or Pig iron 70,000 TPA from 9 MVA x 2 Nos SAF; Captive Power of 20 MW (12 MW through WHRB and 8 MW through AFBC); Pipes 150,000 TPA; Galvanizing products 100,000 TPA; and Fly Ash Bricks 34,600 TPA.

49.6.3 Environmental site settings:

<table>
<tr><th>SNo</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>26.93 Ha. [Private]</td><td></td></tr>
<tr><td>ii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Project Site:

Study area:<table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Khapri</td><td>1.17 km</td><td>ESE</td></tr><tr><td>Mandhi</td><td>0.90 km</td><td>South</td></tr><tr><td>Janjgira</td><td>1.0 km</td><td>SW</td></tr></table></td><td>R&R not required for the proposed project</td></tr>
<tr><td>iii.</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>BP1</td><td>21°27'18.12"N</td><td>81°48'0.59"E</td></tr><tr><td>BP2</td><td>21°27'43.59"N</td><td>81°48'3.93"E</td></tr><tr><td>BP3</td><td>21°27'41.39"N</td><td>81°48'16.77"E</td></tr><tr><td>BP4</td><td>21°27'28.86"N</td><td>81°48'26.95"E</td></tr><tr><td>BP5</td><td>21°27'27.77"N</td><td>81°48'19.18"E</td></tr><tr><td>BP6</td><td>21°27'18.79"N</td><td>81°48'13.04"E</td></tr><tr><td>BP7</td><td>21°27'27.81"N</td><td>81°48'6.69"E</td></tr><tr><td>BP8</td><td>21°27'31.83"N</td><td>81°48'7.13"E</td></tr></table></td><td></td></tr>
<tr><td>iv.</td><td>Elevation of the project site</td><td>291/ 297 m above mean sea level</td><td></td></tr>
<tr><td>v.</td><td>Involvement of Forest land if any.</td><td>Nil</td><td></td></tr>
<tr><td>vi.</td><td>Water body exists within the project site as well as study area</td><td><u>Study area</u><table><tr><th>Sr. no.</th><th>Name of the Water Body</th><th>Dist. (km)</th><th>Dir.</th></tr><tr><td>1.</td><td>Kirna Tank / Jalso dam</td><td>1.0</td><td>W</td></tr><tr><td>2.</td><td>Dhumma Nala</td><td>1.4</td><td>NW</td></tr></table></td><td></td></tr>
</table>

SNo	Particulars	Details				Remarks
		3.	Kirna Irrigation Canal	2.6	W	
		4.	Kulhan Nala	2.2	WSW	
		5.	Rindergaon Main Irrigation Canal	7.4	SSE	
		6.	Siliari Distributary	1.7	S	
		7.	JamuniyaNadi	3.5	E	
		8.	Bhatapara Branch (MahaNadi Canal)	1.9	NW	
		9.	Pikridih Tank	9.6	SE	
		10.	Jheel garden	4.0	NNW	
		11.	Khambha Talab	4.1	W	
		12.	Pindraon Tank	8.0	SE	
		13.	Bannubai Talab	9.7	N	
		14.	Dalal Talab	9.6	N	
vii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil				Not present in 10 km radius area.

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

S No	Process plant	Proposed configuration of the plant	Product Name	Capacity (in TPA)
1	DRI Kiln (Coal Fired)	2x200TPD & 2x100TPD	Sponge Iron	198,000
2	Induction Furnace along with CCM and LRF	IF:6x20Tons and LRF:1x20ton	MS Billet	345,800
3	Hot Rolling Mill			342,144
	a. Hot Charging Rolling Mill	Electrical driven Rolling Mill about 529TPD	Rerolled Steel product (Wire Rod, TMT bar, Structure Steel etc.)	174,636
	b. Billet Reheating Furnace	Reheating furnace based rolling mill about 507TPD	Rerolled Steel products (Sheets, Strips and Rerolled Structural Steel etc.)	167,508
4	Sub/Merged Arc Furnace	Electrically operated Sub/Merged Arc Furnace 9 MVA x 2 nos	Ferro Alloys (FeSi, FeMn, SiMn)*	35,000
			And/or	
			Pig Iron	70,000
5		Waste Recovery Heat Boilers (WHRB)	Captive Power	12 MW

S No	Process plant	Proposed configuration of the plant	Product Name	Capacity (in TPA)
	Captive Power Plant(Boiler and TG based)	Atmospheric fluidized bed combustion (AFBC)		8 MW
6	Pipe Mill Unit	Pipe mill with 454 TPD capacity	Pipes	150,000
7	Galvanizing unit	Galvanizing unit	GI Pipes & other galvanized products	100,000
8	Fly Ash Bricks/ Block making unit	Fly Ash product making facilities	Fly Ash Bricks/ Blocks	34,600

** The Submerged arc furnace will produce either Ferro Manganese 70,000TPA and/or Silico Manganese 35,000TPA and/or Ferro Silicon 22,600TPA and/or Pig Iron 70,000TPA.*

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

For Sponge Iron Plant

S. No.	Raw Material	Quantity required per annum	Source	Distance from site (Kms)	Mode of Transportation
1	Iron Ore	326,700	NMDC Iron Ore Mines	500 KMs	By Rail to nearest sidings and then by Road through covered vehicles
2	Coal	247,500	SECL Coal mines	200 KMs	By Rail to nearest sidings and then by Road through covered vehicles
3	Dolomite	6,930	Open Market	50 KMs	By Road through covered vehicles
4	Refractory Material	297	Open Market	100 KMs	By Road through covered vehicles
	Total	**581,427**			

For Induction furnace

S. No.	Raw Material	Qty (in TPA)	Source	Distance	Mode of Transportation
1	Sponge Iron	356,400	Captive plant and from nearby sponge iron plants	Internal & 100 Kms	Internal Roads & By road through covered vehicles
2	Pig Iron / CI Scrap	44,090	Captive Plant/ Local Market	Internal & 100 KMs	By Road through covered vehicles
3	Melting Scrap	7,400	Captive plant	Internal & 100 KMs	Internal Roads
4	Ferro Alloys	3,564	Captive plant	/	Internal Roads

S. No.	Raw Material	Qty (in TPA)	Source	Distance	Mode of Transportation
5	Aluminum	356	Open Market/ BALCO	150 KMs	By Road through covered vehicles
6	Ramming Mass	891	Open Market	100 KMs	By Road through covered vehicles
7	Steel Sheet Former	90	Open Market	100 KMs	By Road through covered vehicles
8	Furnace Oil for Ladle Preheating	691	Open Market	70 KMs	By Road through Tankers
9	Calcined Lime for Refining of Liquid Steel	17,820	Open Market	250 KMs	By Road through covered vehicles
10	Flurospar and other additives for de phos	3,564	Open Market	300 KMs	By Road through covered vehicles
11	Electrode for LRF (Arc Furnace)	713	Open Market	500 KMs	By Road through covered vehicles
	Total	**435,579**			

For Hot Charging Rerolling Mill

S. No.	Raw Material	Qty (in TPA)	Source	Mode of Transportation
1	Hot Billets	178,200	Captive plant	Through Conveyor belts
	Total	**178,200**		

For Reheating Furnace based Rerolling Mill

S No	Raw Material	Qty (in TPA)	Source	Distance	Mode of Transportation
1	Cold MS Billets	178,200	Captive plant / Local market as per requirement	Captive or Within 100KMs	Internal Transfer/ By Road through covered vehicles
2	Coal for Reheating Furnace	17,820	SECL Mines/ Local Market	Within 500Kms	By Rail wagons and Road through covered vehicles
	Total	**196,020**			

For Ferro Alloys Plant (SiMn, FeMn, FeSi)

S No	Raw Material	Qty (in TPA)	Source	Distance	Mode of Transportation
1	Manganese Ore	66,016	Mines at Orissa and Madhya	Within 500Kms	By Road through covered

S No	Raw Material	Qty (in TPA)	Source	Distance	Mode of Transportation
			Pradesh and Vidarbha region		vehicles
2	High Manganese Ore Slag	12,574	Open Market	Within 100Kms	By Road through covered vehicles
3	Quartz	2,515	Mines in Raigarh	Within 100Kms	By Road through covered vehicles
4	Coke/Coal/Charcoal	18,862	Open Market	Within 100Kms	By Rail wagons and Road through covered vehicles
5	Dolomite	944	Mines in Bilaspur	Within 500Kms	By Road through covered vehicles
6	Electrode Paste	944	Local Industries	Within 100Kms	By Road through covered vehicles
7	M.S. Item.	315	Local Industries	Captive	Internal Transfer
8	Lancing Pipe and Canister Sheet	472	Local Industries	Within 100Kms	By Road through covered vehicles
9	Oxygen Gas	95	Local Industries	Within 100Kms	By Road through Tankers
	Total	**102,737**			

Captive AFBC Power Plant (12 MW)

S. No.	Raw Material	Qty (in TPA)	Source	Distance	Mode of Transportation
1	Char/ Dolochar	49,500	captive generation in SID	Captive	Internally available.
2	Coal	24,636	SECL Mines (200 KM)	Within 500Kms	By Rail wagons and Road through covered vehicles
3	Fluidizing Bed Media	150	Open Market; (100 KMs)	Within 100Kms	By Road through covered vehicles
	Total	**74,286**			

For Pipe Mill & Galvanizing Unit

S. No.	Raw Material	Qty (in TPA)	Source	Distance	Mode of Transportation
1	MS Strip through reheating furnace	160,714	Captive generation from Billet Reheating Furnace	Captive	Internally available.

S. No.	Raw Material	Qty (in TPA)	Source	Distance	Mode of Transportation
2	Zinc	5,000	Open Market	Within 100Kms	By Road through covered vehicles
3	Lead	50	Open Market	Within 100Kms	By Road through covered vehicles
4	Furnace Oil	2,000	Open Market	Within 100Kms	By Road through covered vehicles
5	Acid	4,500	Open Market	Within 100Kms	By Road through covered vehicles
6	Lime for Treatment	2,500	Open Market	Within 100Kms	By Road through covered vehicles
	Total	**174,764**			

For Fly Ash Brick Plant:

S No	Raw Material	Qty (in TPA)	Source	Distance	Mode of Transportation
1	Fly Ash	22,490	Captive Plant	Captive	Internal Roads
2	Gypsum	3,460	Open Market; (100 KMs)	Within 100Kms	By Road through covered vehicles
3	Grounded Slag from Induction Furnace	8,650	Captive Plant	Captive	Internal Roads
	Total ::	**34,600**			

49.6.6 The water requirement for the project is estimated as 1700 KLD which will be sourced from Surface Water i.e. from nearest source, for which application for allotment of water from Bangoli Tank has already been submitted to Chhattisgarh Water Resource Department vide Ref. WA00262. During rainy season for 75 days water will be met from the rain water collection reservoir of 50,000 KLD capacity.

49.6.7 The power requirement for the project is estimated as 60 MW, out of which 20 MW will be obtained from captive power plant and 40 MW will be sourced through State Grid (CSPDCL). In addition, 2 Nos. of 3300 kVA DG sets are proposed for emergency backup.

49.6.8 The capital cost of the project is Rs **280.10** Crores including CER cost and proposed CER expenses is 135 Lakhs. The employment generation from the proposed project will be **550 Nos.**

49.6.9 Proposed Terms of Reference (**Baseline data collection period – 15/10/2021 to 15/01/2022**):

Attributes		Sampling		Remarks
		No. of stations	Frequency	
A. Air				
a. Meteorological parameters	Temperature, Relative Humidity, rainfall, wind direction & wind speed.	1 (Project site)	Daily	

Attributes		Sampling		Remarks
		No. of stations	**Frequency**	
b. AAQ parameters	PM_{10}, $PM_{2.5}$, SO_2, NO_2, NH_3, Ozone, CO, Benzene and Benzopyrene & Heavy metals, Heavy metals: Ni, Pb, As	8	For PM_{10}, $PM_{2.5}$, SO_2, NO_2, NH_3 **– 24 Hr** **&** For Ozone & CO **/ 8 Hr**	
B. Noise	Sound pressure level (Leq)	8	Once during the study period.(hourly reading for 24 hrs at each location)	
C. Water		13		
Surface water Ground water quality parameters	As per IS: 10500	8 5	Once during the study period	
D. Land				
a. Soil quality b. Land use	Physical and nutrition properties of soil	2	Once in a season	
E. Biological a. Aquatic b. Terrestrial	Flora and fauna within study area depending on Ecological receptors in the study area Aquatic Ecological Study at KirnaTank, Jamuniya Nadi and other water bodies in study area	3	Once during the study period	
F. Socio/ economic parameters	Occupational Health monitoring of employees	1 (Project site)	Once during the study period	

49.6.10 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.

49.6.11 Name of the EIA consultant: M/s. Anacon Laboratories Pvt. Ltd., Nagpur [S No 68, NABET Certificate no. NABET/EIA/1922/RA0150 valid up to 30/09/2022].

49.6.12 The proposal was considered in 49th meeting of re/constituted Expert Appraisal Committee (Industry/1) held on 16-17th December, 2021. The EAC observation and recommendation is given as below:

Observations of the Committee

49.6.13 The EAC noted the following:

i. The instant proposal is for seeking ToR for undertaking EIA study for setting up Greenfield project for a DRI based Steel plant in Village- Madhi, Tehsil-Tilda, and District- Raipur Chhattisgarh state within project area of 26.93 ha.
ii. Two villages Janjgira at 1.0km in SW and Mandhi at 0.9 km in South direction from the project are located.
iii. 4 sites have been explored. Selected site has the advantage of water availability, contiguous land.
iv. 2x9 MVA SAF are proposed to manufacture SiMn /FeMn / FeSi and pig iron. FeCr shall not be manufactured.
v. Location of AAQ monitoring stations are not in conformity to the wind rose diagram.

Recommendations of the Committee

49.6.14 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure/1 read with additional ToRs at Annexure/2:

i. 1700 KLD water shall be drawn from Bangoli tank. No ground water abstraction is permitted.
ii. Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.
iii. Action plan for fugitive emission control in the plant premises shall be provided.
iv. Action plan for green belt development covering 33% of the project area all along the periphery of the project site with a density of 2500 trees per hectare shall be submitted. This shall include development of green belt with a width of 20 m within the project site towards Janjgira village located at 1.0km in SW and Mandhi village located at 0.9 km.
v. Action plan for 100 % solid waste utilization shall be submitted.
vi. Action plan for rain water harvesting shall be submitted.
vii. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
viii. 4^{th} hole extraction system shall be provided in the Submerged Arc Furnace and SAF of closed type.
ix. One additional air quality monitoring station be installed for better and representative coverage of air quality and one-month additional monitoring be conducted at all the existing locations and at the additional monitoring station proposed.

49.7 Expansion of plant for production of 7,87,500TPA Crude Steel, 2,14,272 TPA Ferro/Alloys (maximum) along with allied facilities by **M/s. Shakambhari Ispat & Power Limited** located at Village Parvatpur, Madandih, Radhamadabpur, P.O. Bortoria, Tehsil Raghunathpur, **District Purulia, West Bengal** [Online Proposal No. IA/WB/IND/238446/2021; File No.: IA/J/11011/282/2021/IA/II(I)] – **Amendment in Terms of Reference – regarding.**

49.7.1 M/s. Shakambhari Ispat & Power Limited (SIPL) has made online application vide proposal no. IA/WB/IND/238446/2021 dated 12/11/2021 along with Form 3 and sought for amendment in standard Terms of Reference accorded by the Ministry vide letter no. IA/J/11011/282/2021/IA.II(I) dated 15/08/2021.

Details submitted by the project proponent

49.7.2 M/s. Shakambhari Ispat & Power Limited (SIPL) had earlier applied for grant of ToR for Expansion of Shakambhari Ispat & Power Limited plant for production of 7,87,500TPA Crude Steel, 2,14,272 TPA Ferro/Alloys (maximum) along with allied facilities. Accordingly, standard TOR was issued vide letter no IA/J/11011/282/2021/IA.II(I) dated 15/08/2021.

49.7.3 In view of marked demand of Stainless Steel (SS) long products, it is proposed to incorporate the production of SS products. MS and SS long products shall be produced on either/or basis, or in combination of both without change in ultimate production capacity.

49.7.4 Amendment in standard Terms of reference dated 15/08/2021:

S No	Plant Facility	Configuration and capacity of project			Capacity and configuration proposed for amendment in standard ToR dated 15/08/2021	Remarks
		Exiting as per EC dated 21/12/2016 & 29/04/2020	Proposed in ToR proposal dated 15/08/2021	Total as per ToR dated 15/08/2021		
1	Iron Ore Beneficiation Plant	630,000 TPA	Additional 3,70,000 TPA	10,00,000 TPA	10,00,000 TPA	No change
2	Pellet Plant	1x1870 TPD (582,000 TPA)	1x965TPD (2,68,000TPA)	1x2835TPD (850,000 TPA)	1x2835TPD (850,000 TPA)	No change
3	Sponge Iron Plant	4x100 TPD 2x350 TPD 1x600 TPD (544,000 TPA)	Capacity enhancement of **4x100TPD**(30400 TPA) + **2x350TPD** (53200 TPA) + **1x600TPD**(45600 TPA) and addition of **1x600 TPD** (2,37,600 TPA)	4x100TPD+ 2x350TPD+ 2x600TPD (910,800 TPA)	4x100TPD+ 2x350TPD+ 2x600TPD (9,10,800 TPA)	No change
4	Sinter Plant	1x20m^2 (198000 TPA)	1x20m^2replacedwith 1x90m^2(additional 5,97,600 TPA)	1x90 m^2 (795,600TPA)	1x90 m^2 (795,600TPA)	No change
5	Mini Blast Furnace	1x350 m^3 (249,900 TPA) Pig casting Machine: 1x1500TPD	Capacity enhancement of Mini Blast Furnace: 1x350m^3 for additional 166,600 TPA	Mini Blast Furnace: 1x350m^3 Pig casting Machine: 1x1500TPD (416,500 TPA)	1x350 m^3 (416,500TPA)	No change
6	Reheating Furnace	--	1x25TPH	1x25TPH	2x40TPH	2x40 TPH Reheating Furnace instead of 1x25 TPH
7	Producer Gas Plant	--	6x4000 Nm^3 /hr (24,000 Nm^3/hr)	6x4000 Nm^3 /hr (24,000 Nm^3/hr)	6x4000 Nm^3 /hr (24,000 Nm^3/hr)	No Change
8	Lime Plant	250TPD (80000 TPA)	--	250TPD (80000 TPA)	250TPD (80000 TPA)	No change

S No	Plant Facility	Configuration and capacity of project			Capacity and configuration proposed for amendment in standard ToR dated 15/08/2021	Remarks
		Exiting as per EC dated 21/12/2016 & 29/04/2020	**Proposed in ToR proposal dated 15/08/2021**	**Total as per ToR dated 15/08/2021**		
9	Ferro/alloys Plant	**4x9 MVA** (63,150TPA) Fe/Mn or Si. Mn or Fe Si or High Carbon Ferro Chrome, or Pig Iron, or in combination of any	Capacity enhancement of 4x9MVA SAF with metal recovery Plant + Additional installation of 4x9MVA SAF FeMn/142,848 or SiMn/194,058 or FeSi/64,282 or High Carbon Ferro Chrome – 135,330 or Ferro Silico Chrome – 88,664, or Pig Iron/214,272, or in combination of any	8x9MVA SAF with metal recovery Plant FeMn/142,848 or SiMn/194,058 or FeSi/64,282 or High Carbon Ferro Chrome – 135,330, or Ferro Silico Chrome – 88,664, or Pig Iron2,14,272 or in combination of any	8x9 MVA Fe/Mn / Si/Mn/ Fe/Cr., Fe/Si,/ Fe/Si/Cr/	No change
10	Power Plant	AFBC/ CFBC: 62 MW WHRB: 37	WHRB: 27 MW	AFBC/ CFBC: 62 MW WHRB: 64	AFBC/ CFBC: 62 MW WHRB: 64	No change
11	Briquette Plant for Ferro/alloys		1x 50 TPH 300,000	1x 50 TPH 300,000	1x 50 TPH 300,000	No change
12	Induction Furnace with LRF, VOD & AOD	IF: 9x25T LRF: 1x30T & CCM: 3x6/11 (MS Billets 523,950 TPA)	Capacity enhancement &Product Modification (263,550 TPA of MS/SS Billets)	IF: 9x25T LRF, VOD: 1x30T& CCM: 3x6/11m (MSBillets787,500 TPA)	IF: 9x25T LRF, VOD: 1x30T or **1x25 AOD**& CCM: 3x6/11m (MS/SS Billets 787,500 TPA)	Not change in production capacity. **1x25 AOD will be added**
13	Rolling Mill along with wire drawing facility	MS Long Products 300,000 TPA	360,000 MS Long Products	660,000 MS Long Products	660,000 MS/SS Long Products	SS long product include with MS product
14	Sinter Plant for Ferro/alloys	--	1x600 TPD 216,000 TPA	1x600 TPD 216,000 TPA	1x600 TPD 216,000 TPA	No change
15	Coal Washery	7,40,000TPA	--	7,40,000TPA	7,40,000TPA	No change
16	Oxygen Plant	225TPD		225TPD	225TPD	No change

49.7.5 Any other amendment sought:

S No	Raw Material/ Project requirement	Description as per approved ToR	Amendment proposed
	Raw material		
1	Ferro/alloys for AOD	--	207,207 TPA
2	Scrap for AOD	--	229,320 TPA
3	Calcined Lime AOD	--	40,950 TPA
4	Calcined Dolomite for AOD	--	40,950 TPA
	Others		
5	Project cost	300 Crore	320 Crores
6	Industrial shed area	14.394 ha	14.80 ha
7	Water requirement	13,690 m^3/ day	13,738 m^3/ day
8	fuel (LDO/LSHS)	630 kl/ year	810 kl/ year

49.7.6 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.

49.7.7 Name of the EIA consultant: M/s. Vardan Environet [S.L. No. 41, list of ACO's with their Certificate No. NABET/EIA/1922/RA 0166 and valid up to 06/11/2022; Rev 16, November 15, 2021].

49.7.8 During the meeting, project proponent submitted written submission on the following points:

- PP submitted the revised table for solid waste generation and its management to update detail of AOD slag. According to the revised table 23760 KLD of AOD slag will be generated. AOD slag after metal recovery and TCLP test sold to the cement manufacturer or to tile manufacturer after crushing.

Observations of the Committee

49.7.9 The Committee noted the following:

i. ToR was given on 15/08/2021 for Expansion of Shakambhari Ispat & Power Limited plant for production of 7,87,500TPA Crude Steel, 2,14,272 TPA Ferro/Alloys (maximum) along with allied facilities.
ii. Due to the marked demand of Stainless Steel (SS) long products, it is proposed to incorporate the production of stainless steel products with addition of 1x25 AOD in instant proposal.

Recommendations of the Committee

49.7.10 After deliberations, the Committee recommended the project proposal for amendment in the ToR dated 15/08/2021 as mentioned above at para no. 49.7.4 & 49.7.5 subject to stipulation following additional specific ToRs

i. Action plan for AOD slag disposal and utilization by other user industries shall be provided in the EIA report.
ii. Zigging and briquetting plant shall be provided with submerged arc furnace (SAF).
iii. Action plan for treatment, storage and utilization of tailings shall be submitted.
iv. 4th hole extraction system shall be provided in the SAF.
v. Action plan for 100 % solid waste utilization shall be submitted.

vi. Action plan for treatment of phenolic wastewater from producer gas plan shall be submitted.

49.8 Proposed set up of steel plant for Sponge Iron: 5,61,000 TPA (DRI Kilns: 2x500 TPD & 2x350 TPD), Billets/ Ingots/ Hot Billets: 4,95,000 TPA (IF: 6x25 T), Rolling Mills: 4,50,000 TPA (TMT / Wire Rod: 2,00,000 TPA, HR Strip Mill: 1,50,000 TPA & Structural Mill: 1,00,000 TPA), Ferro Alloy Unit: 1 x 9 MVA (FeSi: 7000 TPA/ FeMn: 25,200 TPA/ SiMn: 14,400 TPA/ Pig Iron: 25,200 TPA) and Power plant 56 MW (40 MW: WHRB + 16 MW CFBC) by **M/s. GOS Ispat Private Limited** at Ghughuwadih Village, Simga Tehsil, **Balodabazar/Bhatapara District, Chhattisgarh** [Online Proposal No. IA/CG/IND/239265/2021; File No.: IA/J/11011/185/2021-IA.II (I)] – **Amendment in Terms of Reference – regarding.**

49.8.1 M/s. GOS Ispat Pvt. Ltd. has made online application vide proposal no. IA/CG/IND/239265/2021 dated 17/11/2021 along with Form 3 and sought for amendment in Terms of Reference accorded by the Ministry vide letter no. IA-J/11011/185/2021-IA-II (I) dated 17/05/2021.

Details submitted by the project proponent

49.8.2 M/s. GOS Ispat Pvt. Ltd. had earlier applied for grant of ToR for Greenfield project for Establishment of DRI Kilns (Sponge Iron / 5,61,000 TPA), Induction Furnaces with CCM (Billets / Ingots / Hot Billets /4,95,000 TPA), Rolling Mills – 4,50,000 TPA (TMT / Wire Rod – 2,00,000 TPA, HR Strip Mill – 1,50,000 TPA & Structural Mill – 1,00,000 TPA), Ferro Alloy Unit 1 x 9 MVA (FeSi-7,000 TPA / FeMn- 25,200 TPA / SiMn – 14,400 TPA / Pig Iron – 25,200 TPA), WHRB based Power Plant – 40 MW & CFBC based Power Plant -16 MW. The proposal was considered in 35th meeting of the Reconstituted Expert Appraisal Committee (Industry- 1) held on 30th April, 2021. Accordingly, TOR was issued vide letter no. IA-J/11011/185/2021-IA.II (I) dated 17/05/2021.

49.8.3 In the instant proposal project proponent seeking amendment in ToR due to proposed increase in total land area and revised the plant configuration & production capacity.

49.8.4 Amendment in Terms of reference dated 17/05/2021:

S No	**Units (Products)**	**Plant configuration & production capacities as per ToR issued by MOEF&CC dated 17/05/2021**	**Plant configuration & production capacities (Proposed Amendment)**
1.	DRI Kilns (Sponge Iron)	2x500 TPD & 2x350 TPD (5,61,000 TPA)	**3x600 TPD & 1x350 TPD (7,09,500 TPA)**
2.	Induction Furnace with LRF + CCM (Billets / Ingots / Hot Billets)	6 x 25 T (4,95,000 TPA)	**6 x 30 T (5,94,000 TPA)**
3.	Rolling Mill (85 % Hot charging with Hot Billets and remaining 15% through RHF with LDO / Producer Gas as fuel)	4,50,000 TPA	**7,50,000 TPA**

S No	Units (Products)	Plant configuration & production capacities as per ToR issued by MOEF&CC dated 17/05/2021	Plant configuration & production capacities (Proposed Amendment)
	TMT / Wire Rod / H.B. Wire	1 x 667 TPD (2,00,000 TPA)	1 x 667 TPD (2,00,000 TPA)
	HR Strip Mill	1 x 500 TPD (1,50,000 TPA)	**1 x 667 TPD (2,00,000 TPA)**
	Structural Mill (Angles / channels / Beams / Flat / Round / Square bars)	2 x 167 TPD (1,00,000 TPA)	2 x 167 TPD (1,00,000 TPA)
	Pipe Mill	--	**6 x 140 TPD (2,50,000 TPA)**
4.	Gasifier (Producer Gas)	--	7000 Nm^3/hr
5.	Power generation through WHRB (Electricity)	40 MW	**53 MW (3 x 15 MW + 1 x 8 MW)**
6.	Power generation through CFBC (Electricity)	16 MW	**18 MW (1 x 18 MW)**
7.	Ferro Alloys Unit (FeSi / FeMn / SiMn / Pig Iron)	1 x 9 MVA (FeSi/7000 TPA / FeMn/ 25,200 TPA / SiMn – 14,400 TPA / Pig Iron – 25,200 TPA)	**2 x 9 MVA** (FeSi/14,000 TPA (or) FeMn/ 50,400 TPA (or) SiMn – 28,800 TPA (or) Pig Iron – 50,400 TPA)
8.	Briquetting Plant	--	200 Kg/hr
9.	Brick Manufacturing Unit	--	70,000 Brick/ day

49.8.5 Any other amendment sought:

S No	Raw Material/ Project requirement		Description as per approved ToR	Amendment proposed
A	**Raw material**			
1	**For DRI Kilns (Sponge Iron)**			
a	Iron ore (100%)		8,42,000	10,64,250
b	Coal	Indian	7,30,000	9,22,350
		Imported	4,67,000	5,90,300
c	Dolomite		28,000	35,475
2	**For Steel Melting Shop (Billets/ Ingots/Hot Billets)**			
a	Sponge Iron		5,00,000	6,05,880
b	MS Scrap / Pig Iron		74,000	89,000
c	Ferro alloys		25,000	30,000
3	**For Rolling Mill through Hot charging (TMT/Wire Rode, HR Strips & Structural Steels)**			

S No	Raw Material/ Project requirement		Description as per approved ToR	Amendment proposed
a	Hot Billets / Billets / Ingots		4,77,000	5,94,000 (Own generation) & 2,01,000 (Ext. Purchase)
b	LDO / LSHS or		20,000 Kl/annum	3,700 Kl/annum (Nearby IOCL Depot)
	Producer Gas		--	7,000 m^3 /hr (Own generation)
4	**For FBC Boiler [Power Generation 1 x 18 MW]**			
a	Indian Coal (100 %)		86,400	97,200
	or			
b	Imported Coal (100 %)		55,400	62,208
	or			
c	Dolochar + Indian Coal	Dolochar	1,12,200	1,41,900
		Indian Coal	30,000	26,250
	or			
d	Dolochar + Imported Coal	Dolochar	1,98,000	1,41,900
		Imported Coal	23,500	16,800
5	**For Ferro Alloys**			
5i	For Ferro Silicon			
a	Quartz		12150	24,300
b	LAM coke		9450	18,900
c	MS Scrap / Mill scales		2115	4,230
d	Electrode paste		180	360
e	Bag filter dust		100	200
5ii	**For Ferro Manganese**			
a	Manganese Ore		34200	68,400
b	LAM coke		9900	19,800
c	Dolomite		4050	8,100
d	MS Scrap / Mill scales		3600	7,200
e	Electrode Paste		315	630
f	Bagfilter dust		500	1,000
5iii	**For Silico Manganese**			
a	Manganese Ore		24300	48,600
b	LAM Coke		8100	16,200
c	FeMn. Slag		15147	30,294
d	Dolomite		3690	7,380
e	Electrode paste		315	630
f	Quartz		3870	7,740
g	Bagfilter dust		200	400
5iv	**For Pig Iron**			
a	Iron Ore / Sinter		46,000	92,000
b	LAM Coke		21,600	43,200

S No	Raw Material/ Project requirement	Description as per approved ToR	Amendment proposed
c	Dolomite	3,000	6,000
d	Quartz	1,530	3,060
e	Bag filter dust	600	1,200
f	Electrode Paste	--	1,650
Others			
5	Land requirement	20.54 Ha. (50.76 Acres)	27.08 Ha. (66.91 Acres)
6	Water consumption	1690	2165 KLD
7	Power requirement	74.3	89.3
8	Project cost	490 Crores	655 Crores

Observations of the Committee

49.8.6 The Committee noted the following:

i. TOR was issued on 17/05/2021 for undertaking EIA study for setting up of Greenfield steel plant at Ghughuwadih Village, Simga Tehsil, Balodabazar - Bhatapara District, Chhattisgarh.
ii. PP has sought for amendment in ToR dated 17/05/2021 for increase in total land area and revised the plant configuration & production capacity.
iii. Location of AAQ monitoring stations are not in conformity to the wind rose diagram.

Recommendations of the Committee

49.8.7 After deliberations, the Committee recommended the project proposal for amendment in the ToR dated 17/05/2021 as mentioned above at para no. 49.8.4 & 49.8.5 subject to stipulation following additional specific ToRs

i. A high tension electric line is passing through proposed project site. No tall tree shall be planted including any construction activity under the high tension line.
ii. One more AAQ monitoring station shall be selected and air quality shall be monitored at all existing locations and at the one additional station proposed in upwind direction up to February 15, 2021.
iii. Action plan for green belt development covering 33% of the project area all along the periphery of the project site with a density of 2500 trees per hectare shall be submitted. This shall include development of green belt with a width of 20 m within the project site towards the reserved forests located adjacent to the site.
iv. Chitwar nallah flowing adjacent to the plant site shall not be disturbed and landscaped.

49.9 Expansion of Integrated Cement Project / Cement (2.75 to 6.75 MTPA), Clinker [2.2 to 6.75 MTPA (Line I / 2.2 MTPA to 2.75 MTPA, Proposed Line II / 4.0 MTPA)], CPP (50 MW to 100 MW), D.G. Set (18 MW to 30 MW) and WHRB / 15 MW by **M/s. UltraTech Cement Ltd.** located at Hirmi Works, Village Hirmi, Tehsil Simga, District Balodabazar – Bhatapara, Chhattisgarh [Online Proposal No. IA/CG/IND/239639/2021; File No.: J/11011/586/2011/IA.II(I)] – **Extension of validity of Environmental Clearance – regarding.**

49.9.1 M/s. UltraTech Cement Ltd.has made online application vide proposal no. IA/CG/IND/239639/2021 dated 30/11/2021 along with Form 6 and sought for extension of

validity of Environment Clearance accorded by the Ministry vide letter no. J/11011/586/2011/IA.II(I) dated 24/02/2015.

Details submitted by the project proponent

49.9.2 M/s. UltraTech Cement Ltd. was granted Environment Clearance by the Ministry vide letter No. J/11011/586/2011/IA.II(I) dated 24/02/2015 for a project titled "Expansion of Integrated Cement Project / Cement (2.75 to 6.75 MTPA), Clinker [2.2 to 6.75MTPA (Line I / 2.2 MTPA to 2.75 MTPA, Proposed Line II / 4.0 MTPA)], CPP (50 MW to 100 MW), D.G Set (18 MW to 30 MW)and WHRB / 15 MW at Hirmi Works, Village Hirmi, Tehsil Simga, District Balodabazar – Bhatapara, Chhattisgarh" under the provisions of EIA Notification, 2006.

49.9.3 Due to poor market scenario and Pandemic situation caused delay in detailed engineering, vendor finalization for implementation of proposed Line / II (this includes ordering of machinery, civil construction work, fabrication work etc.). Project proponent has requested to extend the validity of Environmental Clearance dated 24/02/2015 for another three years i.e. till 23/02/2025.

49.9.4 The details of progress of implementation of the project facilities as per EC dated 24/02/2015 is given as below:

i. Minor expansion in Line I by process optimization and debottlenecking completed and its operation started in May, 2018.
ii. Proposed Line II is under implementation and company will be planning to complete it by March, 2023; however, looking into the pandemic situation, company will try to complete it before 2025.
iii. Also, 90% of the Civil work, more than 70% of the mechanical work, 50% of the electrical and instrumentation has been completed and 80 % of the total project cost is already invested.

49.9.5 Implementation schedule for the unimplemented facilities envisaged under EC is given as below:

S No	Facilities	Start	Finish
A.	**Hirmi Cement Works :: Line 2**	25/03/2021	30/03/2023
1.00	Milestone (Project Mobilization)	25/03/2021	12/07/2021
2.00	Construction	01/04/2021	04/03/2023
2.10	LS crusher	04/05/2021	19/11/2022
2.20	**Pre Clinkerization (L S Stacker, Raw Mill, Blending Silo, Pre/heater, Kiln, Cooler and Clinker Silo)**	01/04/2021	26/01/2023
2.21	Civil Construction	01/04/2021	07/10/2022
2.22	Mechanical work	30/04/2021	26/01/2023
2.23	Mechanical Fabrication /Pre Clinkerization	30/04/2021	07/11/2022
2.24	Mechanical Erection /Pre Clinkerization	30/06/2021	12/12/2022
2.25	Refractory work	30/04/2022	27/09/2022
2.26	Insulation work	21/01/2022	26/01/2023
2.27	Electrical & Automation work	12/11/2021	11/12/2022
2.30	**Post Clinkerization (Cement Mill, Fly ash Silo and Bulk loading)**	04/01/2021	26/12/2022

S No	Facilities	Start	Finish
2.31	Civil construction	01/08/2022	13/12/2022
2.32	Mechanical work	21/12/2021	26/12/2022
2.33	Electrical & Automation work	31/05/2022	29/11/2022
2.40	**WHRS**	15/05/2021	04/03/2023
2.41	Civil construction	15/05/2021	02/12/2022
2.42	Mechanical work	23/05/2022	04/03/2023
2.43	Electrical & Automation work	19/08/2022	21/02/2023
3.00	Group Trial & Commissioning	10/12/2022	30/03/2023
3.10	Trial Run & Commissioning of LS Crusher	10/12/2022	16/12/2022
3.20	Trial Run & Commissioning of Pre Clinkerization	19/12/2022	02/01/2023
3.30	Trial Run & Commissioning of Post Clinkerization	14/12/2022	28/12/2022
3.40	Trial Run & Commissioning of WHRS	01/03/2023	30/03/2023

49.9.6 The proposal was considered in 49th meeting of Reconstituted Expert Appraisal Committee (Industry-1) held on 16- 17th December, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

49.9.7 The Committee noted the following:

i. Environment Clearance for the instant project was issued by Ministry vide letter no. J/11011/586/2011/IA.II(I) dated 24/02/2015.
ii. Project got delayed due to poor market scenario and pandemic situation due to Covid-19.
iii. It is inferred from submitted documents about 70% work of mechanical work has been completed with respect to the plant facilities for which EC was accorded on 24/02/2015.
iv. New schedule submitted by the PP indicates completion of the unimplemented plant facilities by February, 2025.
v. There is no change in project facilities, layout and project area.

Recommendations of the Committee

49.9.8 In view of above and after deliberations, the Committee recommended to extend the validity of the Environment Clearance for a period of three years beyond 24/02/2022, i.e., from 24/02/2022 to 23/02/2025 subject to environmental safeguards prescribed in the EC dated 24/02/2015.

17th December, 2021

49.10 Expansion in existing Steel manufacturing unit to produce Steel Ingots (25,200 TPA to 99,800 TPA), MS Bars, Flats wire rod & TMT Bars (99,800 TPA) and Forged Roll (3300 TPA) by **M/s. Sharu Special Alloys (P) Limited** located at Village Gobindgarh, Adjoining, Phase-VII, Focal Point, **Ludhiana District, Punjab** [Online Proposal No. IA/PB/IND/237836/2019, File No. J-11011/346/2019-IA.II(I)] – **Environment Clearance – regarding.**

49.10.1 M/s. Sharu Special Alloys (P) Limited has made an online application vide proposal no. IA/PB/IND/2378360/2019 dated 10/11/2021 along with copy of EIA/EMP report and Form

– 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & nonferrous) under Category "B1" of the schedule of the EIA Notification. The project site falls within the "critically polluted areas" Ludhiana as notified by the Central Pollution Control Board. Hence, the project is appraised as Category 'A' at Central Level.

Details submitted by Project proponent

49.10.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	ToR Validity
14/12/2019	13th meeting of REAC held on 27-29th November, 2019.	Terms of Reference	30/01/2020	29/01/2024

49.10.3 The project of M/s. Sharu Special Alloys (P) Ltd. located at Village Gobindgarh, adjoining Phase-VII, Focal Point Ludhiana, Punjab is for expansion in existing Steel manufacturing unit to produce Steel Ingots (25,200 TPA to 99,800 TPA), MS Bars, Flats wire rod & TMT Bars (99,800 TPA) and Forged Roll (3300 TPA).

49.10.4 Environmental site settings

S. No.	Particulars	Details	
i.	Total land	4. 5 acres or 1.821 hectare or 18217.47 m^2 (Industrial Land)	
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Land acquisition is completed, and no additional land is required for proposed expansion.	
iii.	Existence of habitation & involvement of R&R, if any.	Nil, expansion in the existing land, no additional land is required for proposed expansion.	
iv.	Latitude and Longitude of the project site	**Latitude**	30°52'12.50"-30°52'15.14"N, 30°52'17.85"-30°52'15.00"N,
		Longitude	75°56'32.33"-75°56'33.83"E, 75°56'27.70"-75°56'26.15"E,
v.	Elevation of the Project site	255 m AMSL	
vi.	Involvement of Forest land if any.	No forest land is involved.	
vii.	Water body exists within the project site as well as study area	Project site: Nil **Study area:** Sirhind Canal – 6.3 km, SW Buddha Nallah – 6.1 km, N	

S. No.	Particulars	Details
viii.	Existence of ESZ/ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil

49.10.5 The existing unit does not require Environment Clearance under the provisions of EIA, 2006 as the capacity of the unit is less than 30,000 TPA. The industry has valid CTO's from Punjab Pollution Control Board. CTO under water act vide no. CTOW/Varied/LDH4/2020/12719021 dated 07/08/2020 valid up to 30/06/2025. CTO under Air act vide no. CTOA/Varied/LDH4/2020/12719004 dated 03/08/2020 valid up to 30.06.2025.

49.10.6 The unit configuration and capacity of existing and proposed unit are given as below:

S. No.	Name	Existing Units		Proposed Units		Total (Existing + Proposed)	
		Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
1.	Steel Ingots/ Billets	• Induction Furnace- 1x6 TPH (to be replaced) • Re-heating Furnace- 1 no of 15 TPH (Hammer division) • Boiler- 1x2 TPH • Annealing furnace – 2x10 TPH • Forging Furnace – 1x10 TPH • DG Set – 125 KVA	25,200	• Induction Furnace- 2x10 TPH each • Reheating Furnace - 1 no of 15 TPH (Rolling division). • Rolling Mill – 01 No.	74,600	• Induction Furnace- 2x10 TPH each • Re-heating Furnace- 1 no of 15 TPH • (Hammer division) and - 1 no of 15 TPH (Rolling division). Rolling Mill – 01 No. • Boiler- 1x2 TPH • Annealing furnace – 2x10 TPH • Forging Furnace – 1x10 TPH • DG Set – 125 KVA	99,800
2.	MS Bars, Flat wire rod & TMT Bars		**NIL**		99,800		99,800
3.	Forged roll		3,300		-		3,300

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

S.No.	Raw material	Quantity required per annum in TPA			Source	Distance from Site	Mode of transportation
		Existing	Expansion	Total			
1.	MS Scrap	27,900	80,782	1,08,682	Open market	100 Km	By Road
2.	Ferro Alloys	297	801	1098			

49.10.8 The total water requirement of the project is estimated at 70.0 KLD. Domestic water requirement is 8.1 KLD and for cooling purposes is 61.9 KLD. The daily requirement of water will be met through the Ground Water, for which permission from PWRDA has been obtained vide permission no. PWRDA/06/2021/L2/90 dated 11/06/2021.

49.10.9 The total power requirement for the proposed project is estimated as 15 MW. The demand of electricity will be sourced from Punjab State Power Corporation Limited (P.S.P.C.L.). One D.G. Set (125 kVA) is there as power failure back-up.

49.10.10 Baseline Environmental Studies

Period	November, 2019 to December, 2020
AAQ parameters at 08 locations	PM_{10} = 66.5 to 113.4 µg/m^3 $PM_{2.5}$ = 29.0 to 70.2 µg/m^3 SO_2 = 6.2 to12.8 µg/m^3 NO_2 = 15.2 to 32.6 µg/m^3 CO = 0.40 to 0.60 mg/m^3
AAQ modeling (Incremental GLC Level)	PM = 1.17µg/m^3 SO_2 = 1.84 µg/m^3 NOx = 1.96 µg/m^3
Ground water quality at 8 locations	pH- 7.14-7.44 Total Hardness: 220-250 mg/l Fluorides: 1.10-1.20 mg/l Chlorides: 12.2 to 18.1 mg/l Total Dissolved Solids: 310-340 mg/l Heavy metals are within the limits.
Surface water quality at 2 locations	**Sirhind Canal** • pH of the surface water collected ranged from 7.9 – 8.1 • TDS was found to be 308- 346 mg/l. The tolerance limit is 1,500 mg/l as per IS:2296 • Total hardness was found to be 140-150 mg/l. • Nitrate was found 1.2mg/l. • Total Coliform in water was 565-895 MPN/100ml. The likely source of bacteriological contamination may be due to the proximity to residential area • All the heavy metals were not detectable. **Buddha Nallah** • pH of the surface water collected ranged from 7.49 – 7.52 • TDS was found to be 142- 154 mg/l. The tolerance limit is 1,500 mg/l as per IS:2296

<table>
<tr><td></td><td>

Total hardness was found to be 104-112 mg/l.
Dissolved oxygen is 5.4 to 6.1 mg/l.
Total Coliform in water was 2100-2600 MPN/100ml. The likely source of bacteriological contamination may be due to the proximity to residential area
All the heavy metals were not detectable.

</td></tr>
<tr><td>Noise levels</td><td>Noise Level During Day Time - 50.2 dB (A) to 72.2 dB (A)
Noise Level During Night time - 36.4 dB (A) to 68.4 dB (A)</td></tr>
<tr><td>Traffic assessment study findings</td><td>Existing Traffic Scenario & LOS-Point ‘A’& ‘B’
<table>
<tr><th>Point</th><th>Volume of vehicles in PCU/ day (V)</th><th>Capacity of road in PCU/day (C)</th><th>V/C ratio</th><th>LOS</th><th>Performance</th></tr>
<tr><td>A</td><td>2595</td><td>6000</td><td>0.43</td><td>C</td><td>Good</td></tr>
<tr><td>B</td><td>2463</td><td>6000</td><td>0.41</td><td>C</td><td>Good</td></tr>
</table>
Modified Traffic Scenario & LOS-Point ‘A’& ‘B’
<table>
<tr><th>Point</th><th>Volume of vehicles in PCU/ day (V)</th><th>Capacity of road in PCU/day (C)</th><th>V/C ratio</th><th>LOS</th><th>Performance</th></tr>
<tr><td>A</td><td>2640</td><td>6000</td><td>0.44</td><td>C</td><td>Good</td></tr>
<tr><td>B</td><td>2508</td><td>6000</td><td>0.41</td><td>C</td><td>Good</td></tr>
</table>
From the traffic study, it is inferred that with the proposed expansion coming into being an average 15 trucks/day each @20 ton will be added to the existing traffic. The traffic study on both sides was conducted by physical count of the vehicles for 24 hrs. From the traffic study it is observed that, there will be insignificant impact on the link road due to proposed expansion, and the existing road network is sufficient to cater the load.</td></tr>
<tr><td>Flora and fauna</td><td>No Schedule - I species have been observed and recorded in the study area. No Critically Endangered flora found in the study area.</td></tr>
</table>

49.10.11 Thedetails of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

SNo	Waste	Source	Quantity	Disposal
1.	APCD Dust	Induction Furnace	360 TPA	Will be sent to TSDF for Final disposal.
2.	Sludge from Waste Water Treatment	STP	7.2 kg/d	Composted and used as manure in horticulture.
3.	Runner/Riser	From Rolling Mill	6.0 TPD	It will be sold
4.	Furnace Slag	Induction Furnace	16.0TPD	Will be supplied to manufacturers of cement concrete blocks, pavers & tiles under proper agreement.
5.	Used Oil	DG sets	0.030	Will be sold to authorized recyclers

SNo	Waste	Source	Quantity	Disposal
			Kl/Annum	
6.	MSW from every day &Domestic	Employees	36kg/d	Will be collected in bins and disposed as per SWM rules 2016.

49.10.12 Public Consultation:

Details of advertisement given	Public hearing notice was published on 25/11/2020 in a prominent newspapers namely 'The Indian Express' and 'Rozana spokesman'.
Date of public consultation	Public hearing was conducted at project site on 24/12/2020
Venue	Community centre, Kathua, 500 m away from the project site
Presiding Officer	Additional Deputy Commissioner (General), Ludhiana
Major issues raised	Employment, Pollution, Plantation.

Action plan as per MoEF&CC O.M. dated 30/09/2020

Sr. No	Name & address of the person	Detail of query / statement / information / clarification sought by the person present	Reply of the query / statement / information / clarification given by the project proponent	Action Plan
1.	Sh. Rajnish Jain, S/o O.P. Jain, resident of Vijay Inder Nagar, Ludhiana	The industry shall clarify as to whether preferences shall be given to local people for employment after expansion.	Environmental Consultant informed that the Induction furnaces are to operate by special technical persons having experience. However, preference shall be given to local people and training shall be imparted to the persons to be employed for rest of the jobs in the industry.	The existing manpower is 80, and after expansion total manpower will be 180. Majority of the current workforce are from local area and preference will be given after expansion also.
2.	S. Avtar Singh, S/o Harbhajan Singh, resident of Kot Mangal Singh, Ludhiana	The industry shall clarify as to whether it is also upgrading its APCD along with expansion of the unit.	Environmental Consultant informed that the industry has installed Bag Filter and Wet scrubber as APCDs for scrubbing of emissions. He further informed that the same will be upgraded during the expansion process so as control the dust emission. The industry has also provided fume extraction hood for control of fugitive emissions. The industry has to obtain	The industries will upgrade the APCD as per norms and design by Punjab State Council for Science & Technology (PSCST). Budget: Capital cost of Rs. 50.0 lakhs and recurring cost of Rs. 2.0 lakhs under EMP budget installation

			authorization under HWM Rules, 2016 from the Board for disposal of APCD dust in proper manner.	and maintenance of APCD.
3.	Sh. Santosh Kumar, S/o Sh. Ramanand, resident of Durga Colony, Ludhiana.	The industry shall clarify as to whether there will be any generation of process water. If yes, whether it will impact the quality of ground water.	Environment Consultant Informed that there will be no generation of process water, only domestic waste water is being generated which is being treated through Septic tank. He also informed that after expansion, due to increase in the capacity of workers, the domestic waste water shall be treated through STP. He further informed that as there is no waste water to be discharged on land, hence, water quality shall not be impacted.	STP of 15 KLD will be installed after expansion to treat domestic waste-water. Budget: Capital cost of Rs. 15.0 lakhs and recurring cost of Rs.0.5 lakhs under EMP budget installation and maintenance of STP.
4.	Sh. Vishal Jain, S/o Sh. B.K. Jain resident of Basant Nagar, Ludhiana	The Industry shall clarify as to how the industry will control emissions in the unit.	Environmental Consultant informed that fugitive emissions shall be trapped by fume extraction hood which will then be passed through Bag filter house. He further informed that the existing Air Pollution Control Device shall be upgraded during expansion process, so that there will no pollution in the vicinity.	Fugitive emissions shall be trapped by fume extraction hood which will then be passed through upgraded pulse jet bag filter. Budget: Capital cost of Rs. 50.0 lakhs and recurring cost of Rs. 2.0 lakhs under EMP budget installation and maintenance of APCD.

49.10.13 The capital cost of the project is Rs. 18.75 Crores including the cost of expansion and the capital cost for environmental protection measures is proposed as Rs 100 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 7.0 Lakhs. The proposed project will provide employment to total 180 number of people. The details of cost for environmental protection measures is as follows:

S. No.	Activities	Capital Cost Rs. in Lakhs	Recurring Cost Rs. in Lakhs
1	Pollution Control during construction stage (water sprinkler)	5.0	-
2	Air Pollution Control Measures (up-gradation of	50.0	2.0

S. No.	Activities	Capital Cost Rs. in Lakhs	Recurring Cost Rs. in Lakhs
	APCD)		
3	Water Pollution Control measures (STP installation)	15.0	0.50
4	Noise Pollution Control	2.0	0.10
5	Green Belt Development (plantation and maintenance)	5.0	1.50
6	Solid Waste Management	3.0	1.00
7	Occupational Health, Safety and Risk Management (Provision of PPE, Medical Examination)	5.0	0.50
8	Rain water harvesting	10.0	0.50
9	Miscellaneous	5.0	-
	Environment Monitoring and Management (Rs. 0.9 lakhs as recurring cost)		
a.	Air Quality Monitoring	-	0.40
b.	Noise monitoring	-	0.15
c.	Water and wastewater monitoring	-	0.15
d.	Soil quality monitoring and Solid and hazardous waste quality	-	0.20
TOTAL		**100.0**	**7.0**

49.10.14 Greenbelt will be developed in 7295.53 sqmt which is about (40.0 %) of the total project area. Local and native species like Mulberry, Shishm, Mango, Safeda, Kachnar. Bungania and False Ashok will be planted with a density of 2500 trees per hectare. A total of 1094 trees will be planted and nurtured in 0.73 ha in June, 2022.

49.10.15 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

49.10.16 Name of the EIA consultant: M/s Chandigarh Pollution Testing Laboratory-EIA Division [S.No. 102, List of ACOs with their Certificate / Extension Letter no. Rev. 16, November 15, 2021].

Certified compliance report from Regional Office:

49.10.17 The Status of compliance of Consent to Operate was obtained from Punjab Pollution Control Board *vide* letter no. 326 dated on 04/03/2021 in the name of M/s. Sharu Special Alloys (P) Ltd. As per the report, the conditions prescribed in the Consent To Operate have been complied with.

Observations of the Committee

49.10.18 The EAC noted the following:

i. Project is located in a critically polluted area. Control measures to be adopted in this regard neither mentioned in the EIA report nor in the presentation made before the EAC.

ii. Number of induction furnace in EIA report and CTO issued by Punjab pollution control board is different. PP shall be provided the clarification about number of Induction furnaces in existing unit.
iii. PM_{10} in ambient air exceeds the National Ambient Air Quality Standards. After expansion PM_{10} may go up to 114.57ug/m^3. Scheme to control particulate matter emission level has not been furnished.
iv. Action plan to address the issues raised during public hearing is not in conformity to the MoEF&CC O.M. dated 30/09/2020.
v. Rain water harvesting details have not been provided in the EIA report.
vi. Quality of the EIA report is extremely poor and does not address the significant environmental concerns arising out of the proposed expansion project.
vii. Compliance to ToR point no. 9 pertaining to Corporate Environment Policy has not been furnished.

Recommendations of the Committee

49.10.19 In view of the foregoing and after detailed deliberations, the committee recommended to return the proposal in its present form to address the shortcomings enumerated at 49.10.18. Further, the Committee warned the EIA consultant for submission of poor quality of EIA report and advised to improve upon the quality of EIA report.

49.11 Proposed Greenfield Project - 3.85 MTPA throughput Iron Ore Beneficiation and 2.0 MTPA Pellet Plant with Producer Gas Plant (5 x 15000 Nm^3/hr) by **M/s. Orissa Sponge Iron & Steel Limited** located at Palaspanga, **District- Keonjhar, Odisha** [Online Proposal No. IA/OR/IND/234285/2019, File No. J-11011/275/2019-IA.II (I)] – **Environment Clearance – regarding.**

49.11.1 M/s. Orissa Sponge Iron and Steel Limited, has made an online application vide proposal no. IA/OR/IND/234285/2019 dated 15/11/2021 along with copy of EIA/EMP report and Form-2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 2 (b), Mineral Beneficiation and 3 (a) Metallurgical industries (Ferrous & non-ferrous) under Category "A" of the schedule of the EIA notification, 2006 and appraised at Central level.

Details submitted by Project proponent

49.11.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	ToR Validity
16/08/2019	11th meeting of REAC held on 24-25th September, 2019	Terms of Reference	24/10/2019	23/10/2023

49.11.3 The project of M/s. Orissa Sponge Iron and Steel Ltd located at Village -Palaspanga, Tehsil-Kedhujhar Sadar, District- Keonjhar, Odisha is for setting up of greenfield project - 3.85 MTPA throughput Iron Ore Beneficiation and 2.0 MTPA Pellet Plant with Producer Gas Plant (5 x 15000 Nm^3/hr).

49.11.4 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>Total Land: 64.18 ha [Gov. Land]</td><td>Land use: Industrial Land</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>Acquired Land: 64.18 ha.</td><td>-</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>There is no existence of habitants identified within the plant boundary. Hence no R&R.</td><td>-</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Corner</th><th>Latitude (N)</th><th>Longitude (E)</th></tr><tr><td>1</td><td>21°47'19.89"N</td><td>85°34'9.67"E</td></tr><tr><td>2</td><td>21°47'26.18"N</td><td>85°34'19.62"E</td></tr><tr><td>3</td><td>21°47'29.96"N</td><td>85°34'29.04"E</td></tr><tr><td>4</td><td>21°48'4.78"N</td><td>85°34'41.76"E</td></tr><tr><td>5</td><td>21°48'9.07"N</td><td>85°34'35.94"E</td></tr><tr><td>6</td><td>21°48'8.51"N</td><td>85°34'31.23"E</td></tr><tr><td>7</td><td>21°47'57.43"N</td><td>85°34'29.82"E</td></tr><tr><td>8</td><td>21°47'57.22"N</td><td>85°34'16.68"E</td></tr></table></td><td>-</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>428 m - 457 m AMSL</td><td>-</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any</td><td>Nil</td><td>-</td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td>Project Area:
No water body exists.
Study Area:<table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Water reservoir, Jhumpura</td><td>1.65 Km</td><td>N</td></tr><tr><td>Tangrani Dam</td><td>1.66 Km</td><td>NE</td></tr><tr><td>Ardei River</td><td>2.1 Km</td><td>SW</td></tr><tr><td>Jokdara River</td><td>3.56 Km</td><td>W</td></tr><tr><td>Jagadala Reservoir</td><td>9.63 Km</td><td>W</td></tr></table></td><td>Distance of nearest Highest Flood Level (HFL) from the Project Boundary- 1.95 km</td></tr>
<tr><td>viii.</td><td>Existenceof ESZ/ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve
etc. if any within the study area</td><td>NIL

Reserved Forest (RF) In Study Area
• Tangrani RF-Adjacent, W
• Raikala RF- 1.28 Km, E
• Nayagarh RF- 6.0 Km, E
• Jodipada RF-6.0 Km, SE
• Lakshmiposi RF- 8.30 Km, NE
• Patabila RF- 8.80 Km, N</td><td>-</td></tr>
</table>

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

Sl. No.	Plant Equipment/Facility	Proposed Units	
		Configuration	Capacity
1	Iron Ore Beneficiation Plant	3.85 MTPA Throughput	38,50,000 TPA Throughput (Beneficiated ore - 25,00,000 TPA)
2	Iron Ore Pellet Plant	1 x 2.0 MTPA	20,00,000 TPA
3	Producer Gas Plant	(5X15000 Nm3/hr)	75000 Nm3/hr

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

Sr. No	Raw material	Quantity (TPA)	Source	Distance (with respect to Plant)	Mode of Transportation
1.	Iron Ore Fines	38,50,000	Nearby Iron Ore Mines of Keonjhar, Joda & Barbil areas.	120 Km	By Rail & Road
2.	Coke Breeze	37,500	Open market/ JSL/ Visa Steel in Jajpur Area	150 Km	By Road
3	Bentonite	12,500	Rajasthan	1750 Km	By Road
4	Limestone/ Dolomite fines	25,000	Rourkela	200 KM	By Road
			Rourkela	200 KM	By Road
5	LDO	25,000 KL/year	Nearest Oil depot	15 Km	By Road
6	Coal	2,00,000	Open Auction MCL, SECL etc. having mines in Talcher & Sambalpur areas.	120 KM	By Road

49.11.7 The water requirement for the project is estimated as 2345.29 m^3/day, will be met from Ardei River. The permission for drawl of surface water is obtained from Department of Water Resource, Govt. of Odisha, vide Lr. No. 21386/WR, dated 24/08/2021 for 1 Cusec (2446.57 m3/day).

49.11.8 The power requirement for the project is estimated as 32 MW, out of which 15 MW will be obtained from GRIDCO. The remaining 17MW power demand will be fulfilled by importing from OTPCL/TPNDO by enhancing the power import agreement to match the total plant electrical load prior to commissioning of plant.

49.11.9 Baseline Environmental Studies:

Period	March-May 2021
AAQ parameters at 9 locations	$PM_{2.5}$ = 23.1 to 49.0 µg/m^3 PM_{10} = 42.6 to 88.7 µg/m^3 SO_2 = 9.1 to 21.4 µg/m^3 NO_2 = 15.7 to 30.7 µg/m^3

<table>
<tr><th>Period</th><th>March-May 2021</th></tr>
<tr><td></td><td>CO = 0.16 to 0.63 mg/m^3</td></tr>
<tr><td>AAQ modelling (Incremental GLC)</td><td>PM_{10} = 1.47 µg/m^3 at 0.4 Km NW
$PM_{2.5}$= 0.984 µg/m^3 at 0.4 Km NW
SO_2 = 1.56 µg/m^3 at 0.4 Km NW
NO_2 = 2.31 µg/m^3 at 0.4 Km NW</td></tr>
<tr><td>Ground water quality at 8 locations</td><td>pH: 6.4 to 7.5, Total Hardness: 92 to 379 mg/l, Chlorides: 13 to 120 mg/l, Fluoride: 0.1 to 0.5 mg/l. Heavy metals are within the limits</td></tr>
<tr><td>Surface water quality at 8 locations</td><td>pH: 7.2 to 8.0; DO: 4.6 to 5.8 mg/l and BOD: 2 to 2.8 mg/l.
COD from 12.0 to 32.0 mg/l</td></tr>
<tr><td>Noise levels</td><td>Ambient noise reaches 47.9 to 53.7 dB(A) during day time and 37.0 to 42.3 dB(A) during night time.</td></tr>
<tr><td>Traffic assessment study findings</td><td>Traffic study has been conducted at 3 locations. Near entry gate of project site (NH-20) adjacent to plant boundary, Jhumpura Chakk (NH-20) at a distance of 3.30 km from the project site, Near OSISL Old Plant (MDR) at a distance of 0.30 KM from project site.
Transportation of raw material, fuel & finished product will be done 100 % by road.
Existing PCU details is given below-
<table>
<tr><th>Sl No.</th><th>Study Location</th><th>Details</th><th>Volume (PCU/hr)</th><th>*Capacity (PCU/hr)</th><th>Existing V/C ratio</th><th>**Level of Service (LOS)</th></tr>
<tr><td rowspan="2">1.</td><td rowspan="2">Near entry gate of project site</td><td>Average Hour Load</td><td>1187</td><td>3600</td><td>0.32</td><td>B</td></tr>
<tr><td>Peak Hourly Load</td><td>1605</td><td>3600</td><td>0.44</td><td>C</td></tr>
<tr><td rowspan="2">2.</td><td rowspan="2">Near OSISL plant road</td><td>Average Hour Load</td><td>715</td><td>1500</td><td>0.47</td><td>C</td></tr>
<tr><td>Peak Hourly Load</td><td>990</td><td>1500</td><td>0.66</td><td>D</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">Jhumpura Chakk</td><td>Average Hour Load</td><td>1191</td><td>3600</td><td>0.33</td><td>B</td></tr>
<tr><td>Peak Hourly Load</td><td>1774</td><td>3600</td><td>0.49</td><td>C</td></tr>
</table>
IRC 106:1990
Additional PCU load after proposed project will 69 PCU/hr.
<table>
<tr><th>Sl No.</th><th>Study Location</th><th>#Volume after Proposed project (PCU/hr)</th><th>*Capacity (PCU/hr)</th><th>V/C ratio after Proposed project</th><th>**Level of Service (LOS)</th></tr>
<tr><td>1</td><td>Near entry gate of project site</td><td>1674</td><td>3600</td><td>0.46</td><td>C</td></tr>
<tr><td>2</td><td>Near OSISL plant road</td><td>1059</td><td>1500</td><td>0.70</td><td>D</td></tr>
<tr><td>3</td><td>Jhumpura Chakk</td><td>1843</td><td>3600</td><td>0.52</td><td>C</td></tr>
</table>
*IRC 106:1990
Considering peak hour traffic at the three locations.</td></tr>
</table>

Period	March-May 2021
	Conclusion: The level of service will remain same after including additional traffic due to proposed project.
Flora & Fauna	There are no endangered or endemic wildlife species in the area. Sloth Bear & Elephant are the Schedule I species found in the study Area. Wildlife Conservation Plan has been prepared and the same has been submitted to DFO, Keonjhar Forest Division. However, approval of the Competent Authority is yet to be obtained.

49.11.10 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

Sl. No	Type of wastes	Source	Quantity (TPA)	Treatment before Disposal	Mode of Disposal	Agreement Details for Disposal
1	Tailings	Beneficiation Plant	13,50,000	Filter Press	Disposal to outside parties for use in cement plants in Jajpur area- M/s. JSW Cement/ M/s. Emami Cement/ M/s. RAMCO Cement & brick manufacturing/ landfill/ Construction fillings in nearby areas.	Agreement will be done after getting statutory clearances
2	Fines	Pellet Plant	1,02,480	-	Will be recycled in pellet plant along with concentrate	-
3	Ash	PGP	60000	Ash Conditioning	Supplied to fly ash bricks/blocks manufacturers M/s. Lucky Fly Ash Bricks & Paver Blocks/ M/s. Ramamani Ecobrick Tech in Keonjhar area.	Agreement will be done after getting statutory clearances
4	Tar	PGP	7000	-	Sold to Authorize Tar Processing Vendors by SPCB	Agreement will be done after getting statutory clearances
5	Used Oil	Transformers	6 KLA	-	Storage in containers over the concrete floor under-ventilated covered shed followed by sale to actual users/Recyclers/Re-processors having	
6	Wastes/ Residues Containing Oil	Plant machineries	3 KLA	-		

Sl. No	Type of wastes	Source	Quantity (TPA)	Treatment before Disposal	Mode of Disposal	Agreement Details for Disposal
					valid authorization from SPCB, Odisha or disposed to TSDF.	
7	Phenolic water	PGP	10 KLD	ETP	Treated water to be reused in dust suppression.	-

49.11.11 Public Consultation:

Details of advertisement given	05/03/2021
Date of public consultation	15/04/2021
Venue	Village- Murusuan, Khata No. 13 (Rakhit), Plot no. 986) of Palaspanga Gram Panchayat of Keonjhar District.
Presiding Officer	Additional District Magistrate, Keonjhar
Major issues raised	Education, Health, Drinking water, Environment, Livelihood

Action plan as per MoEF&CC O.M. dated 30/09/2020:

S. No.	Name of the activities	Physical Target	Year Wise Proposed CER Budget (Rs. In Lakhs)			Total Amount (Rs. In Lakhs)
			1st Year	2nd Year	3rd Year	
A	**Education**					
1	High School Transformational Project (smart class, science lab, etc.) partnering with Govt. of Odisha flagship project under Mo School Abhiyaan or Madhyamik Shikshya Abhiyan	2 High School shall be supported. (Palasponga & Jhumpura village)	0.0	20.0	20.0	40.0
2	Beti Padhao Campaign and Campaign against Child Labour	Each year, 4 campaigns shall be conducted with the help of Local NGOs (2 Beti Padhao and 2 Child Labour)	4.0	4.0	4.0	12.0
4	Organizing School level competition (Quiz, Drawing, Slogan, etc. on various issues)	Each year, 4 school level & 1 GP level Competition shall be organized for a period of 3 years. In total 15 such events shall be organized	2.5	2.5	2.5	7.5
5	Improvement in basic amenities & teaching learning materials in Anganwadi center (AWC)	Each year 02 AWCs shall be supported per year.	2.0	2.0	2.0	6.0

S. No.	Name of the activities	Physical Target	Year Wise Proposed CER Budget (Rs. In Lakhs)			Total Amount (Rs. In Lakhs)
			1st Year	2nd Year	3rd Year	
6	Financial Support to Children with single parent or Orphans for Education (Death due to Covid-19 or Scholarship for Merit Students (Above Matriculation for completing Graduation)	For the period of 3 years, 15 Children will be supported	5.4	5.4	5.4	16.2
7	Bridge Course Centre (For Drop-Out and Never Enrolled Children)	2 Bridge Course Centre shall be operationalized to develop skill of Drop-out children to re-enroll in schools	0.0	3.6	3.6	7.2
	Sub Total		**13.9**	**37.5**	**37.5**	**88.9**
B	**Health**					
1	Setting up a Dispensary	Setting up a Dispensary serving local Community and Plant workers	15.0	-	-	15.0
2	Operational Cost of the Dispensary (Free Doctor consultation and Generic medicine)	Operational Cost of the Dispensary for 3 years	12.0	12.0	12.0	36.0
3	Ambulance	1 Ambulance serving the peripheral villages	10.0	2.8	2.8	15.5
4	Health Camps in Surrounding Villages	4 Camps in a Year concluding the total 12 Camps	8.0	8.0	8.0	24.0
	Sub Total		**45.0**	**22.8**	**22.8**	**90.5**
C	**Drinking Water**					
1	Purified Drinking Water Facility at Public Places	In total 3 nos of Purified Drinking Water shall be installed at strategic public locations	11.0	11.0	11.0	33.0
2	Community based RO Plant	Every year 3 Nos. of RO Plant shall be installed considering Contamination of Drinking Water	10.0	10.0	10.0	30.0
	Sub Total		**21.0**	**21.0**	**21.0**	**63.0**
D	**Environment**					
1	Rain Water Harvesting in Govt. Schools and Govt. Institutions	50 Schools or Govt. offices or Govt. Institution shall be covered within 2 years i.e. 25 per year	0.0	13.8	13.8	27.5
2	Plantation/Afforestation Drive (including sampling and protection like tree guard etc)	60 Schools or Govt. offices or Govt. Institution shall be covered within 3 years with	5.0	5.0	5.0	15.0

S. No.	Name of the activities	Physical Target	Year Wise Proposed CER Budget (Rs. In Lakhs)			Total Amount (Rs. In Lakhs)
			1st Year	2nd Year	3rd Year	
		approximately 15000 Sampling (250 sampling per Institution)				
	Sub Total		**5.0**	**18.8**	**18.8**	**42.5**
E	**Livelihood**					
1	Promotion of Income Generation Activities- Tailoring & embroidery etc	100 interested women beneficiaries within 10 SHG members of neighboring GP shall be trained within 2 years i.e. 5 Group with 10 member in each group shall be trained every year	0.0	7.5	7.5	15.0
2	Promotion of Income Generation Activities- Mushroom Cultivation, NTFP, Kitchen Garden, Leafplate, Pickle etc.	100 interested women beneficiaries within 10 SHG members of neighboring GP shall be trained within 2 years i.e. 5 Group with 10 member in each group shall be trained every year	0.0	7.5	7.5	15.0
3	Farmers input support for improving the yield for better return	150 interested and selective farmers shall be provided with inputs for 3 years	5.0	5.0	5.0	15.0
4	Setting up a Community Centre-cum-Training Centre	1 Community Centre cum Training Centre shall be constructed	10.0	0.0	0.0	10.0
	Sub Total		**15.0**	**20.0**	**20.0**	**55.0**
	GRAND TOTAL		**99.9**	**120.0**	**120.0**	**339.9**

49.11.12 The capital cost of the project is Rs 500 Crores and the capital cost for environmental protection measures is proposed as Rs 12 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 1.11 Crores. The employment generation from the proposed project is 350. The details of cost for environmental protection measures is as follows:

Sr. No.	Particulars	Estimated Capital cost in Rs. Cr.	Recurring cost in Rs. Cr./annum
1.	Air Pollution Control	8.00	0.20
2.	Water Pollution Control	1.00	0.10

Sr. No.	Particulars	Estimated Capital cost in Rs. Cr.	Recurring cost in Rs. Cr./annum
3.	Noise Pollution Control	0.50	0.015
4.	Environment Monitoring & Management	0.50	0.575
5.	Occupational Health	0.50	0.04
6.	EMS & Disaster Management	1.0	0.10
7.	Green Belt/plantation	0.50	0.08
Total		**12.0**	**1.11**
Addressal of Public Consultation		**3.40**	

49.11.13 Greenbelt will be developed in 21.18 ha which is about 33% of the total project area. A 2x2 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 34,145 saplings will be planted and nurtured in 21.18 Ha in 5 years.

49.11.14 The proponent has reported that there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.

49.11.15 Name of the EIA consultant: M/s. Visiontek Consultancy Services Private Limited [S. No. 100, List of ACOs with their Certificate / Extension Letter no. Rev. 16, November 15, 2021].

Observations of the Committee

49.11.16 The Committee noted the following:

i. On perusal of the KML file, some building structures are visible within the project site. Clarification is required to the provided by the PP regarding the same.
ii. As observed on the Toposheet file, most of the project site appears to be forest area which needs to be clarified. However, according to the information submitted by proponent in Form 2 and EIA report, it has been stated that there is no involvement of forest land. PP needs to submit clarification in this regard from the State Forest Department by mentioning the legal status of the khasra numbers proposed for the green field project.
iii. PP submitted that out of 1374 total trees present at project site, 839 trees will be maintained as it is and 595 trees will be cut down after obtaining the approval from competent authority. Action plan to minimize the no. of trees to be felled down and the details regarding type of trees to be felled down has not been made available.
iv. PP submitted that HFL level of Ardei River is 450m, authenticated data with respect to HFL of Ardei River has not been made available.
v. Green belt is not in uniform all along the boundary of the project site. Time bound action plan shall be provided to develop the green belt uniformly all around the periphery of project site covering 33% of the total area.
vi. Plant layout is highly congested and needs to be revised.
vii. The environmental baseline data collected during March to May 2021 and earlier in March to May 2019, a comparative statement has not been provided for the study conducted during 2019 and 2021 along with the location of the sampling stations.

viii. Action plan to address issues raised during public hearing is not as per Ministry OM dated 30/09/2020. Revised action plan shall be provided accordingly.
ix. Mitigation measures provide for the pollution control is given generic form, project specific mitigation measures with quantitative data has not been provided.
x. PP submitted that Phenolic water will be treated in ETP. Treatment methodology to be used in ETP has not been furnished.
xi. No tailing pond is proposed. Details regarding management and disposal of iron ore tailings have not been made available. MOUs with Cement manufacturers for tailings utilization has not been submitted.
xii. Quality of the EIA report is extremely poor and does not address the significant environmental concerns arising out of the proposed project.

Recommendations of the Committee

49.11.17 In view of the foregoing and after detailed deliberations, the committee recommended to return the proposal in its present form to address the shortcomings enumerated at 49.11.16. Further, the Committee warned the EIA consultant for submission of poor quality of EIA report and advised to improve upon the quality of EIA report.

49.12 Proposed enhancement in production of sponge iron from 90,000 TPA to 2,25,000TPA, MS Billet of 1,76,400 TPA by installation of four number of induction furnace of capacity 15 TPH, one Captive power plant of 30 MW & 1,50,000 TPA TMT Barby **M/s. Ramgarh Sponge Iron Private Limited** located at Village Hosir, P.O. Dari, Tehsil Churchu, **District Hazaribagh, Jharkhand**. [Online Proposal No. IA/JH/IND/193612/2019, File No. IA-11011/309/2019-IA-II(I)] –**Reconsideration for Environment Clearance based on ADS reply– regarding.**

49.12.1 M/s. Ramgarh Sponge Iron Private Limited has made an online application vide proposal no. IA/JH/IND/193612/2019 dated 29/09/2021 along with copy of EIA/EMP report and Form–2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3 (a) & schedule 1(d) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

49.12.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
29/09/2019	12th meeting of EAC held on 21- 23rd October, 2019	Terms of Reference	22/11/2019

49.12.3 The project of M/s. Ramgarh Sponge Iron Private Limited located in Hossir Village, Churchu Tehsil, Hazaribagh District, Jharkhand State is for enhancement in production capacity of existing sponge iron plant from 90,000 TPA (3x100 TPD) to 2,25,000 TPA with production from 1x100 TPD DRI & additional installation of 1x 350 TPD DRI Unit. Proposed MS Billet of 1,76,400 TPA by installation of 4 x 15 TPH Induction Furnace, Rolling Mill having capacity 1,50,000 TPA & Captive Power Plant having capacity 30 MW (WHRB - 16MW & AFBC-14 MW).

49.12.4 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>8.99 ha (22.2157 Acres)
[Private: 8.99 ha]</td><td>Land use: Industrial land</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 will be come within the existing plant area of 8.99 ha. No additional land is required for proposed expansion.</td><td>--</td></tr>
<tr><td>iii.</td><td>Existence of habitation and involvement of R&R, if any.</td><td>Not involved R&R.</td><td>--</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>23˚42’40.47”N</td><td>85˚24’05.69”E</td></tr><tr><td>B</td><td>23˚42’38.56”N</td><td>85˚24’11.46”E</td></tr><tr><td>C</td><td>23˚42’38.06”N</td><td>85˚24’19.61”E</td></tr><tr><td>D</td><td>23˚42’33.26”N</td><td>85˚24’22.84”E</td></tr><tr><td>E</td><td>23˚42’30.93”N</td><td>85˚24’18.21”E</td></tr><tr><td>F</td><td>23˚42’29.86”N</td><td>85˚24’11.54”E</td></tr><tr><td>G</td><td>23˚42’33.14”N</td><td>85˚24’05.60”E</td></tr></table></td><td>--</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>382 m AMSL</td><td>--</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>Nil</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>: Nil

<u>Study area</u>:
Village Pond: 1.7 km/ SE
Village pond:2.36km/ North
Damodar River: 5Km, S</td><td>--</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger Reserve / elephant reserve etc. if any within the study area</td><td>Nil.
However, following forests are present in the study area:
Husir PF: 1.33km/ ESE
Bundu PF: 3.86km/ South
Chano PF: 4.45km/ NE</td><td>--</td></tr>
</table>

49.12.5 The existing project was accorded Consent to Establish (CTE) by Jharkhand State Pollution Control Board (JSPCB) dated 09/04/2005 for 4x100 TPD DRI Kiln and investment of 36.9 Crores. Hence, the said activity does not require Environment Clearance under the provisions of EIA, 1994 and EIA, 2006. Consent to Operate (CTO) obtained for 3x100 TPD DRI on 06/11/2006. Subsequently, PP applied for CTO to operate 4thDRI kiln. JSPCB denied operation of 4thDRI Kiln and instructed not to operate the same without obtaining EC. Since then, CTO is being renewed for operation of 3x100 TPD kilns only. CTO renewal is accorded by JSPCB dated 28/10/2020 and is valid up to 30/09/2022.

49.12.6 Implementation status of the existing CTE dated 09/04/2005.

S No	Facilities as per CTE	Implementation Status as on date	Production as per CTO dated 28/10/2020
1	Sponge Iron: 90,000 TPA (DRI Kilns: 4 x 100 TPD)	Sponge Iron: 90,000 TPA DRI Kilns: 3x100 TPD	Sponge Iron: 90,000 TPA (DRI Kilns: 3x100 TPD)

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

S No	Name	Existing Units		Proposed Units		Total (Existing + Proposed)	
		Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
1.	DRI	3x100 TPD	90,000	1x100 TPD + 1x350 TPD	1,35,000	4x100TPD +1x350TPD	2,25,000 TPA
2.	Induction Furnace (Steel Melting)	Nil	Nil	4x15 TPH	1,80,000 TPA (10 heat/day)	4x15 TPH	1,80,000 TPA (10 heat/day)
3.	Continuous Caster (for Billet making)	Nil	Nil	3x6/11 m Radius	1,76,400 TPA	3x6/11 m Radius	1,76,400 TPA
4.	Rolling Mill	Nil	Nil	1,50,000 TPA	1,50,000 TPA	1,50,000 TPA	1,50,000 TPA
5.	Slag Grinding Unit	Nil	Nil	40,000 TPA	40,000 TPA	40,000 TPA	40,000 TPA
6.	Captive Power Plant	Nil	Nil	WHRB-16MW AFBC-14MW	30 MW	WHRB-16MW AFBC-14MW	30 MW

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

S No	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Iron Ore	1,44,000TPA	216000 TPA	360000TPA	Mines of Odisha and Jharkhand	400	by rail rake and by road
2	Non-Coking coal	1,17,000 TPA	175500 TPA	292500TPA	CCL	100	by Rail rake and by Road
3	Dolomite/ Limestone	2700 TPA	4050 TPA	6750TPA	Chhattisgarh	500	by Road
4	Sponge Iron	Nil	1,80,000 TPA	1,80,000 TPA	Captive production	0.5	by Road
5	Scrap	Nil	43,200 TPA	43,200 TPA	Open market	50	by Road
6	Billet	Nil	154500 TPA	154500 TPA	Captive Production	0.5	by Road
7	Char	Nil	58050TPA		Captive Production	0.5	by Road
8	Coal Fines	Nil	38400TPA		CCL mines	100	by Road

49.12.9 **Existing water requirement:** 233 KLD; Drinking – 6 KLD (Tanker water); Plantation: 2 KLD; Process requirement – 225 KLD (RWH ponds 2 nos (40x40x5m) and nearby quarry of CCL during summer for 3 months.

Proposed water requirement: The water requirement for the project is estimated as 2488 m^3/day, out of which 2488 m^3/day of fresh water requirement will be obtained from the Damodar Valley Corporation. The permission for drawl of surface water of 0.6 MGD (2727 KLD) is reported to be under process. In this regard, Chief Engineer, Water resource department, Jharkhand, Ranchi, vide letter no. 894/Hazaribagh dated 29/12/2020 has sent the recommendations to DVC for consideration.

49.12.10 The power requirement for the project is estimated as 30 MW, out of which 1MW will be obtained from the JSEB. (Power will be initially sourced from JSEB for construction / erection and preliminary work. Presently 1 MW load has been sanctioned. Later on power will be sourced through the CPP as it will be commissioned simultaneously with the other units. After the installation the power requirement will met through its captive power plant).

49.12.11 Baseline Environmental Studies:

Period	**October – December 2019**	**Additional Study**
AAQ parameters at 8 Locations (min and max)	$PM_{2.5}$= 29.2 to 58.1 µg/m^3 PM_{10}= 46.2 to 89.3 µg/m^3 SO_2= 4.1 to 16.3 µg/m^3 NO_2= 12.4 to 38.7 µg/m^3 CO=0.21to0.60mg/m^3	
AAQ modelling (Incremental GLC)	PM_{10} = 0.44 µg/m^3 at 2.4 km / SE $PM_{2.5}$ = 0.0 µg/m^3 at 2.4 km SO_2 =1.78 µg/m^3 at 3.7 km/ SE NO_x = 1.0 µg/m^3 at 4.0 km/ SE	
Ground water quality at 8 locations.	pH: 6.5 to 7.7, Total Hardness:58 to 428 mg/l, Chlorides: 14 to 58 mg/l, Fluoride: 0.14 to 1.69 mg/l. Heavy metals are within the limits.	
Surface water quality at 8 locations.	pH: 7.1 to 7.9, DO: 6.1 to 7.4 mg/l BOD: 1 to 7 mg/l COD: 5 to 48 mg/l	Fresh sampling at 2 locations i.e., Hossir Pond and Kamala River downstream near Dari village - BOD level of Hossir pond is found to be 2.5 mg/l and BOD of Kamala river downstream is found to be <1.0 mg/l.
Noise levels at 8 locations (min and max)	40 to 72 dBA for the day time and 30 to 68 dBA for the Night time.	
Traffic assessment study findings	Traffic study has been conducted at Kuju-Giddi Road (MDR) which is approximately 1.0 km from the plant site. Transportation of raw material, fuel and Finished product will be done 100% by road.	

<table>
<tr><th>Period</th><th>October – December 2019</th><th>Additional Study</th></tr>
<tr><td></td><td>Existing PCU is 218 PCU/ hr and existing LOS is A.
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr)</th><th>C (Capacity in PCU/hr)</th><th>Existing V/C ratio</th><th>LOS</th></tr>
<tr><td>Kuju-Gidi Road</td><td>218</td><td>1500</td><td>0.15</td><td>A</td></tr>
</table>
PCU load after proposed project will be 218 (Existing) + 32 (Additional) PCU/hr and level of Service will be A.
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr)</th><th>C (Capacity in PCU/hr)</th><th>Existing V/C ratio</th><th>LOS</th></tr>
<tr><td>Kuju-Gidi Road</td><td>250</td><td>1500</td><td>0.17</td><td>A</td></tr>
</table>
Note: Capacity as per IRC106:1990 guideline for capacity of road
Conclusion: The level of service will be A after including the additional traffic due to the proposed project.</td><td></td></tr>
<tr><td>Flora and fauna</td><td><u>Flora</u>: None endangered plant species found in the study area.
<u>Fauna</u>: No Schedule I fauna observed in the study area.</td><td></td></tr>
</table>

49.12.12 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

S No	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment /Disposal
1.	Dolochar	DRI	58050	This expansion project envisages 100% utilization of Dolochar by installing AFBC boilers. The dolochar produced from the existing unit is being sold to the nearby power plants
2.	ESP Dust	DRI	37125	Sale outside agency for process use
3.	Wet Scrapper sludge	DRI	13500	Sale to brick manufacturers
4.	Bag filter dust	DRI	20250	Sale outside agency for process use
5.	Accretion Dust	DRI	2025	Nonmagnetic dust Utilized for Brick manufacturing

S No	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment /Disposal
				Magnetic dust utilized in SMS
6.	IF Bag filter dust	IF	10800	Sale outside agency for process use
7.	End Cut	IF	3900	Utilized in IF
8.	Fly ash	AFBC	49400	Sale to Brick manufacturing unit
9.	Bottom Ash	AFBC	12360	Saleable
10.	Non-Magnetic slag	IF	16200	Sale to Brick manufacturing unit
11.	Magnetic Slag	IF	1800	Reused in SMS

49.12.13 Public Consultation:

Details of advertisement given	30.09.2020
Date of public consultation	31.10.2020
Venue	Samudayik Sabha Bhawan, Giddi, Hazaribagh
Presiding Officer	Sri Abhay Kumar Sinnha, Deputy Development Commissioner, Hazaribagh.
Major issues raised	Local employment Infrastructure development Drinking water facility Health Facility Road construction and Maintenance Pollution Control Electricity supply

Action plan as per MoEF&CC O.M. dated 30/09/2020:

Issues raised during PH	Physical Activity and Action Plan	Particulars	Year of Implementation				Total Budget
			1st year	2nd year	3rd year	4th year	
Employment and Skill development							
Employment for local people	Priority will be given to local employment. Out of the regular employment of 660 nos 350 nos will be from local people based on their qualification and experience. Out of the total contractual workers i.e. 1200 persons, 80% will be	Activity	50 regular and 900 contractual workers	100 regular and 900 contractual workers	--	--	
		Budget	As per the company rule				--

Issues raised during PH	**Physical Activity and Action Plan**	**Particulars**	**Year of Implementation**				
			1st year	**2nd year**	**3rd year**	**4th year**	**Total Budget**
	sourced from the local villages as per the requirement.						
Skill development	Scholarship to 10 nos ITI students per annum as decided by village committee from Hussir, Dari, Napo and Giddi village	Activity	10 nos	10 nos	10 nos	10 nos	
		Budget @20,000 per annum per student	2.0 Lakhs	2.0 Lakhs	2.0 Lakhs	2.0 Lakhs	8.0 Lakhs
Health Care							
Provision for medical facility for local people and workers.	Organizing Specialized Health check-up camps alternatively for treatment of Diabetes, Eye & Gastro Intestinal Diseases on Quarterly basis. (Hussir, Dari, Napo and Giddi village)	Activity	Quarterly health camps (January, April, July & October) for 4 villagesin one suitable place Hussir, Dari, Napo and Giddi village	Quarterly health camps (January, April, July & October) for 4 villagesin one suitable place Hussir, Dari, Napo and Giddi village	Quarterly health camps (January, April, July & October) for 4 villagesin one suitable place Hussir, Dari, Napo and Giddi village	Quarterly health camps (January, April, July & October) for 4 villagesin one suitable place Hussir, Dari, Napo and Giddi village	
		Budget	2.0 Lakhs	2.0 Lakhs	2.0 Lakhs	2.0 Lakhs	8.0 Lakhs
Regular Health facility	A dispensary will function at Community Centre Hussir. (Pharmacist & Medicine will available in the evening hours) A general medicine specialist will be available once in a week	Activity	Establishment of Dispensary at Hussir	Operation of dispensary at Hussir	Operation of dispensary at Hussir	Operation of dispensary at Hussir	
		Budget @ 50,000 per month for operation of Dispensary	5.0 Lakhs	6.0 Lakhs	6.0 Lakhs	6.0 Lakhs	23.0 Lakhs
	Dedicated Vehicle for	Activity	--	--	Purchase of vehicle	Maintenance	

Issues raised during PH	**Physical Activity and Action Plan**	**Particulars**	**Year of Implementation**				
			1st year	**2nd year**	**3rd year**	**4th year**	**Total Budget**
	attending local people for medical emergency	Budget	--	--	16 Lakhs	3 Lakhs	19.0 Lakhs
Education							
Infrastructure development of educational institutions.	Support to Primary school and Hussir college for developmental activities (Repair and maintenance of furniture, Boundary wall, Gate, Missionary work of class rooms, Toilet water supply etc as per requirement of school)	Activity	Repair and maintenance of furniture, Boundary wall, Gate, Missionary work of class rooms, Toilet water supply etc as per requirement of school in Hussir Primary School	Repair and maintenance of furniture, Boundary wall, Gate, Missionary work of class rooms, Toilet water supply etc as per requirement of school in Dari Primary School	Repair and maintenance of furniture, Boundary wall, Gate, Missionary work of class rooms, Toilet water supply etc as per requirement of school in HussirCollege	Further repair and maintenance activities in Hussir primary School, Dari Primary School and Hussir College.	
		Budget @1,00,000 per annum per institute	3.00 Lakhs	3.00 Lakhs	3.00 Lakhs	3.00 Lakhs	12.0 Lakhs
Road construction and Maintenance							
Provision of paved road and repair of damaged road connecting plant site and village.	Repair and maintenance of the road connectingHussir Village to KujuGoddi main road (1400m)	Activity	Complete Repair of the existing road (1400m)	Regular maintenance of 1400m road	Regular maintenance of 1400m road	Regular maintenance of 1400m road	
		Budget	20 Lakhs	10 Lakhs	10 Lakhs	10 Lakhs	50.0 Lakhs
Peripheral Developmental activities							
Formation of village Committee	Formation of the village committee to monitor the Peripheral Developmental activities implemented by the proponent. Nomination will be made	Activity	Village committee will be formed	Monitoring and review of the developmental activities by the committee and proper utilization of the demarcated fund for the specified developmental work			
Utilization plan for CSR fund		Budget	--	--	--	--	

Issues raised during PH	**Physical Activity and Action Plan**	**Particulars**	**Year of Implementation**				
			1st year	**2nd year**	**3rd year**	**4th year**	**Total Budget**
	by Panchayat during Gramsabha						
Supply of drinking water facility to nearby people and villagers	Solar water supply system with pump and pipe supply in nearby villages. Water filtration system in Chano and Dari village	Activity	Chano village	Hussir Village	Dari village	--	
		Budget	7.5 Lakhs	5.0 lakhs	7.5 Lakhs	--	20.0 Lakhs
Supply of Electricity	Installation of solar street lights	Activity			20 nosHussir village	20 nosHussir village	
		Budget @40,000 per light post			8 Lakhs	8 Lakhs	16.0 Lakhs
Reduce soil fertility of the land near to the plant site due to emission	Soil quality analysis will be carried out for the nearby agricultural fields as a part of regular monitoring	Activity	Sampling and analysis of soil from the agricultural fields near the plant site (4 samples on quarterly basis)				
		Budget	1 Lakhs	1 Lakhs	1 Lakhs	1 Lakhs	4.0 Lakhs
Supply of fertilizers to the nearby farmers	Fertilizers will be supplied to the nearby farmers whose agricultural land is alleged to be affected due to plant operation	Activity	20 nos of farmers	20 nos of farmers	20 nos of farmers	20 nos of farmers	
		Budget @20,000 per farmer	4 Lakhs	4 Lakhs	4 Lakhs	4 Lakhs	16.0 Lakhs
Pollution control measures							
Pollution control measures to be implemented by the industry	Installation and operation of pollution control measures to reduce the pollution load on the surrounding	Activity	All the pollution control measures will be installed as per the statutory requirement and will be monitored by statutory authority as well as village committee.				
		Budget	Included in EMP cost				

Issues raised during PH	**Physical Activity and Action Plan**	**Particulars**	**Year of Implementation**				
			1st year	**2nd year**	**3rd year**	**4th year**	**Total Budget**
	environment						
Plantation along the road	Plantation along the road side (From Hussir village to Kuju-Giddi Road)	Activity	Plantation of 600 nos of saplings (600m)	Plantation of 800 nos of saplings (800m)			
		Budget @Rs.300/- per saplings with tree guard	1.8 Lakhs	2.2 Lakhs			4.0 Lakhs
Total			**46.3 Lakhs**	**35.2 Lakhs**	**59.5 Lakhs**	**39.0 Lakhs**	**180.0 Lakhs**

49.12.14 The capital cost of the project is Rs. 346 Crores and the capital cost for environmental protection measures is proposed as Rs 38 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 2.2 Crores. The employment generation from the proposed project / expansion is 530. The details of cost for environmental protection measures is as follows:

S No	**Description of Item**	**Existing (Rs. In Crores)**	
		Capital Cost	**Recurring Cost**
i.	Air/Noise Pollution Control	30	0.6
ii.	Water Pollution Control	3	0.5
iii.	Environmental Monitoring and Management	2	0.2
iv.	Green Belt Development	0.5	0.1
v.	Miscellaneous	2.5	0.8
	Total	**38.0**	**2.2**
vi.	Addressed to Public Consultation concerns	1.80	Nil

49.12.15 **Existing Green Belt:** Existing green belt has been developed in 5.6-acre area with 1500 no of saplings. **Proposed green belt:** green belt will be developed in 7.5 acres which is about 34 % of the total project area. A 7.5 m wide green belt, consisting of at least 3 tiers around plant boundary will be developed as green belt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare.

Greenbelt Plan:

Sr. No.	**No. of Existing Plantation**	**No of Saplings to be planted**	**Area**	**Survival Rate (Avg.)**	**Existing Plantation area in acres**	**Proposed Saplings**
Proposed Additional plantation in the existing Plantation area (1stYear)						
1	320	1130	Along NW Plant Boundary and open space near Both side of Entrance	70%	1.45	Mango, Sisoo, Teak, Deodar, Neem, Alstonia, Kachnar, Gulmohr, Mahagoni, Bot, Champa, Sirisa,
2	480	1370	Along SW Boundary and open space near office building, Product Storage Yard, Car & Truck		1.82	

Sr. No.	No. of Existing Plantation	No of Saplings to be planted	Area	Survival Rate (Avg.)	Existing Plantation area in acres	Proposed Saplings
			Parking area			Bakul, Kadam, Radhachura, Nyctanthes, Nerium, Mesuaferra, Lagerostromea, Ceaslpineapulcherima, Cassia fistula, Aegle marmelos, Pongamia pinnatta etc
3	350	850	Along southern boundary of the lease area		1.19	
4	380	770	Along SE Boundary		1.15	
(A)	**1530**	**4120**			**5.6**	
Proposed Plantation in additional area (2nd Year)						
1	-	950	Near Proposed SMS and rolling mill, Coal unloading, stacking and handling area,	70%	0.95	
2	-	950	Plantation along NE and North boundary of the proposed DRI		0.95	
(B)		**1900**			**1.9**	
Total (A + B)		**6020**			**7.5**	

49.12.16 The proponent has reported that there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.

49.12.17 Name of the EIA consultant: M/s. Kalyani Laboratories Private Limited [S.No. 98, List of ACOs with their Certificate / Extension Letter no. Rev. 16, November 15, 2021].

Certified Compliance report from the Jharkhand State pollution control Board:

49.12.18 The Status of compliance of earlier CTO was obtained from Regional Office, Jharkhand State Pollution Control Board, Hazaribagh *vide* letter no. 588 dated 07/06/2021 in the name of M/s. Ramgarh Sponge Iron Private Limited. As per the report, PP is complying with the conditions prescribed in the CTO.

49.12.19 The proposal was initially considered in 46th meeting of the Re-constituted EAC (Industry-I) held on 11 – 12th October, 2021wherein proposal was deferred for want of additional information. The observations and recommendations of EAC is given as below:

Observations of the Committee (EAC during 11th – 12th October, 2021)

49.12.20 The EAC noted the following:

i. On perusal of the KML file, visible emissions are found to be emanating from the stacks. No explanation has been furnished by the PP in this regard.
ii. BOD levels in the surface water quality samples have been reported as below BDL. No explanation is furnished by the proponent/consultant in this regard.
iii. No information was made available by the proponent and consultant regarding installation date of 4th DRI kiln, CTE obtained for the installation of 4th kiln and reasons for denial of CTO by JSPCB for 4th kiln.
iv. Existing green belt development is very poor as per the KML file made available and needs improvement.
v. Action plan to address the public hearing issues is not in conformity to the MoEF&CC O.M. dated 30/09/2020.
vi. Permission obtained for the water withdrawal of 235 KLD for the existing unit has not been made available.

vii. TOR point # 9 pertaining to Corporate Environment Policy has not been addressed in EIA Report.

Recommendations of the Committee (EAC during 11th – 12th October, 2021)

49.12.21 In view of the foregoing and after deliberations, the Committee deferred the consideration of the proposal and sought following additional information from the proponent:

i. Reasons for the visible emissions which are found to be emanating from the stacks. Details of the existing pollution control systems to control the PM, SO2 and NOX shall be submitted.
ii. Fresh analysis of surface water samples shall be carried out and report shall be submitted.
iii. Details regarding installation date of 4th DRI kiln, CTE obtained for the installation of 4th kiln and reasons for denial of CTO by JSPCB for 4th kiln along with the relevant supporting documents shall be submitted.
iv. Revised green belt development action plan covering 33% of the area with a tree density of 2500 trees per hectare shall be submitted.
v. Action plan to address the public hearing issues as per MoEF&CC O.M. dated 30/09/2020 shall be submitted.
vi. Permission obtained for water withdrawal of 235 KLD for the existing unit shall be submitted.
vii. Compliance to the TOR point # 9 pertaining to Corporate Environment Policy shall be submitted.

49.12.22 The proponent submitted the ADS reply vide letter dated 03/12/2021 uploaded on PARIVESH on 03/12/2021. Point-wise reply of ADS is given as below:

Sl. No	ADS Point	Reply/ Response of PP
1.	Reasons for the visible emissions which are found to be emanating from the stacks. Details of the existing pollution control systems to control the PM, SO2 and NOX shall be submitted.	The KML file given in the EIA report is the latest one on (03/12/2020) by Google, which was being verified by the Hon'ble committee. The fact on the date as visualized from the KML file was a dense fume coming out of the stack. The same may be due to sudden failure in main power supply and time taken to transfer the power through Diesel Generator Set, this intervening period is where the emission visible and found to be emanating from the stack occasionally. However, the PP has taken stringent pollution control measures like ESPs, Bag filters, SO_2 analyser, PM_{10} analysers. Online emission monitoring system has been installed in the stacks and connected to JSPCB server. Any fluctuation for a longer time being intimated to the plant. This event was for a particular time on that date. It is not a continuous process which can be verified from KML files dated 28/11/2020 and 23.05.2020. Screen shot of the files submitted by PP**.** Further PP has also taken a drone image of the plant on 30/11/2021 which can be verified.

Sl. No	ADS Point	Reply/ Response of PP
		Further, Stack monitoring is being carried out twice in a year by JSPCB by their authorized agencies in March 2021 and the emission from the stack is found to be with in the permissible limit as specified by JSPCB. Test report submitted by PP for reference**.**
2.	Fresh analysis of surface water samples shall be carried out and report shall be submitted.	In the EIA report, the surface water was analysed for 8 sampling locations out of which in 2 sampling locations i.e., Hossir Pond and Kamala River downstream near Dari village, the BOD was found to be <1.0 mg/l. Fresh sampling was carried out in these two locations and analysis report has been submitted by PP for reference. From the report it is observed that the BOD level of Hossir pond is found to be 2.5 mg/l and BOD of Kamala river down-stream is found to be <1.0 mg/l which has been updated at para 49.12.11. The reasons for low BOD value is due to the dilution of the sample as informed by the consultant during the meeting.
3.	Details regarding installation date of 4thDRI kiln, CTE obtained for the installation of 4th kiln and reasons for denial of CTO by JSPCB for 4th kiln along with the relevant supporting documents shall be submitted.	1. Application of Consent to Establish (CTE) for 4 x 100TPD sponges Iron plant was made on 29.11.2004. 2. CTE obtained from Jharkhand State Pollution Control Board (JSPCB) for 400 TPD sponge Iron plant on 09.04.2005 vide letter no. 292. (Before applicability of EIA Notification 2006). 3. **All 4x100 TPD kiln was constructed and installed simultaneously during the period 2005-2006.** 4. But due to market condition and non-availability of raw material PP decided to operate only 3 x100 TPD plant and Consent to Operate (CTO) for the same was applied on 20.08.2006. CTO for the same was obtained for trial production on 6.11.2006. Subsequently the same was renewed till 1.02.2011. 5. In the consent order vide memo no. 442 dated 01.02.2011 strict condition was laid down for installation of online continuous stack monitoring system in all three operating kilns within 15 days period from the issue of the CTO. 6. Again, as the market and financial condition revived, PP decided to start the operation of 4th kiln for which consent to establish was already obtained. Consent to Operate for the 4th kiln was added in the renewal application.

Sl. No	ADS Point	Reply/ Response of PP
		7. As PP failed to comply the previous CTO condition (online continuous stack monitoring system in all three kilns within 15 days period) our application for the operation of the 4th Kiln was denied by JSPCB vide consent Memo no. D-1287 (c) dated 16.04.2012. 8. And this instruction was continued till date and is reflected in all the subsequent consent orders also in the certified compliance report. 9. In the routine CTO renewal process, JSPCB instructed not to operate 4th Kiln without obtaining Environment Clearance (EC) and CTO for the 4th Kiln vide Ref. No. JSPCB/HO/RNC/CTO-550518/2019/2028 dated 30.09.2019. During present expansion proposal, PP made the application for EC with operation of the 4th kiln along with additional installation of 1x350 TPD Kiln and other additional facilities.
4.	Revised green belt development action plan covering 33% of the area with a tree density of 2500 trees per hectare shall be submitted.	Revised green belt development action plan attached updated at para 49.12.15 above.
5.	Action plan to address the public hearing issues as per MoEF&CC O.M. dated 30/09/2020 shall be submitted.	Revised green belt development action plan updated at para 49.12.13 above.
6.	Permission obtained for water withdrawal of 235 KLD for the existing unit shall be submitted.	The plant management made contract with the water tanker supplier to supply 25 tankers (10 KL) of water per day. Copy of the documents has been submitted by the PP. The water is being sourced by the tanker suppliers from the abandoned quarry of CCL located at a distance of about 2 Km from the plant site.
7.	TOR point # 9 pertaining to Corporate Environment Policy has not been addressed in EIA Report	Revised corporate environment policy is submitted by the PP.

49.12.23 Based on the ADS reply, the proposal is reconsidered in the 49th meeting of the Re-constituted EAC (Industry-I) held on 16-17th December, 2021. The observations and recommendation is given as below.

49.12.24 During the meeting, project proponent submitted written submission on the following points:

- PP has given confirmation that the 4th Kiln has been installed in the year 2005, but it is not in operation till date and will be operated only after obtaining requisite Environmental Clearance.
- PP submitted the revised Environment Policy of the company.

Observations of the Committee

49.12.25 The EAC noted the following:

i. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.

ii. The EAC also deliberated on the certified compliance report of RO of JSPCB, public hearing issues as well as action plan to address the issues raised during public hearing ADS reply & written submissions, and found it satisfactory.

iii. 4TH DRI kiln was established during 2005-06 based on the CTE accorded by the JSPCB and the same is not under operation till date.

Recommendations of the Committee

49.12.26 In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and general conditions as per the Ministry's Office Memorandum No. 22/34/2018/III dated 9/8/2018 based on project specific requirements.

A. Specific Conditions

i. Particulate matter emission from all the stacks shall not exceed 30 mg/Nm^3.

ii. Green belt shall be developed in 34% of the total area all along the periphery of the plant with a density of 2500 sapling per hectare as committed by the PP.

iii. 2488 KLD water shall be sourced from Damodar River for the proposed expansion. No ground water abstraction is permitted.

iv. 100 % solid waste generated in the facility shall be utilized.

v. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.

vi. Slip roads shall be provided at the gates and along crossings on main roads to avoid traffic congestion.

vii. Performance monitoring of all Pollution Control Devices shall be carried out annually and report submitted to MoEF&CC, Regional Office.

viii. All internal and connecting road to the Highway shall be black topped/ concreted with suitable load in term of Million Standard Axle (MSA) as per IRC guidelines.

ix. Rain Water harvesting shall be implemented as per the action plan submitted in the EIA report.

I. Statutory compliance:

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc.,

required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as two Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.

vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

viii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

iii. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March, 2012 (applicable to IF/EAF) as amended from time to time.

iv. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

IV. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

i. Used refractories shall be recycled as far as possible.
ii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

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

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

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

xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

49.13 Expansion of Cement Plant with Increase of Clinker Production from 0.165 MTPA to 3.00 MTPA and Cement from 0.252 MTPA to 2.00 MTPA (OPC/PPC/PSC/Composite Cement/GGBS) along with installation of 12 MW Waste Heat Recovery Power Plant by **M/s. Shiva Cement Limited** located at Village Telighana, P.O. Bringatoli, Kutra, **District Sundargarh, Odisha**. [Online Proposal No. IA/OR/IND/233908/2010, File No. J-11011/84/2008- IA II (I)] – **Environment Clearance – regarding**.

49.13.1 M/s. Shiva Cement Limited, has made an online application vide proposal no. IA/OR/IND/233908/2010 dated 03/12/2021 along with copy of EIA/EMP report, Form-2 and certified EC Compliance report seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(b) Cements plants under Category "A" of the schedule of the EIA notification, 2006 and appraised at Central level.

Details submitted by Project proponent

49.13.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	ToR Validity
13/11/2020	Standard ToR was issued by the MoEF&CC	Terms of Reference	21/11/2020	20/11/2024

49.13.3 The project ofM/s. Shiva Cement Limited located at Telighana Village, P.O. Bringatoli, Kutra, District Sundargarh, Odisha is for expansion of Cement Plant with Increase of Clinker Production from 0.165 MTPA to 3.00 MTPA and Cement from 0.252 MTPA to 2.00 MTPA (OPC/PPC/PSC/Composite Cement/GGBS) along with installation of 12 MW Waste Heat Recovery Power Plant in two phases as below.

- Phase-I - Installation of 0.66 MTPA (2000 TPD) kiln with 5/6 stage preheater and 0.789 MTPA cement grinding & packing unit.
- Phase-II – Installation of 2.34 MTPA (7000 TPD) kiln with 6 stage preheater and 1.20 MTPA cement grinding & packing unit.

49.13.4 Environmental site settings

SNo	Particulars	Details	Remarks
i.	Total land: 58.31 Ha.	• Present Land: 28.68 Ha. - Proposed Phase - I expansion within this land. • Additional Land: 29.63 Ha. - For proposed Phase – II expansion Total Land After Expansion : 58.31 Ha	
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Existing land belonging to SCL is 28.68 Ha Additional Land for Expansion is 29.63 Ha (73.22 acres). The Land classification of the total Land of 58.31 Ha: **Existing land: 28.68 Ha** **Additional Land: 29.63 Ha** Govt. land - 2.93 Ha Pvt. Land – 26.70 Ha (ST Land 24.07 Ha and SC Land 2.63 Ha)	-

SNo	Particulars	Details	Remarks
		SCL has approached IPICOL for the land of 43.7 Ha (107.95 acres). 34.47 Ha (85.15 acres) for plant and 9.23 Ha (22.80 acres) for Overland Belt Conveyor). IPICOL vide letter No. IPICOL/SW/SCL-Exp./1 dated 08/06/2021 Recommended acquisition/ alienation and allotment of a Total of 107.95 acres of land in favour of SCL by IDCO to set up the cement plant and allied facilities Under the recommendation of IPICOL, IDCO vide letter no IDCO/P&A/LAE/8157/2021/1455 dated 15.07.2021 has informed SCL to submit the necessary documents for filling the acquisition and the lease proposal with appropriate authority SCL has submitted the above documents and publication of preliminary notification is awaited	
iii.	Existence of habitation & involvement of R&R, if any.	No habitation falls within the proposed additional land area. The project site falls in a scheduled area and the additional land required for the project i.e 29.63 Ha which will be acquired by the Govt of Odisha as per the provisions of Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2016 and the same will be leased out to Shiva Cement Limited. Land acquisition will be done in phases as per the requirement of the project. This is proposed in order to ensure minimal disturbance of the land & associated people. No forceful land acquisition will be undertaken. The project affected families are 48.	Compensation for acquisition of land for the project will be fixed according to LARR Act, 2013 considering the market price, cost of rehabilitation / resettlement and alternate income generation of PAFs. PP has earmarked total budget of Rs. 25.175

SNo	Particulars	Details	Remarks
			crores towards R&R.
iv.	Latitude and Longitude of the project site	Latitude : 22º 13' 48.91" N – 22º 13' 26.31" N & Longitude: 84º 24' 39.72" E - 84º 25' 29.08" E -	-
v.	Elevation of the project site	260 m above msl	-
vi.	Involvement of Forest land if any.	No Forest Land Involved	-
vii.	Water body exists within the project site as well as study area	No water Bodies exists in project area **Study area** 1.Sapai Nadi - 9.5 km, WSW 2.Lohranga Nadi - 10.0 km, S 3.Daku Nala - 5.0 km, W 4.Nakti jor - 3.5 km, SE 5.Jharia Nala - 8.0 km, NE	River is at 9.5 km
viii.	Existence of ESZ/ESA/ national park/ wildlife sanctuary/biosphere reserve/tiger reserve/ elephantreserve etc. if any within the study area	Nil	-

49.13.5 The existing project was accorded Environmental Clearance byMoEF&CC vide letter no. J-11011/84/2008-IA-II (I) dated 23/05/2011 for expansion of Cement Plant from 0.115 MTPA to 0.825 MTPA clinker and from 0.132 MTPA to 1.05 MTPA Cement production. Extension of validity of the existing EC was obtained for 3 years i.e. up to 22nd May, 2021 vide letter of even no. dated 15/06/2018. Consent to Operate from OSPCB has also been obtained vide letter No. 3713, IND-I-CON-119 dated 12/03/2021 and valid up to 31/03/2022 for the Phase-I.

49.13.6 Implementation status of the existing EC:

Sl. No.	Facilities	Units	As per EC dated 23/05/2011	Implementation Status as on October,2021	Production as per CTO
1	Clinker	MTPA	0.825	1) **Phase- I:** 0.165 (implemented)- Unit -I 2) **Phase-II:**0.66 MTPA (under implementation) Unit-II	0.165
2	Cement (OPC/ PPC/ GGBS/	MTPA	1.05	1) **Phase- I:** 0.252 (implemented)- Unit -I	0.252

	PSC/ Composite Cement)			2) **Phase-II:**0.798 MTPA (under implementation) Unit-II	

49.13.7 The unit configuration and capacity of existing and proposed unit are given as below:

Facility	**Present Capacity**	***Under implementation**	**Proposed Expansion**	**Capacity After Expansion**
		Phase –I	**Phase – II**	
Clinker	0.165	0.66	2.34	#3.0
Cement (OPC/ PPC/ GGBS/ PSC/ Composite Cement)	0.252	0.798	1.20	2.0
Waste Heat Recovery power generation (MW)	-	4.0	8.0	12.0
Note: * After commissioning of Phase – I, Present Unit of 0.165 MTPA clinker and 0.252 MTPA Cement will be Dismantled **#2.0 MTPA clinker will be sent to Split Grinding units**				

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

S. No.	**Raw material**	**Existing requirement (TPA)**	**Total requirement after proposed expansion (TPA)**	**Source**	**Distance /Transportation**
1	Limestone	172,500	+4,200,000	Captive Mine	12 km (by road/ OLBC)
2	Laterite/ Clay	4,600	1,12,000	Lanjibera/ Kutra	2 km (by road)
3	Iron Fines	-	67,500	Barbil, Odisha	175 (by Road)
4	Coal* (imported)	28,750	360,000	Paradeep Port	460 km (by rail)
5	Coal* (Indian)	34650	480,000	SECL, Korba (Chhattisgarh)	270 km (by road)
6	Pet Coke*	0	260,000	IOCL, Odisha	460 km (by road)
7	Alternate Fuel	0	33,000	Different sources (by road)	
8	BF Slag	56,760	820,000	Rourkela	60 km (by road)
9	Gypsum	6,600	85,000	Paradeep Phosphates Ltd.	490 km (by road)
10	Fly Ash	5,280	200,000	Rourkela/ Jharsuguda	60 km / 85km (by road)

Coal and Pet Coke can be used in any combination depending on process & quality requirements

+Sulphur content of the limestone varies from 0.20 to 0.40 % as SO3 (as S - 0.08 to 0.16 %) (Source: Shiva Cement Ltd)

49.13.9 The water requirement of the plant after expansion is 2030 m^3/day of which fresh water requirement is 1800 m^3/day. About 230 m^3/day of treated waste water will be used to meet the water requirements of plantation and dust suppression. SCL has obtained permission for withdrawal of 688 m^3/day water from the CGWA vide letter No 21-4/1423/OR/IND/2017 dated 07/08/2018 which is sufficient for Phase-I. However, for phase-II, the additional 1112 m^3/day of water will be sourced from the mine pit and after laying of water pipeline. The water requirement for the Phase II industrial consumption, except drinking and domestic, will be met from the mine pit. No additional groundwater shall be used for plant operation.

49.13.10 The existing peak power requirement of the cement plant is 5 MW which is met from the state grid. Additional power requirement will be 39 MW and the same will be sourced from the grid & 12 MW WHRS through a dedicated 132 kV overhead grid line.

49.13.11 Baseline Environmental Studies

Period	Post Monsoon Season, 2020 (October'2020, November'2020 and December'2020)
AAQ parameters at 08 Locations	$PM_{2.5}$ = 6.0 to 37.0 µg/m^3 PM_{10} = 21.0 to 80.0 µg/m^3 SO_2 = 3.0 to 18.0 µg/m^3 NOx = 9.0 to 31.0 µg/m^3 CO: less than 1 ppm
AAQ modelling (Incremental GLC)	**Impact of plant and transportation:** PM_{10} = 8.78 µg/m^3 - 0.50 km - SSW $PM_{2.5}$ = 2.64 µg/m^3 - 0.50 km - SSW SO_2 = 3.11 µg/m^3 - 1.05 km - SSW NOx = 18.3 µg/m^3 - 1.05 km - SSW CO = 366-1375 µg/m^3 - 0.1 km - on transportation route **Model used :** AERMOD – Version 9.7
Ground water quality at 08 locations	pH = 6.28 – 7.38 Total Hardness = 102.75-636.27 mg/l Chlorides = 7.94-134 mg/l Fluoride = 0.09-0.5 mg/l Heavy Metals (Zinc) = 0.02-0.1831 mg/l
Surface water quality at 07 Locations	pH: 7.34 to 7.81; DO: 5.8 to 6.2 mg/l; BOD: 01 to 03 mg/l. COD from 5.65 to 10.68 mg/l
Noise Levels At 08 Locations	49.9 to 71.4 dB (A) for the day time 40.5 to 62.7 dB (A) for the Night time.
Traffic assessment study Findings	
➢ **Traffic study carried out at two locations** 1) Near project Site-State Highway (SH-10), BIJU EXPRESS WAY connecting Sambalpur–Rourkela Highway: • Type of Road: Arterial - 4 lane divided (2 way) road	

- PCU limit: 3600 PCU per hour

2) Near mine site at Kutra Road connecting SH-10 (Sambalpur – Rourkela Highway) to Ranchi.
   - Type of Road: Arterial - 2 lane undivided (one way) road
   - PCU limit: 1500 PCU per hour

➢ **Traffic impacts done in two phases**
- Phase – 1
- Phase – 1+2

Particulars	**Details**			**Remarks**		
	SH-10-Towards Rourkela	**Kutra road**	**SH-10-Towards Sundergarh**	**SH-10-Towards Rourkela**	**Kutra road**	**SH-10-Towards Sundergarh**
Traffic Load Study Period	10-06-2020, 08:00 AM to 10-06-2020, 08:00 PM	10-06-2020, 08:00 AM to 10-06-2020, 08:00 PM	10-06-2020, 08:00 AM to 10-06-2020, 08:00 PM	Connecting Sambalpur Rourkela Highway	Connecting Sambalpur Rourkela Highway to Captive Mine	Connecting Sambalpur Rourkela Highway
Traffic Load (Baseline) (PCU/Hr) – Max	1616 PCU's/hr during 08:00-09:00 AM	444PCU's/hr during 09:00-10:00 AM.	1616 PCU's/hr during 08:00-09:00 AM	LOS: C (Good)	LOS: B (Very Good)	LOS: C (Good)
Additional Traffic Load During Operation Of Project (PCU/Hr) – Max	72 PCU/Hr	0	24 PCU/Hr	Maximum trucks which would add to the existing traffic will be 18 trucks / hour (72 PCU/Hr)	0	Maximum trucks which would add to the existing traffic will be 6 trucks / hour (524PCU/Hr)
Total Traffic Load During Operation Of Existing And Proposed (PCU/Hr) – Max	1688 PCU/Hr	444 PCU/Hr	1640 PCU/Hr	LOS: C (Good)	LOS: B (Very Good)	LOS: C (Good)
Traffic Capacity As Per The IRC 106:1990 For Highways (PCU/Hr)	3600 PUC per hour	1500 PUC per hour	3600 PUC per hour	IRC-106:1990 Guide line		

➢ No change in the Level of Service (remained at "B" and "C") of the roads due to additional traffic from SCL.

➢ EMP MEASURES
- Closed trucks will be employed for transport of Materials/Products
- Trucks Pollution Under Control (PUC) will be employed

• Plantation of local species has already been taken up along the road on either side • Monitoring of trucks to ensure compliances such as covering of trucks by tarpaulin, spillage on roads etc. • The existing road is the only road connecting to SCL plant to SH-10. SCL proposes to widen and concrete this road at cost of Rs 6.50 crores ➢ **PARKING FACILITIES:** • Ha (area allotted within plant) • About 150-200 vehicles in the parking yard • All facilities, canteen, toilets, rest rooms, etc. will be provided for truck drivers.	
Flora and fauna	• Nearest Forest - Dahijira R.F. – 3.0 km, ENE • There are no Schedule-I species presented in study area. • Authenticated List of Flora and Fauna by Divisional Forest Officer, Sundargarh District, Odisha

49.13.12 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

Sl. No	Type Of Waste	Source Name	Quantity	Treatment before disposal	Mode Of Disposal	Agreement Details For Disposal
Solid Waste						
1	Solid Waste	Cement Plant	No solid waste will be generated	Dust collected from Pollution control Equipment will be recycled back to the process		
Hazardous Waste						
1	Spent Oil	Cement Plant	15 kl/Annum	None	Containers	Authorized Recycler
2	Waste grease	Cement Plant	06 TPA	None	Containers	Authorized Recycler

49.13.13 Public Consultation:

Details of advertisement given	15/07/2021 - Times of India." (English News Paper) 14/07/2021 - Samabad (Oriya News Paper)
Date of public consultation	26/08/2021
Venue	Ambabagicha ground, Telighana Village, under Kutra Block of Sundargarh District, Odisha State.
Presiding Officer	Addl. District Magistrate (ADM) Sundargarh District.
Major issues raised	1. Land and displacement 2. Environment & pollution 3. Groundwater depletion and water scarcity - 4. Dedicated Approach Road 5. Local Employment, Proper wages and Safety of workers 6. Covid-19 Pandemic 7. Peripheral Development

Action plan as per MoEF&CC O.M. dated 30/09/2020

(A) PUBLIC HEARING COMMITMENTS AND ACTION PLAN AND BUDGET

Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1st year	2nd year	3rd year	
Issue of displacement will be there	As there are no houses/ settlement in the land proposed to be acquired, there will be no displacement of people	Physical Target	-	-	-	
		Budget: Rs. Lakh	-	-	-	-
Company should discuss with the local inhabitants in Panchayat level for consensus.	Company had a meeting with Sarpanch, Kandeimunda in presence of ADM, Sundargarh and Tehasildar Kutra on 23-08-2021. The Sarpanch demanded to comply with their requirement in the areas of pollution control, local employment and peripheral development	Physical Target: Env. & pollution Control: SCL will install high efficiency pollution control systems for control of air, water and noise pollution and will strictly comply with the pollution norms of SPCB and MoEF				
		Budget :	Included in EMP cost			-
		Physical Target: Local Employment – There is a potential for employment to approx. 500 people for the proposed expansion in 2 phases. Local will be preferred and employment will be given based on qualification and eligibility				
		Budget: Rs. Lakh	-	-	-	-
		Physical target: Peripheral development will be undertaken by SCL in the following areas: - Livelihood - Education - Health & sanitation - Rural development				
		Budget: Rs. Lakh	SCL will spend the allocated budget for various peripheral development activities in a span of 3 years. Year wise and activity wise budget allocation is detailed in subsequent points			-
Regarding increase in level of pollution, Poisonous gas emission, respiratory illness, Cement Dust deposits over houses and in agricultural lands, Los of soil fertility and crop productivity, water and noise pollution etc.	• Adequate control measures like installation of ESP, Bag filters, dust suppression system, fume extraction system, sprinklers &stacks of adequate height at relevant places will be installed. • Air borne dust shall be controlled by mobile water tanker inside the plant premises. • Maintenance and performance monitoring of air pollution control	Physical Target:	The physical targets for the entire activities shall be achieved in 3 years			
		Budget:	Included in EMP cost.			-

Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1st year	2nd year	3rd year	
	equipment shall be done at regular intervals. • All roads shall be paved on which movement of raw materials or products will take place inside the plant premises. • No waste water will be discharged outside the plant area. The plant is designed as a zero discharge plant. The entire wastewater will be recirculated and recycled. • Domestic waste water will be treated in STP and the treated water will be used for plantation. • The equipment shall comply with the Statutory limit of 85 dB(A) (at 1 m. from the source). • Noise Reduction Systems will be provided. • Thick greenbelt will be developed around the periphery					
Regarding ground water depletion and water scarcity in the locality due to drawl of ground water by company.	The fresh water requirement of the plant after expansion is 1800 m3/day. For phase-1, 688 m3/day water will be sourced from bore wells and for phase-II, the additional 1112 m3/day of water will be sourced from the mine pit after laying of water pipeline.	Physical target:	Rooftop rainwater harvesting within plant premises. This includes roof tops of CCR, stores, admin, workshop, packing plant and residential buildings as well as groundwater recharge of	Construction of a) 2 check dams in village Telighana and Kandeimunda b) deepening/ renovation of 2 ponds in Kandeimunda and Kutra c) Construction of Roof top RWH structures in 5 govt offices and school buildings		

Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1st year	2nd year	3rd year	
			surface runoff.			
		Budget: Rs 50 Lakh	Included in EMP cost	Rs. 50 Lakh		**Rs. 50 Lakh**
	Supply of drinking water during summer	Physical target:	Drinking water supply through tankers in 3 villages, i.e. Telighana, Kutra and Kandeimunda as per requirement. Water supply will be continued even after 3 years and will also be extended to other villages based on their needs.			
		Budget: Rs. 18 Lakh	Rs. 6 Lakh	Rs. 6 Lakh	Rs. 6 Lakh	**Rs. 18 Lakh**
	Development of drinking water facility	Physical target:	Bore well construction and provision of solar pumps (2 nos each in village Telighana, Kutra and Kandeimunda)			
		Budget: Rs. 30 Lakh	Rs. 10 Lakh	Rs. 10 Lakh	Rs. 10 Lakh	**Rs. 30 Lakh**
	Utilization of mine pit water to conserve groundwater	Physical target:	Laying of water pipeline from Khatkurbahal mine to plant for carrying mine pit water			
		Budget:	Included in project cost			-
Regarding construction of dedicated road from State Highway to plant	The existing road is the only road connecting our plant to SH-10. The company proposes for widening and concreting of this road	Physical target:	Widening and concreting of approx. 1.5 km road will be completed by July 2022		-	
		Budget: Rs. 650 Lakh	Rs. 650 Lakh		-	**Rs. 650 Lakh**
Regarding employment to local people	Top most priority will be given to the local people based on their academic qualification and eligibility. In addition, skill development (SD) for unemployed local youths through National Skill Development Corporation and Odisha Skill Development Authority. Construction of SD Centre with the necessary infrastructure	Physical target:	Construction of Skill Development Centre/ Vocational training centre building with 6 AC rooms near plant premises. Installation of 20 nos of sewing machines, 10 nos of computer systems, 10 nos of machines for making hand craft items along with necessary raw materials, organizing 6 workshops annually for practical training, provision of qualified trainers, approved course contents, independent 3rd party assessment, equipment, machinery and necessary consumables/ raw materials based on the need of the local people			
		Budget:	Rs. 30 Lakh	Rs. 60 Lakh	Rs. 60 Lakh	**Rs. 150 Lakh**
Proper wages to Local labours,	Wages will be paid strictly as per statutory norms	Physical target:	-	-	-	
		Budget:	-	-	-	-
Regarding proper safety measures to be taken for workers to be deployed in	Company will strictly comply with all safety measures in accordance with State Factory Rules	Physical target:	All safety measures related to plant and machinery have been incorporated in plant design. Other measures such as provision of safe workplace, hand rails, toe guards, safe platforms, proper insulation, provision of			

Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1st year	2nd year	3rd year	
company.	and other applicable health and safety rules		sensors for equipment safety, required safety gadgets to workers, appointment of safety officers (in each shift), job safety analysis, regular safety training, ensuring good housekeeping in plant premises, regular health checkup of workers, provision of first aid and a health center within the premises and implementation of Safety Management System in line with ISO 45001			
		Budget:	Included in project and EMP cost			-
Regarding peripheral development	Construction of hospital in the area	Physical target:	Construction of 20 bed hospital with doctors, paramedical staff, minor OT, Emergency, Pathology lab, gynaecology and other required facilities near plant in village Telighana			
		Budget:	-	Rs. 150 Lakh	Rs. 150 Lakh	**Rs. 300 Lakh**
	Village infrastructure development	Physical target:	Construction of 400 Mtr CC road along with drainage (Backside of colony to Telighana village)	Construction of 800 Mtr CC road along with drainage (Road leading from plant backside to Telighana village)	Construction of 1 km CC road along with drainage (Road leading from plant gate to Kandeimunda village)	
		Budget: Rs. 125 Lakh	Rs. 60 Lakh	Rs. 95 Lakh	Rs. 120 Lakh	**Rs. 275 Lakh**
	Sanitation (public toilets)	Physical target:	Construction of public toilets 5 nos each in village Telighana, Kandeimunda, Bringatoli and Kutra. Total 20 nos.			
		Budget: Rs. 15 Lakh	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh	**Rs. 15 Lakh**
	Development of building infrastructure, playground, class rooms, library facilities and providing computers in the Local schools	Physical target:	Construction of 4 extra rooms in govt school, village Telighana	Development of play ground in Kutra High School and providing sports kits to students	Computer labs and 2 nos of smart boards in village schools of Telighana and Kandeimunda	
		Budget: Rs. 32 Lakh	Rs. 12 Lakh	Rs. 10 Lakh	Rs. 10 Lakh	**Rs. 32 Lakh**
	Electrification through Solar LED street lighting in villages	Physical target:	10 nos of solar street lights in Kutra village	10 nos of solar street lights in Telighana village	10 nos of solar street lights in Kandeimunda village	
		Budget: Rs. Lakh	Rs. 7 Lakh	Rs. 7 Lakh	Rs. 7 Lakh	**Rs. 21 Lakh**
		Total budget:				**Rs. 1541**

Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1st year	2nd year	3rd year	
						Lakh

(B) DETAILED ACTION PLAN WITH PHYSICAL TARGETS FOR NEED BASED ACTIVITIES

Need based activities	Particulars	Year of implementation		
		1st year	2nd year	3rd year
Supporting health, nutrition and sanitation	Physical target	Providing nutritious diet package to pregnant women and new mothers for their baby's physical and mental health, providing support for timely vaccination		
	Budget (Rs. 9 Lakh)	Rs. 3 Lakh	Rs. 3 Lakh	Rs. 3 Lakh
	Physical target	Arranging 2 health camps in a year for elderly persons. One camp for eye check-up and free cataract surgery whereas another camp for general health check-up including blood, urine and other tests.		
	Budget (Rs.15 Lakh)	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh
	Physical target	Distribution of sanitary napkins to girls and women.		
	Budget (Rs. 3 Lakh)	Rs. 1 lakh	Rs. 1 lakh	Rs. 1 lakh
Renovation and augmentation of infrastructure	Physical target	Repairing of existing tube wells	Hand pump Installation – 2 nos	Hand pump Installation – 2 nos
	Budget (Rs.3 Lakh)	Rs. 1 lakh	Rs. 1 lakh	Rs. 1 lakh
	Physical target	Repair & maint, of 1 km road .n the village	Repair & maint, of 1 km road .n the village	Repair & maint, of 1 km road .n the village
	Budget (Rs. 30 Lakh)	Rs. 10 Lakh	Rs. 10 Lakh	Rs. 10 Lakh
	Physical target	Supply of furniture and 2 computers in 2 village schools	Supply of medicines in CHC, Kutra	
	Budget (Rs.15 Lakh)	Rs 5 Lakh	Rs 5 Lakh	Rs 5 Lakh
Support to children in education and sports	Physical target	Distribution of school bags, books, bicycles,	Sponsoring 30 candidates for ITI training (fee & other educational	Providing sports kits to children (25 nos) and supporting them to participate in

Need based activities	Particulars	Year of implementation		
		1st year	**2nd year**	**3rd year**
		stationery items to 50 students	expenses)	various sports tournaments etc.
	Budget (Rs. 17 Lakh)	Rs 2 Lakh	Rs 10 Lakh	Rs 5 Lakh
	Physical target	Scholarships to 10 meritorious students every year		
	Budget (Rs. 6 Lakh)	Rs 2 Lakh	Rs 2 Lakh	Rs 2 Lakh
Facilitate carrier oriented programs to make youth eligible for various job opportunities	Physical target	Vocational training for self-employment in the field of auto mechanic, electrician, drill operator, loader operator, Maintenance Crew, excavator operator, HEMM Mechanic etc.		
	Budget (Rs. Lakh)	Covered in Public Hearing related issues		
	Physical target	Financial assistance to 10 students from PAFs towards coaching for competitive examinations		
	Budget (Rs. 15 Lakh)	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh
Sustainable livelihood	Physical target	Organizing driving and vehicle maintenance workshops for PAFs (2 sessions in a year)		
	Budget (Rs.6 Lakh)	Rs. 2 Lakh	Rs. 2 Lakh	Rs. 2 Lakh
	Physical target	Training to PAFs through experts in the field of agriculture & livestock through workshop (2 sessions in a year)		
	Budget (Rs. 6 Lakh)	Rs. 2 Lakh	Rs. 2 Lakh	Rs. 2 Lakh
	Physical target	Training to PAFs for papad making, sanitary napkin making, sewing training through workshop by area expert (4 sessions in a year)		
	Budget (Rs. 15 Lakh)	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh
	Total budget Rs. 140 Lakh			

49.13.14 The capital cost of the project is Rs. 2050 Crores and the capital cost for environmental protection measures is proposed as Rs. 294.9 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.14.505 Crores. The employment generation from the proposed project/ expansion is 500 (locals will be preferred). The details of cost for environmental protection measures is as follows:

S No	Description of Item	Capital Cost (Rs. Crore)	Recurring Cost per annum (Rs. Crore)
	Air Pollution Control	**224.5**	**13.5**
	Wastewater Management	**1.0**	**0.06**
	Energy Conservation Measures	**10.15**	**0.06**
	Solid Waste Management	**30.2**	**0.02**

S No	Description of Item	Capital Cost (Rs. Crore)	Recurring Cost per annum (Rs. Crore)
	Rehabilitation and Resettlement (Land Oustees)	**25.17**	**0.08**
	Greenbelt development	0.70	0.20
	Rainwater Harvesting Structures	0.30	0.03
	Environmental monitoring	2.88	0.555
	Total	**294.9**	**14.505**

49.13.15 Greenbelt has developed greenbelt in an area of 4.46 ha in and around the cement plant complex and will increases it to 19.24 Ha. (33 % of green belt). A 20-100 m wide greenbelt, consisting of at least 3 tiers around plant boundary is/will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species are/will be planted with a density of 1500 trees per hectare. Total no. of 36950 saplings will be planted and nurtured in 14.78 hectares in 05 yearsby incurring an amount of Rs 70 Lakhs.

49.13.16 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

49.13.17 Name of the EIA consultant: M/s. B.S. Envi Tech Pvt. Ltd. [S.No. 147, List of ACOs with their Certificate / Extension Letter no. Rev. 16, November 15, 2021].

Certified compliance report from Regional Office:

49.13.18 The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide letter no. 106-678/16/EPE issued by MoEFCC, dated 18/02/2021 in the name of M/s. Shiva Cement Limited. The Action taken report regarding the partially/non-complied condition was submitted to Regional officer MoEF&CC, Bhubaneswar on 27/02/2021 & 25/06/2021, Compliance Report Recertified by Integrated Regional Office, Bhubaneshwar Vide letter No:106-678/16/EPE dated 28/06/2021. The details of the observations made by RO in the report dated 28.06.2021 along with its re-assessment / present status as furnished by the PP is given as below.

Sl. No	Non-compliances (Observation made during monitoring on 15/01/2021)	Corrective action taken (Action taken report submitted by the project proponent on 27/02/2021 and 25/06/2021)	Present status	Remarks
1	As per GSR 826 (E) dated 16th November, 2009, PAs also need to monitor O3. Pb, CO, NH3, CgHg, Ba., As, Ni and submit the results to the Regional Office of MoEFCC, Bhubaneswar (Specific condition No.iii)	Ambient Air Quality Monitoring is being carried out for the parameters PM10, PM2.5, S02, N02 & CO by NABL accredited third party on regular basis and results are shared to MoEF&CC during six monthly compliance report submission. However, as observed, PP has started periodic monitoring of Pb, NH3, CftHg, Ba., As, Ni parameters and the results of the monitoring carried out on 20-	Being complied.	From reports submitted by PAs, it is observed that they have analyzed parameters such as 03. Pb, CO, NH_3, CgHe, BaP, As, Ni at four locations Main Gate, Office Area, Kiln Area, Colony Area. The parameters are within the stipulated standard.

Sl. No	Non-compliances (Observation made during monitoring on 15/01/2021)	Corrective action taken (Action taken report submitted by the project proponent on 27/02/2021 and 25/06/2021)	Present status	Remarks
		02-2021 are attached**.**		
2	PAs need to conduct fugitive emission monitoring regularly in other locations such as coal mill, packing section, crushing section and submit the monitoring data to the Regional Office of MoEFCC at Bhubaneswar. During monitoring thick layer of fines were observed in the packing area and beside the cement silo indicating poor condition of the existing dust emission control system. Similarly thick layer of dust were found deposited on the ground in the primary crusher and secondary crusher area, coal mill area indicating poor condition of the dust control system. (Specific condition No.iv)	Fugitive emission monitoring in coal mill, packing and crushing section has been started and the monitoring results are attached. PP checked all the bag filters in packing and cement silo section and the faulty bags have been replaced and now the dust extraction has been considerably improved as indicated by the fugitive emission results shown**.** In addition, PP has taken actions to further improve the housekeeping in the primary crusher & secondary crusher area. A dedicated team has been assigned with the responsibility to oversee the housekeeping in critical /dust prone areas on regular basis.	Being complied.	From the reports submitted by projects its is observed PAs have monitored fugitive emission in coal mill, cement packing section and crushing section. Further, they have informed that faulty bags have been replaced in the packing and cement silo section. They have also assured to take action actions to improve the housekeeping in the primary crusher and secondary crusher area.
3	PAs need to submit details e.g., amount generated and amount reused for raw mill dust, coal dust, clinker dust and cement dust from pollution control devices. (Specific condition No.ix)	On an average 3500 kg/hr of dust is collected in bag filters and the entire dust is automatically recirculated in the system.	Being complied.	PAs have informed that 3500 kg/hr (average) dust is collected in the bag filters and the entire dust is recirculated in the system.
4	PAs need to intimate the total area that has been developed as green belt until now with year wise plantation and action plan for covering the 25.42 acres under green belt as mentioned in the EC. (Specific condition No.xii)	Green belt is already developed in 13acres' areas inside the plant premises. The year wise green belt development details till date is attached**.** Action plan for covering 25.42 acres under green belt is attached.	Assured to comply	As per the report submitted by projects, it is observed that from 2013-14 to 2020-21, 13.11 acres have been planted. For the remaining land (12.3 acres), they have assured to take plantation like: year 2021-22 : 1.8 acre, year 2022-23 : 2.0 acre, year 2023-24: 2.5 acre, year 2024-25: 3.0 acre, 2025-26: 3.0 acre.
5	Separate budget for implementing the public hearing commitments need to submitted to the Regional Office along with an implementation plan. Further they also	Separate budget for implementing the public hearing commitments is attached**.** Details of the development carried out towards education, health care, livelihood, women	Being complied.	PAs have submitted action plan for ESC activities that includes education, infrastructure development, promotion of sports, skill development, drinking water supply, health care, livelihood promotion rural

Sl. No	Non-compliances (Observation made during monitoring on 15/01/2021)	Corrective action taken (Action taken report submitted by the project proponent on 27/02/2021 and 25/06/2021)	Present status	Remarks
	need to give details of the development earned for education, health care, livelihood, women empowerment, sanitation etc. from 2011-2020 along with supporting documents. (Specific condition No.xiv)	empowerment, sanitation from 2011 -2020 are attached**.**		development, project management and environmental promotion for 2021-22 to 2027-28. They have also provided details of the development carried out for education, health care, livelihood, women empowerment, sanitation etc. from 2011-2020.
6	Details of the time bound action plan needs to be submitted immediately to the Regional Office. PAs need to provide details of the activities undertaken under "improving living conditions, promoting social development, addressing environmental issues, rural development, Swachch Bharat mission, promotion of education, environment promotion, livelihood promotion, project management cost" along with supporting documents. (Specific condition No.xv, General condition No.vii)	Execution of the project started w.e.f. 0ct'2020. Time bound action plan for undertaking the peripheral development is attached**.** Details of the activities undertaken under Improving Living Conditions, Promoting Social development, rural development, swatch Bharat mission, promotion of education, Livelihood promotions during last 4 years are attached**.**	Being complied .	PAs have submitted action plan for activities under ESC from 2021-22 to 2027-28. PAs have provided information with respect to activities undertaken under "improving living conditions, promoting social development, addressing environmental issues, rural development , Swachch Bharat mission, promotion of education, environment promotion, livelihood promotion" from 2017-18 to 2020-21.
7	PAs have not provided any information with respect to corporate environmental policy. The same should be submitted to the Regional Office. (Specific condition No.xvii)	The copy of the Corporate Environment Policy is attached**.**	Being complied .	PAs have submitted a copy of the corporate environment policy to this office.
8	PAs need to conduct ambient air quality monitoring in four location instead of three. (General condition No.iii)	One more Ambient Air Quality Monitoring Station has been added & now monitoring of 4 locations has been started. The monitoring results of four locations are attached**.**	Being complied .	PAs have submitted AAQ monitoring report from four locations: Main Gate, Office Area, Kiln Area, Colony Area. The parameters are within the stipulated standard.
9	Poor housekeeping was observed. Thick layers of dust were observed in different areas of the project particularly in the packing area, cement silo, crushing area (primary and secondary crushing area), coal mills, dust deposition in number of	Although housekeeping is earned out on regular basis throughout the plant area. However, in recent past, due to non-availability of sufficient labour due to Covid-19situation, the housekeeping of plant was affected and during monsoon, the accumulated cement/ clinker dust deposited in some areas.	Being complied .	As per the photographic evidence submitted by PAs vide letter No.SCL/600-09/2020-21/27 dated 25.06.2021, it is observed that PAs are maintaining good housekeeping inside the plant area and they have also informed that they have a dedicated housekeeping

Sl. No	Non-compliances (Observation made during monitoring on 15/01/2021)	Corrective action taken (Action taken report submitted by the project proponent on 27/02/2021 and 25/06/2021)	Present status	Remarks
	places from the conveyer belt. (General condition No.vi)	Now, the housekeeping is done on regular basis in all the areas. Proper SOPs are being followed to maintain a good housekeeping inside the plant areas and a dedicated housekeeping team has been put in place for maintaining good house-keeping inside the plant premises.		team for maintaining good housekeeping.
10	PAs need to provide a separate environmental management cell with full-fledged laboratory facilities to carry out various management and monitoring functions under the control of Senior Executive. (General condition No.ix)	Shiva Cement has a well structured Environment Management Cell staffed with qualified personnel at site supported by team at Head Office in Mumbai. However, after commissioning of the project, SCL will further strengthen the Environment Management Cell. Organization structure of Environment Management Cell is attached**.** SCL is engaging the services of NABL, MoEF&CC & OSPCB recognized laboratory to carry out the regular environment monitoring.	Assured to comply.	PAs have submitted a copy of the organization structure of Environmental Management Cell. Further they have informed that they do not have a full-fledged laboratory since they have engaged an NABL accredited agency for carrying out environmental monitoring. They have assured to set up environmental lab after commissioning of the expansion project.
11	PAs need to clarify whether occupational health cost come under environment management. (General condition No.x)	Yes, the Occupational Health cost comes under Environment Management budget. Review of Acton Taken	Being complied.	PAs have submitted that occupational health cost comes under Environment Management budget.
12	PAs also need to inform the date of financial closure and final approval of the project by the concerned authorities. (General condition No.xiii)	Final approval of the project :27.11.2019 Date of financial closure of the project is 27.11.2019 Start of project execution (land development work): 22-10.2020.	Being complied.	PAs have submitted the date of financial closure and final approval of the project by the concerned authorities to this office.
13	PAs may inform whether they have workshop in their mining site and whether the waste water is properly collected, treated so as to confirm to the standards prescribed under GSR 422 (E) dated 19.05.1993 and 31st December, 1993 or as amended. (General condition No.xv)	Presently we do not have any workshop in mining areas and therefore no waste water is generated. However, after expansion of mines, workshop will be provided and trade effluent will be treated as prescribed under GSR 422 (E) dated 19.05.1993 and 31stDecember, 1993 or as amended.	Assured to comply.	PAs have informed that there is no workshop in the mining area. They further submitted that after expansion of mines, workshop will be provided and trade effluent will be treated as prescribed under GSR 422 (E) dated 19.05.1993 and 31stDecember, 1993 or as amended.

Sl. No	Non-compliances (Observation made during monitoring on 15/01/2021)	Corrective action taken (Action taken report submitted by the project proponent on 27/02/2021 and 25/06/2021)	Present status	Remarks
14	PAs also need to inform the date of financial closure and final approval of the project by the concerned authorities. (General condition No.xvii)	Final approval of the project: 27.11.2019 Date of financial closure of the project is 27.11.2019. Start of project execution (land development work): 22-10.2020.	Being complied.	PAs have submitted the date of financial closure and final approval of the project by the concerned authorities to this office.
15	Although six monthly compliance report has been uploaded in the company's website. copy of the Environment clearance letter has not been uploaded in their website: www.shivacement.com. The same needs to be uploaded at the earliest. (General condition No.xix)	Environment clearance letter has been uploaded in the company web site i.ewww.shivacement.com. May please refer the following link:https://shivacement.com/wp-content/uploads/2021/02/Environment-Clearance-SCL_compressed.pdf.	Being complied.	EC was available in the link: https://shivacement.com/wp-content/uploads/2021/02/Environment-Clearance-SCL compressed.pdf.

Observations of the Committee

49.13.19 The EAC noted the following:

i. Project proponent has obtained EC on 23/05/2011 for the existing project and the only part of the facility has been implemented and the remaining is reported to be under implementation. However, the validity period of the EC got expired on 22/05/2021. As per MoEF&CC notification S.O. 221 (E) dated 18/01/2021, the period between 1/04/2020 to 31/03/2021 shall not be considered for the purpose of calculation of EC validity period. In view of this, PP shall not undertake the implementation of remaining project activity beyond 22/05/2022.

ii. Land required for the proposed expansion project is not under the possession of proponent. No credible document has been submitted in this regard.

iii. Land requirement stated in the IPICOL letter dated 8/06/2021 is not in consonance with the land requirement for the proposed expansion project.

iv. Rain Water Harvesting calculations have not been given in the EIA report.

v. Mode of transport of limestone from mines to the plant site is reported to be by conveyor. However, Right of Way for conveyor route and its acquisition status has not been made available.

vi. Interlinked project status neither mentioned in the EIA report nor in the presentation made before the EAC.

vii. Performance measurement frequency for Pollution Control Devices (PCDs) is not included.

viii. PP also proposed expansion in colony. Impact assessment for same not incorporated with EIA report.

ix. PP need to be given clarification for higher NOx value.

x. Construction of the plant is proposed in two phases. The land for second phase is not yet available.

xi. Surface water quality results have been reported wrongly with respect to BoD parameter. Fresh analysis of surface water sampling needs to be carried out.
xii. No information has been furnished with respect to co-processing of hazardous waste and monitoring of dioxins and furans.
xiii. For the initial two years, nearly 5 MTPA lime stone is proposed to be transported (19.2 km) by road because the impact assessment for the same has not been carried out.
xiv. Google map of the site shows dense plantation in the plant area proposed. Status of this land is not clear.
xv. PP has not provided the continuous AAQ station in the existing cement plant even after the lapse of 10 years.

Recommendations of the Committee

49.13.20 In view of the foregoing and after detailed deliberations, the committee recommended to return the proposal in its present form to revise the EIA/EMP report by addressing the shortcomings as mentioned above.

49.14 Expansion of Aluminum Smelter production capacity from 5.75 LTPA to 10.85 LTPA by **M/s. Bharat Aluminum Company Limited (BALCO)** located at Risda Village, Korba Tehsil, **Korba District, Chhattisgarh.** [Online Proposal No. IA/CG/IND/2536/2007, File No. J-11011/123/2007-IA.II(I)] –**Reconsideration for Environment Clearance based on ADS reply – regarding.**

49.14.1 M/s Bharat Aluminium Company Limited (BALCO) has made an online application vide proposal no. IA/CG/IND/2536/2007 dated 20/09/2021 along with copy of EIA/EMP report, Form-2, certified EC Compliance report and subsequent ADS reply dated 10/10/ 2021seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3 (a) Metallurgical industries (Ferrous & non-ferrous) under Category "A" of the schedule of the EIA notification, 2006 and appraised at Central level.

49.14.2 The above-mentioned proposal was considered by the Re-constituted EAC (Industry-I) in its 45th meeting held on 28-29th September, 2021 and further reconsidered in its 47th meeting held on 28th – 29th October, 2021 wherein EAC has recommended the proposal for grant of Environment Clearance. Subsequently, the proposal was referred back to the EAC by the Ministry with a request to address the environment impacts occurred due to the following non-compliances and the remedial measures undertaken by the proponent on account of the said environment impacts.

i. Fluoride consumption level was exceeding the permissible norms of 10 Kg/ per ton of Aluminium production
ii. Utilization of Spent Pot Lining waste
iii. Utilization of legacy ash stocks

49.14.3 In this regard, additional information has been sought from the proponent and the same was submitted by the proponent on 8/12/2021 through PARIVESH. The submissions made by the proponent ae summarized as below:

- There is no impact observed on the environment as PP has taken requisite precautionary

and remedial measures from time to time. Regular monitoring of air, water and soil quality is being carried out and the report is being submitted to OSPCB, CPCB and MoEF&CC periodically.

- Fume treatment Plants with dry scrubbers have been installed in Potrooms and Bake Ovens for fluoride absorption and alumina enrichment. Dry scrubbing efficiency is more than 99%.
- Real Time monitoring of Fluoride emissions is being done through CEMS. The fluoride emissions from the Fume Treatment Plant stacks are being maintained well within the stipulated norms i.e., less than 0.65 mg/Nm^3 and reports confirming the same are being submitted to CECB monthly and to the Regional Office of the Ministry every six months.

<table>
<tr><th>Sl. No.</th><th>ADS Point</th><th>Reply/ Response of PP</th></tr>
<tr><td>1.</td><td>Impact of fluoride on environment and remedial measures.</td><td>
• Fluoride consumption has been reduced from 14.53 Kg/MT (2009) to 12.06 Kg/MT (2021).
• The fluoride goes to the environment through stack emissions and fugitive emissions and the rest of the fluoride goes to SPL and gets recycled the bath material from time to time.
• The SPL waste is stored in concrete floor sheds and SLF. The bath materials are kept in Bag and stored in covered shed for use in recycling process.

Preventive Measures to Control Fluoride Emission to Environment:
• Installation of FTP system with dry scrubber in Pot lines and bake ovens for fluoride absorption& enrichment of Alumina.
• The trend of fugitive fluoride which goes out of the Pot line is produced below, however, fugitive fluoride is a volume source emission in which most of the emissions are contained inside the plant premises and very less amount of fluoride goes to the environment.
• However, the fluoride which falls in plant premises is collected through drains and treated through ETP having adequate capacity and being controlled through RO technology.
• Zero Discharge is maintained.

Monitoring and Results:
As mentioned above, measures of the emission from the stack is well within the limit though there is high consumption of fluoride (>10 kg/MT).
From last 8 years monitoring results it is observed that:
<table>
<tr><th>Sl. No.</th><th>Parameter</th><th>Medium</th><th>Location</th><th>Range</th></tr>
<tr><td>1.</td><td>Fluoride</td><td>Air</td><td>Bake oven stack</td><td>0.04-0.47 mg/NM^3</td></tr>
<tr><td>2.</td><td>Fluoride</td><td>Air</td><td>Pot line stack</td><td>0.2-0.5 mg/NM^3</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>ADS Point</th><th>Reply/ Response of PP</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>3.</td><td>Fluoride</td><td>Water</td><td>Surface Water</td><td>0.14-1.2 mg/lit</td></tr>
<tr><td>4.</td><td>Fluoride</td><td>Water</td><td>Ground water</td><td>0.1-0.85 mg/lit</td></tr>
<tr><td>5.</td><td>Fluoride</td><td>Soil</td><td>Around Plant</td><td>15.6-30.4 mg/kg</td></tr>
</table>
From above monitoring values it is found that there is no impact to the environment as values are well within the limit as prescribed
</td></tr>
<tr><td>2.</td><td>Impact of spent pot lining wasteson environment and remedial measures.</td><td>
• Two secured landfills of 10,500 MT, 54000 MT capacity are constructed for the storage/ disposal of SPL / HW as per authorization.
• SPL generation including refractory portion is around 10,000 MTPA.
• Currently around 45000 MT SPL Carbon portion is stored in SLF and around 30000 MT refractory portion is stored on concrete floor in covered sheds.

Control Measures Taken for Impact due to SPL:
• Double liner SLF as per CPCB guidelines have been commissioned and in operation as per approval of CECB. SLF-1 – 10,500 MT capacity and SLF-2 – 54,000 MT capacity.
• Primary and secondary leachate collection pits have been constructed for collection of leachate from the SLF if any which is directed to HDPE lined Solar Pond for evaporation of the leachate. The residue generated if any is disposed in SLF.
• The SLF is covered during rainy season to prevent/reduce leachate generation.
• The refractory portion is being stored on concrete floor in covered shed for further utilization/ disposal as per CPCB SOP.
• Central Pollution Control Board (CPCB) has developed SOP for SPL detoxification, accordingly the SPL generated from our smelters is being disposed off to authorized agencies for detoxification which is further sent to Cement/steel plants.
• Disposed around 53000 MT of SPL to authorized detoxifiers till Nov’21.
• Agreements in place for disposal of complete SPL including stored in SLF by Dec’22.

Monitoring and Results:
Four piezometers are installed around the SLF and regular monitoring is being carried out.
<table>
<tr><th>Sl. No.</th><th>Parameter</th><th>Results</th><th>Limit</th><th>Remarks</th></tr>
<tr><td>1.</td><td>Fluoride in</td><td>0.8 – 1.65</td><td>2 mg/lit</td><td>Four</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>ADS Point</th><th>Reply/ Response of PP</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td></td><td>Piezo metric bore well</td><td>mg/lit</td><td></td><td>piezometers are installed around the SLF</td></tr>
<tr><td>2.</td><td>Fluoride in Soil around SLF</td><td>15.6 – 30.4 mg/kg</td><td>NA</td><td>-</td></tr>
</table>
</td></tr>
<tr><td>3.</td><td>Impact of legacy ash stocks on environment and remedial measures.</td><td>
• Present average ash generation - 3MnT /Annum and 100 % ash utilization from last 3 years and for this year.
• Out of 7 ash dykes, 3 are already reclaimed and legacy ash has been brought down from around 13 to 7 MnT.
Control Measures Taken for Impact due to Legacy Ash Stocks:
• Ash dykes are constructed on abandoned lined red mud ponds, no new land is acquired.
• The Dykes are designed by Dyke Experts (Dr. Dayal, Retired Prof. from IIT, Kanpur and Dr. Patra, Prof. NIT, Rourkela) and they also visit the site periodically to verify the stability issues and guide on the action required, if any.
• PP has adopted High Concentration Slurry Disposal System (HCSD) to dispose ash at dykes which is an environment friendly methodology for ash disposal.
• Dust suppression measures - Stationary sprinklers provided on dyke surface. Also, mobile sprinkling system through tankers in place. Ash trucks are moisturized covered with tarpaulin before leaving dykes.
• Decantation system is provided to collect the decanted water which is recycled back for ash slurry making.

Monitoring and Results:
Regular monitoring of Water and Soil quality is being carried out around Ash Dykes.
<table>
<tr><th>Sl. No.</th><th>Parameter</th><th>Results</th><th>Limit</th></tr>
<tr><td>1.</td><td>Fluoride in Surface Water</td><td>0.14 – 1.2 mg/lit</td><td>-</td></tr>
<tr><td>2.</td><td>Fluoride in Ground Water</td><td>0.1 – 0.85 mg/lit</td><td>1.5 mg/lit</td></tr>
<tr><td>3.</td><td>Heavy Metals in GW
Arsenic (As)
Mercury (Hg)</td><td>
<0.01 mg/lt
<0.001 mg/lt</td><td>
0.01 mg/lt
0.001 mg/lt</td></tr>
</table>
</td></tr>
</table>

49.14.4 Based on the ADS reply, the proposal is reconsidered in the 49th meeting of the Re-constituted EAC (Industry-I) held on 16-17th December, 2021. The observations and recommendation is given as below.

Observations of the Committee

49.14.5 The EAC noted the following:

i. The proposal was earlier considered and recommended by the EAC in its meeting held on 28-29th October, 2021. Subsequently, the said proposal was referred back to EAC by the Ministry for examining the environment impacts occurred due to the following non-compliances and the remedial measures undertaken by the proponent on account of the said environment impacts

- Fluoride consumption level was exceeding the permissible norms of 10 Kg/ per ton of Aluminium production
- Utilization of Spent Pot Lining waste
- Utilization of legacy ash stocks

ii. On perusal of the information submitted, PP claimed that there was no impact of all above non compliances on the environment. However, EAC was not convinced with the data furnished by the proponent and sought for a detailed report by competent agency on analysis of the data for past ten years and submit detailed recommendations on impact and mitigation measures to be taken by PP to remediate the adverse impacts occurred due to excess consumption of Fluoride, storing and not reusing the SPL waste as per CREP recommendations and Storage and non-utilization of Fly Ash as per Fly Ash management and Handling Rules.

iii. As per the Fluoride balance diagram, there is a differential (unaccounted) emission of 0.15 kg/ton is reflected. In view of this, in the report to be submitted through Competent Agency, year wise fluoride data analysis shall be carried out for last ten years and the fluoride balance calculations needs to be submitted. The final result shall be submitted in the following format:

Year details	Fluoride in FEED for corresponding period	Fluoride consumption in the process	Fluoride Contents in SPL/Refractory	Fluoride Emissions	Gap if any

Note: All calculations shall be for per ton of production.
Stack emissions for fluoride & Forage fluoride data shall be submitted.

iv. With respect to SPL waste (carbonaceous and refractory part) and legacy ash stock, PP shall furnish the year wise generation and utilization data.

Recommendations of the Committee

49.14.6 In view of the foregoing and after detailed deliberations, the committee recommended to defer the proposal and sought additional information on the points referred at para no.49.14.5 above.

49.15 Proposed Integrated Cement Plant - Clinker (3.5 Million TPA), Cement (2.5 Million TPA), WHRS (25 MW), DG Set [1250 KVA {1000 KVA or (2 x 500 KVA) & 250 KVA}], Oxygen Plant (80 m^3/hr) along with installation of Railway Siding with Wagon Tippler at Village Parewar, Tehsil Shri Mohangarh, District Jaisalmer, Rajasthan by **M/s. JK Cement Limited** located at Village Parewar, Tehsil Shri Mohangarh, **District Jaiselmer, Rajasthan** [Online Proposal No. IA/RJ/IND/241636/2021; File No.: IA-J-11011/498/2021-IA-II(IND-I)] – **Prescribing for Terms of Reference – regarding.**

49.15.1 M/s. JK Cement Limited has made an online application *vide* Proposal No. IA/RJ/IND/241636/2021 dated 01/12/2021 along with the application in prescribed format (Form- I), Copy of Pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Schedule No. 3 '(b)' Cement plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central level.

49.15.2 It was apprised to the EAC that the project proponent vide email dated 15/12/2021 expressed their inability to participate in the meeting and requested for withdrawal of the same.

49.15.3 In view of the above and after detailed deliberations, the Committee recommended to return the proposal in its present form.

49.16 Proposed Integrated Cement Project - Clinker (2.72 MTPA), Cement (4.05 MTPA), CPP (65 MW), WHRS (10 MW) and D.G. Set (1200 KVA) by **M/s. ACC Limited** located at Villages: Godadih, Bohardih and Loharsi, Tehsil: Masturi, **District: Bilaspur, Chhattisgarh** [Online Proposal No. IA/CG/IND/241466/2021; File No.: J-11011/313/2019-IA. II (I)] – **Amendment in Terms of Reference – regarding.**

49.16.1 M/s. ACC Limited has made an application online vide proposal no. IA/CG/IND/241466/2021 dated 01/12/2021along with the application in prescribed format (Form-3), copy of revised Pre-feasibility report and revised Form-1 and sought for amendment in Terms of Reference accorded by the Ministry vide letter no. J-11011/313/2019-IA.II (I) dated 22/11/2019.

Details submitted by the project proponent

49.16.2 M/s. ACC Limited had earlier applied for grant of ToR for Integrated Cement Project - Clinker (2.72 MTPA), Cement (4.05 MTPA), CPP (65 MW), WHRS (10 MW) and D.G. Set (1200 KVA). The proposal was considered in 12thmeeting of Re-Constituted Expert Appraisal Committee (Industry- 1) held on 21-23rd October, 2019. Accordingly TOR was issued vide letter no J-11011/313/2019-IA.II (I) dated 22/11/2019.

49.16.3 The instant proposal of M/s. ACC Limited is for changing the configuration of proposed Integrated Cement Plant. The configuration & capacity of units granted in TOR dated 22/11/2019 and proposed amendment is as follows:

S. No.	Product / Activity (Capacity / Area)	Unit	Quantity as per Approved ToR dated 22/11/2019	Quantity Proposed
1.	Clinker	Million TPA	2.72	**3.3**
2.	Cement	Million TPA	4.05	**1.0**
3.	CPP	MW	65	**30**
4.	WHRS	MW	10	**17**
5.	D.G. Set	KVA	1200	**2 x 2000 & 1 x 500**

49.16.4 Other changes as per the granted ToR vis-à-vis proposed changes are as follows:

S. No.	Reference of approved ToR dated 22/11/2019	Description as per Approved ToR dated 22/11/2019	Description as per Proposal	Remarks
1.	Subject Matter	Proposed Integrated Cement Project - Clinker (2.72 MTPA), Cement (4.05 MTPA), CPP (65 MW), WHRS (10 MW) and D.G. Set (1200 KVA) by M/s. ACC Limited located at Villages: Godadih, Bohardih and Loharsi, Tehsil: Masturi, District: Bilaspur, Chhattisgarh	Proposed Integrated Cement Project - Clinker (3.3 MTPA), Cement - OPC, PPC, PSC & Composite (1.0 MTPA), CPP (30 MW), WHRS (17 MW) and D.G. Set (2 x 2000 KVA & 1 x 500 KVA) at Villages: Godadih, Boradih and Loharsi, Tehsil: Masturi, District: Bilaspur, Chhattisgarh	Configuration of the project changed.
2.	S. No. 3	M/s. ACC Limited proposes to install a new integrated Cement Project - Clinker (2.72 MTPA), Cement (4.05 MTPA), Captive Power Plant (65 MW) & WHRS (10 MW) and D.G Set (1200 KVA) at Village: Godadih, Bohardih and Loharsi, Tehsil: Masturi, District: Bilaspur (Chhattisgarh). It is proposed to set up the plant based on dry process technology.	M/s. ACC Limited proposes to install a new integrated Cement Project - Clinker (3.3 MTPA), Cement - OPC, PPC, PSC & Composite (1.0 MTPA), Captive Power Plant (30 MW) & WHRS (17 MW) and D.G Set (2 x 2000 KVA & 1 x 500) at Village: Godadih, Bohardih and Loharsi, Tehsil: Masturi, District: Bilaspur (Chhattisgarh). It is proposed to set up the plant based on dry process technology.	Configuration of the project changed.
3.	S. No. 6	The land area required for the proposed plant is 105 ha; out of which 67.37 ha is Govt. Waste land and rest 37.63 ha is private agricultural land. No forest land is involved. The land acquisition is under process. Out of the total project area, 34.65 ha (33%) will be used for greenbelt development.	The land area required for the proposed plant is 112.26 ha; out of which 73.0593 ha is Govt. Waste land and rest 39.2007 is private non-agricultural land. No forest land is involved. The land acquisition is under process. Out of the total project area, 37.04 ha (33%) will be used for greenbelt development.	Area of the plant site increased due to inclusion of residential colony in project area.
4.	S. No. 8	Total project cost is approx. Rs. 2900 Crores. Proposed employment generation from proposed project will be 200 direct employment and 600 indirect/contractual employment.	Total project cost is approx. Rs. 2407 Crores. Proposed employment generation from proposed project will be 362 direct employment during operational phase and 2500 indirect contractual employment during construction phase.	Due to reduction in cement production capacity and CPP Capacity.
5.	S. No. 9	The targeted production capacity of Integrated Cement Project is Clinker - 2.72 MTPA, Cement - 4.05 MTPA, Captive Power Plant - 65 MW & WHRS - 10 MW	The targeted production capacity of Integrated Cement Project is Clinker - 3.3 MTPA, Cement - OPC, PPC, PSC & Composite - 1.0 MTPA, Captive Power Plant - 30 MW & WHRS - 17 MW and D.G Set - 2 x 2000 KV A and	Configuration of the project changed.

<table>
<tr><th>S. No.</th><th>Reference of approved ToR dated 22/11/2019</th><th>Description as per Approved ToR dated 22/11/2019</th><th>Description as per Proposal</th><th>Remarks</th></tr>
<tr><td></td><td></td><td>and D.G Set - 1200 KV A. Limestone for the plant would be sourced from Captive Limestone Mining Lease. The transportation of limestone will be done through covered conveyor belt.</td><td>1 x 500. Limestone for the plant would be sourced from Captive Limestone Mining Lease. The transportation of limestone will be done through covered conveyor belt.</td><td></td></tr>
<tr><td>6.</td><td>S. No. 10</td><td><table><tr><th>Name of Unit</th><th>Proposed Capacity</th></tr><tr><td>Clinker (MTPA)</td><td>2.72</td></tr><tr><td>Cement (MTPA)</td><td>4.05</td></tr><tr><td>CPP (MW)</td><td>65</td></tr><tr><td>WHRS (MW)</td><td>10</td></tr><tr><td>D.G. Set (kVA)</td><td>1200</td></tr></table></td><td><table><tr><th>Name of Unit</th><th>Proposed Capacity</th></tr><tr><td>Clinker (MTPA)</td><td>3.3</td></tr><tr><td>Cement - OPC, PPC, PSC & Composite (MTPA)</td><td>1.0</td></tr><tr><td>CPP (MW)</td><td>30</td></tr><tr><td>WHRS (MW)</td><td>17</td></tr><tr><td>D.G. Set (kVA)</td><td>2 x 2000 & 1 x 500</td></tr></table></td><td>Configuration of the project changed.</td></tr>
<tr><td>7.</td><td>S. No. 11</td><td>The electricity load of 65 MW will be sourced from proposed Captive Power Plant, WHRS & D.G Set (for emergency). Company has proposed to install D.G Set of 1200 KVA for back-up purpose.</td><td>The electricity load of 45 MVA will be sourced from proposed Captive Power Plant, WHRS & D.G Set (for emergency). Company has proposed to install D.G Set of 2 x 2000 KVA and 1 x 500 for back-up purpose.</td><td>Electricity load will be reduced due to reduction in cement production capacity.</td></tr>
<tr><td>8.</td><td>S. No. 12</td><td>Proposed Raw materials required for the project are Limestone (3.9 MTPA) which will be sourced from Captive Limestone Mining Lease near to the proposed project site. Bauxite (0.06 MTPA) will be sourced from Kavardha (Chhattisgarh); Iron Ore (0.06) will be sourced· from Iron ore mines of Tilda (Chhattisgarh); Gypsum (0.25 MTPA) from Paradeep Port, Dahej port, Bharuch; Fly ash (1.22 MTPA) from Power plant in Chhattisgarh & CPP, NSPCL-Sail, JSPL; Slag (1.5 MTPA) will be sourced from JSPL, Bhilai Steel Plant. Fuel Consumption for</td><td>Proposed Raw materials required for the project are Limestone (5.43 MTPA) which will be sourced from Captive Limestone Mining Lease near to the proposed project site. Bauxite (0.121 MTPA) will be sourced from Odisha / Jharkhand / Open market; Gypsum (0.12 MTPA) from Rajasthan / Imported / Paradeep Phosphates or any other fertilizer plant; Fly ash (0.53 MTPA) Power plant in Chhattisgarh & CPP; Slag (0.53 MTPA) will be sourced from JSPL, Bhilai Steel Plant. Fuel Consumption for Cement Plant will be Petcoke (Indigenous/ Imported) requirement is - 0.37 MTPA and Indian / Imported Coal requirement is 0.65 MTPA which will be sourced from SECL. Coal, requirement for CPP is 0.3 MTPA which will be</td><td>Change in the configuration and capacities of Proposed Integrated Cement Plant results in raw material requirement</td></tr>
</table>

S. No.	Reference of approved ToR dated 22/11/2019	Description as per Approved ToR dated 22/11/2019	Description as per Proposal	Remarks
		Cement Plant will be Petcoke (Indigenous/ Imported) - 0.31 MTPA and Indian / Imported Coal requirement is 0.48 MTPA which will be sourced from SECL. Coal, requirement for CPP is 0.52 MTPA which will be sourced from SECL.	sourced from SECL.	
9.	S. No. 13	Water Consumption for the proposed project will be 1753 KLD which will be sourced from Lilagarh River. No waste water will be discharged from the cement plant. Domestic waste water will be treated in STP and treated water will be used for greenbelt development/plantation & dust suppression. Waste water generated from CPP will be recycled back into the process and used for dust suppression after proper neutralization.	Water Consumption for the proposed project will be 2650 KLD which will be sourced from Lilagarh River**.** No waste water will be discharged from the cement plant. Domestic waste water will be treated in STP and treated water will be used for greenbelt development/plantation & dust suppression. Waste water generated from CPP will be recycled back into the process and used for dust suppression after proper neutralization.	In CPP water cooling tower will be replaced by Air coolers and colony has become the part of the Project which was not earlier.

49.16.5 Changes in basic parameters after proposed amendment:

S. No.	Units	Existing Capacity for which ToR has been granted	Proposed Capacity for which Amendment in ToR has been proposed
1.	Total Project Area (Ha)	105	112.26 (102.56 ha + 9.7 ha for colony)
2.	Geographical Coordinates	Latitude - 21°47'49.05" N to 21°48'22.54" N Longitude - 82°19'55.57" E to 82°20'58.35" E	Latitude - 21°47'47.10" N 21°48'22.79" N Longitude - 82°19'55.61" E 82°20'59.13" E
3.	Water Requirement (KLD)	1753	4330
4.	Power Requirement (MW)	65	45
5.	Manpower Requirement (Nos.)	Operation Phase - 200 Construction Phase - 600	Operation Phase - 362 Construction Phase - 2000
6.	Total Project Cost	2900	2407

S. No.	Units	Existing Capacity for which ToR has been granted	Proposed Capacity for which Amendment in ToR has been proposed
	(Crores)		

49.16.6 **Reason for seeking amendment in ToR:** Looking to the future scenario, M/s. ACC Limited will be proposing Clinker Grinding Unit in other places; and this proposed Integrated Cement plant will be the source of clinker for those proposed Grinding Units. Therefore, the company management has decided to change project configuration with reorientation of plant layout of proposed Integrated Cement Plant at Villages Godadih, Boradih and Loharsi, Tehsil Masturi, District: Bilaspur, Chhattisgarh. Secondly, earlier the residential colony was not included in the project area. But now company management has decided to set up colony along with proposed integrated cement plant. Therefore, the total project area has changed from 105 ha (as per granted ToR) to 112.26 ha (102.56 ha for plant and 9.7 ha for residential colony). Therefore, the total project area has changed from 105 ha (as per granted ToR) to 112.26 ha (102.56 ha for plant and 9.7 ha for residential colony). So ACC Limited is proposing amendment in ToR Letter issued by MoEFCC, New Delhi.

49.16.7 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.

49.16.8 During the meeting, project proponent submitted written submission on the following points:

- PP submitted that Air cooled condenser will be used in place of water cooling tower and total water requirement will be 2650 KLD considering air cooled condenser. Accordingly, details have been updated at para 49.16.4 Revised water break up is given as below:

S No	Water consumption section	Water consumption
1	Cement Plant	724
2	Captive Power Plant	720
3	Waste heat recovery system	408
4	Domestic use	354
5	Green Belt	444
	Total Fresh Water	**2650**

- Total project area will be 112.26 ha and separate Environmental Clearance for the colony of 9.7 ha will be obtained from SEIAA, Chhattisgarh.

Observations of the Committee

49.16.9 The Committee noted the following:

i. M/s. ACC Limited had earlier obtained ToR on 22/11/2019 for Integrated Cement Project - Clinker (2.72 MTPA), Cement (4.05 MTPA), CPP (65 MW), WHRS (10 MW) and D.G. Set (1200 KVA) at Villages: Godadih, Bohardih and Loharsi, Tehsil: Masturi, District: Bilaspur, Chhattisgarh.

ii. Now, PP seeking amendment in ToR dated 22/11/2019 due to increase the land area to revised the plant configuration and set up the residential colony. The revised configuration detail is given at para 49.16.3, 49.16.4 and 49.16.5 above.

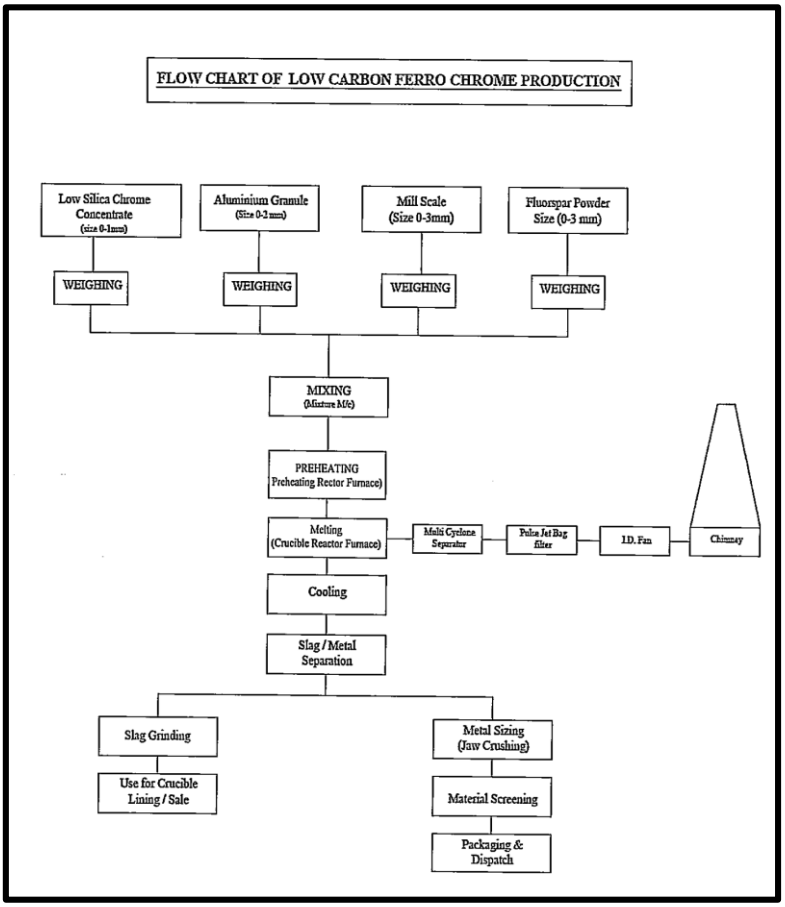
Recommendations of the Committee

49.16.10 After deliberations, the Committee recommended the proposal for amendment in the ToR dated 22/11/2019 as mentioned at para no. 49.16.3, 49.16.4 & 49.16.5 above. All other terms and conditions stated in the ToR dated 22/11/2019 shall remain unchanged.

49.17 Applicability of provisions contained in the EIA Notification, 2006 and its subsequent amendments for establishment of "Low carbon ferro-chrome of 6000 TPA, Molybdenum of 2400 TPA and Aluminium powder of 3600 TPA [Total capacity: 12000TPA]" by **M/s. Indiano Chrome Private Limited** located at Saura Industrial Estate, **District-Khorda**, **Odisha** – **Seeking clarification from MoEF&CC – regarding.**

49.17.1 M/s Indiano Chrome Private Limited has sought for clarification from MoEF&CC regarding requirement of EC for production of low carbon Ferro chrome of 6000 TPA, Molybdenum of 2400 TPA and Aluminium powder of 3600 TPA totalling to production of 12000 TPA. Further, it is reported that reactor furnaces will be used in this project. With reference to SPCB, Odisha Letter No.15739/IND-II-NOC/Mise-244 dated 21/09/2013, proponent has sought clarification with respect to applicability of provisions of EIA notification 2006 & its subsequent amendments, wherein projects involving operation of furnaces with capacity less than 30,000 TPA do not attract Environment Clearance (EC).

49.17.2 As reported, the process flow chart provided by the PP is as follows:



Observations of the Committee

49.17.3 The Committee noted the following:

- As per the provisions of EIA Notification 2006, the Ferro Alloy Plants irrespective of their capacity are covered under schedule 3(a), Category 'A' and requires prior Environment Clearance from MoEF&CC, New Delhi.
- In the instant proposal under consideration, the proposed Ferro Chrome production falls under schedule 3(a) Category 'A' and would require prior Environment Clearance from MoEF&CC, New Delhi.

Recommendations of the Committee

49.17.4 After deliberations, the Committee recommended that aforementioned proposal of M/s. Indiano Chrome Private Limited would require prior Environment Clearance from MoEF&CC, New Delhi. Accordingly, Ministry is requested to inform the project proponent.

49.18 Enhancing the Crude Steel Production from 4.656 MTPA to 5.1 MTPA (an intermediate product) by debottlenecking & improvement in shop logistic of SMS-2, without changing the overall capacity of Hot Metal Production of 5.77 MTPA & amendment in EC Conditions of existing EC by **M/s. Steel Authority of India limited (Bokaro Steel Plant)** located at Village Bokaro Steel City, Tehsil Chas, **Bokaro District, Jharkhand**. [Online Proposal No. IA/JH/IND/234162/2021; File No.: IA-J- 11011/99/2007-IA-II(I)] – **Environment Clearance under Para 7 (ii) of EIA Notification, 2006 and amendment in the EC conditions– regarding.**

49.18.1 M/s SAIL-Bokaro has made an online application vide proposal no IA/JH/IND/234162/2021 dated 17/10/2021 along with copy of Environmental Appraisal report and Form – 2 seeking Environment Clearance (EC) under the provisions of para 7(ii) of EIA Notification, 2006 for the project mentioned above as well as amendment to the existing EC conditions. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (ferrous & non-ferrous) Under Category "A" of the schedule of the EIA Notification, 2006 and appraisal at Central Level.

49.18.2 The aforesaid proposal was considered and recommended by the EAC in its meeting held on 28-29th October, 2021. Following are the EAC recommendations with respect to the EC amendment proposal of PP:

Cond. No.	Specific Conditions	Conditions to dropped/ Amended	Remarks
A. Conditions accepted for amendment by the EAC			
Energy Conservation measures (v)	Ensure installation of regenerative type burners on all reheating furnaces.	To be amended as "Ensure installation of regenerative/ recuperative type burners on all reheating furnaces"	There are four Nos. of Walking beam type reheating furnaces in Hot strip Mill ,which are already equipped with recuperative type burners, which are also an

Cond. No.	Specific Conditions	Conditions to dropped/ Amended	Remarks
			established technology of energy conservation.
Waste Management (ii)	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	To be dropped	100% of GCP sludge is being recycled.
Water Quality monitoring Vii	Treated water from ETP of COBPP shall not be used for coke quenching.	To be dropped.	CREP strongly recommended for use of treated coke oven effluent for quenching. The same is implemented at our existing COBPP facility.
Amendment in subject of EC	Capacity of Existing CRM Complex **(1.66MTPA)**	**To be amended as,** Capacity of Existing CRM Complex **(2.86MTPA)**	It is typographical mistake.
B. Conditions not accepted for amendment by the EAC			
i	CDQ shall be installed in coke ovens. Modified wet quenching tower shall be used as Stand by quenching in coke ovens battery.	To be amended as " CDQ shall be installed in new Coke ovens"	It is not feasible to install CDQ in existing Coke oven Batteries due to space constraint.
iv	New sinter plant shall be equipped with power generation facility from waste heat Recovered from sinter cooler	To be amended as "New Sinter plant shall be equipped with power generation facility/preheating of gas facility from waste heat recovery from sinter cooler"	Our new Sinter Plant is in final leg of construction .i.e. there is provision of preheating of gases from waste heat recovery from Sinter cooler, which is also an established technology of energy conservation.
xvii	Coke Oven Gas shall be desulfurized	To be dropped	It is not feasible to desulfurize total Coke oven gas in existing recovery type Coke ovens due to retrofit constraint, however it is desulfurized partially where ever it is technically required such as HDGL of Cold Rolling mill.

Cond. No.	Specific Conditions	Conditions to dropped/ Amended	Remarks
Air Quality Monitoring Xii	Vapour absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.	To be dropped.	It is not feasible in existing Coke ovens due to retrofit constraint.
Air Quality Monitoring Xiii	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	To be dropped.	It is not feasible in existing raw material piles.

49.18.3 Subsequently, the aforementioned EC amendment proposal was referred back to EAC by the Ministry for examining and suggesting alternatives with respect to achieving compliance to the aforesaid EC conditions for which amendment have not been recommended by the EAC. In this regard, PP has submitted the alternatives vide letter dated 07/12/2021 through PARIVESH.

49.18.4 Based on the submission, the proposal is reconsidered in the 49th meeting of the Re-constituted EAC (Industry-I) held on 16-17th December, 2021. Further during the meeting, the project proponent submitted written submissions on the alternatives for amendment in EC conditions.

49.18.5 The reply submitted by the proponent along with the views of the EAC is furnished as below.

Condition No.	Condition requested for amendment	Amendment Type	Justification for amendment	Alternatives proposed by the Proponent	Views of EAC
i	CDQ shall be installed in coke ovens. Modified wet quenching tower shall be used as Stand by quenching in coke ovens battery.	To be amended as " CDQ shall be installed in new Coke ovens"	Technically it is not feasible to install CDQ in existing Coke oven Batteries due to space constraint, which are detailed below. ➢ The installation of CDQ requires huge space which is not available towards coke side of existing coke oven batteries. ➢ There are railway tracks for the movement of quenching cars just behind the existing coke oven batteries. ➢ Coke sorting plants have been installed just after railway tracks behind all existing coke oven batteries. ➢ Coke conveying lines have been attached with coke soring plant for transportation of BF Coke to Blast furnace.	CDQ shall be installed in end batteries i.e. batteries #1,2,7 & 8 at the time of rebuilding of these batteries. CDQ for Batteries #5 & 6 will be installed during rebuilding of Battery #5. Battery #3 & 4 will be closed down by 2025.	The alternatives proposed by the project proponent has been accepted by EAC.

Condition No.	Condition requested for amendment	Amendment Type	Justification for amendment	Alternatives proposed by the Proponent	Views of EAC
			➢ In view of above it is not possible to install CDQ in existing Coke oven batteries, However modified type quenching towers have been installed along with all existing coke oven Batteries in compliance to Notification G.S.R.46(E), dated 3.2.2006. ➢ New coke oven Battery#9 is equipped with CDQ.		
iv	New sinter plant shall be equipped with power generation facility from waste heat Recovered from sinter cooler	To be amended as "New Sinter plant shall be equipped with power generation facility/preheating of gas facility from waste heat recovery from sinter cooler"	New Sinter Plant is under execution stage (The package is awarded to M/s BEC). Being a PSU PP cannot cancel /modify the work order at this stage ,however there is provision of preheating of gases from waste heat recovery from Sinter cooler, which is also an established technology for energy conservation.	PP will carry out a feasibility study from in-house consultant CET for feasibility of retrofitting of Power generation facility vertically from waste heat recovered from Sinter Cooler of the new Sinter plant, as the space is not available for retrofitting the power generation facility horizontally (One side Gas pipelines is there and the in other side Conveyors feeding coke to BF Complex along with raw material feeding conveyors exists).	The alternatives proposed by the project proponent has been accepted by EAC.
xvii	Coke Oven Gas shall be desulfurized	To be dropped	The coal blend of existing coke oven batteries contains 85% of imported coal & 15% of indigenous coal. Sulphur content in imported coal is less than 0.5% and the indigenous coal contains around 0.7% of sulphur and consequently the sulphur content in Coal blend is around 0.53%. This results in very low sulphur content in Coke oven gas. The SO_2 level in the flue gas of different shops chimney is also well below stipulated standard. Due to this desulfurization system was not installed in our recovery type coke oven plant, however coke oven gas desulfurization system has been	**The condition is accepted.** Provision of Desulphurisation is already provided in downstream side i.e. in consumer units (HDGL & CRM) rather than in the upstream side. The desulfurization unit which is envisaged with upcoming stamp charged Battery #9 will be augmented to take care of the upstream Coke oven gas	Project Proponent has accepted for compliance of the condition, the same has been agreed upon by EAC.

Condition No.	Condition requested for amendment	Amendment Type	Justification for amendment	Alternatives proposed by the Proponent	Views of EAC
			installed at our HDGL where more pure gas is required. The desulfurization unit will be installed in our upcoming stamp charged Battery #9 where low grade coal will be utilised.	network including gas from the existing batteries for desulphurization.	
Air Quality Monitoring Xii	Vapour absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.	To be dropped.	The vapour absorption or vapour compression system for cooling of coke oven gas is associated with Chiller plant. SAIL/BSL does not have Chiller plant for cooling of coke oven gas. SAIL/BSL has heat exchanger system through process water for cooling of Coke oven gas. The heated water is cooled down in cooling towers. So this condition is not relevant to existing process.	**The condition is accepted.** PP has assigned in-house consultant CET for installation of Chiller plant with Vapour Absorption system for cooling of existing coke oven gas.	Project Proponent has accepted for compliance of the condition, the same has been agreed upon by EAC.
Air Quality Monitoring Xiii	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	To be dropped.	It is not feasible in existing raw material piles due to design constraint, as stackers & Reclaimers movement from one pile to another takes lot of space and the wind shelter fence will be an obstacle to the free movement of these equipment. Sprinkling of water is being done on the piles on regular basis to prevent fugitive emission. However, BSL is exploring the possibility of use of chemicals in spraying for control of fugitive emissions.	Installation of wind shelter fence is not feasible in the existing Raw Material Yard due to design constraint as stackers & Reclaimers movement from one pile to another takes lot of space and the wind shelter fence will be an obstacle to the free movement of these equipment. Chemical spraying on piles will be implemented.	The alternatives proposed by the project proponent has been accepted by EAC.

Observations of the Committee

49.18.6 The EAC noted the following:

i. Due to space and technical constraint, the project proponent is unable to comply with the conditions for which amendment has been sought as mentioned at para 49.18.5 above.

ii. The committee recommended for amendment in some of the conditions during the previous EAC meeting held on 28-29th October, 2021 as detailed at para 49.18.2 above.

iii. Further based on the Ministry's decision and submissions made by the proponent, EAC has reviewed the conditions for which amendment have not been recommended by the EAC during the previous meeting held on 28-29th October, 2021.

Recommendations of the Committee

49.18.7 In view of the foregoing and after deliberations, the Committee recommended for the following amendment in the EC dated 17/03/2021. All other terms and conditions of the EC dated 17/03/2021 shall remain unchanged.

Cond. No.	Specific Conditions	Amendment recommended
i	CDQ shall be installed in coke ovens. Modified wet quenching tower shall be used as Stand by quenching in coke ovens battery.	CDQ shall be installed on new coke ovens. With respect to existing coke ovens battery number 1,2,7 and 8, CDQ shall be installed during rebuilding. Battery number 3 and 4 shall be closed after commissioning of new coke battery number 9 as committed. Thereafter, CDQ shall be installed in battery number 5 and 6 of coke ovens during rebuilding.
iv	New sinter plant shall be equipped with power generation facility from waste heat Recovered from sinter cooler	Sinter Cooler WHR shall be installed for power generation vertically in the space available based on the outcome of the feasibility study as committed.
xvii	Coke Oven Gas shall be desulfurized	No change.
Air Quality Monitoring Xii	Vapour absorption system shall be provided in place of vapor compression system for cooling of coke oven gas in case of recovery type coke ovens.	No change.
Air Quality Monitoring Xiii	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	Fixed sprinklers shall be installed and chemical spraying shall be carried out on the raw material stock piles.
Energy Conservation measures (v)	Ensure installation of regenerative type burners on all reheating furnaces.	Ensure installation of regenerative/ recuperative type burners on all reheating furnaces.
Waste Management (ii)	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	To be dropped
Water Quality monitoring Vii	Treated water from ETP of COBPP shall not be used for coke quenching.	To be dropped.
Amend	Modernization-cum-expansion of	Modernization-cum-expansion of Bokaro Steel

Cond. No.	Specific Conditions	Amendment recommended
ment in subject of EC dated 17/03/2021	Bokaro Steel plant by up-gradation of existing SMS-I (1.306 MTPA), Debottlenecking of SMS-II (3.35 MTPA) & **existing CRM complex (1.66 MTPA),** installation of new kiln of 450 TPD in Lime plant, a new Sinter Plant (3.7MTPA) and Oxygen plant (1250 TPD on BOO basis) without increasing the overall production capacity of 5.77 MTPA hot metal by M/s SAIL located at Bokaro Steel City, Tehsil: Chas, District Bokaro, Jharkhand.	plant by up-gradation of existing SMS-I (1.306 MTPA), Debottlenecking of SMS-II (3.35 MTPA) & **existing CRM complex (2.86 MTPA),** installation of new kiln of 450 TPD in Lime plant, a new Sinter Plant (3.7MTPA) and Oxygen plant (1250 TPD on BOO basis) without increasing the overall production capacity of 5.77 MTPA hot metal by M/s SAIL located at Bokaro Steel City, Tehsil: Chas, District Bokaro, Jharkhand.

49.19 Proposed Expansion of Aluminium Smelter Production Capacity from 16 LTPA to 18 LTPA without increasing the CPP capacity of 1215 MW by **M/s. Vedanta Limited** located at Village- Bhurkamunda, PO Kalimandir, **District Jharsuguda, Odisha**- [Online Proposal No. IA/OR/IND/236646/2017, File No. IA-J-11011/29/2007-IA-II(I)] – **Reconsideration for Environment Clearance based on ADS reply– regarding**

49.19.1 M/s Vedanta Limited, Jharsuguda has made an online application vide proposal No. IA/OR/IND/222980/2017 dated 03/08/2021 along with copy of revised EIA/EMP report and Form–2 seeking Environment Clearance (EC) for the proposed expansion of Smelter Plant Capacity from 16 to 18 LTPA, 1215 MW CPP at Bhurkamunda village, District – Jharsuguda, Odisha under the provisions of the EIA Notification, 2006 for the project mentioned above.

49.19.2 The proposal cited above was considered by the EAC in its meeting held on 12-13th August, 2021 wherein EAC recommended to return the proposal in its present form and also recommended for issuance of show cause notice on account of following non-compliances to the prescribed EC conditions.

i. The fluoride consumption in the Smelter Plant is presently at 10.78 Kg/T Al, which is not in compliance to Charter on Corporate Responsibility for Environment Protection (CREP) guideline. Fluoride consumption shall be brought down to CREP standards of less than 10 kg/t.
ii. Utilization of spent pot lining waste by the cement and steel industries are yet to be implemented.
iii. Project proponent has only achieved green belt development in 27% of the total area as against the 33% requirement.
iv. Rain water harvesting has not been carried out at the site by stating that the ground water table is high in the area and establishment of rain water harvesting structures may lead to flooding in the area.
v. Prior permission from the State Forest Department regarding impact of the existing project has been obtained till date.
vi. Significant quantity of legacy ash stocks is still stored in the ash pond located at three different locations in the vicinity of the project site. No effort has been taken to quantify the legacy ash stocks and utilize the same.

vii. Secured Land Fill (SLF) is provided inside the smelter complex. SLF is being implemented in two phases. Phase I of 5000 m^3 capacity started in 2010 was capped in Sept 2013. Phase II of SLF is now in operation. It started in May 2014 and has 5285 m^3 space. No details of the material filled in SLF or the capacity available were provided. No information on plan for post expansion of SLF capacity, once the Phase II site is filled shall be furnished.

viii. There are three ash ponds sites in operation and PP has proposed to acquire large area for ash disposal in spite of new Fly Ash notification to utilize 100 % ash. Further, PP mentioned that they were utilizing 100 % Fly ash since 2018 and the pond ash shall be liquidated in next five years. In view of this, seeking additional land for ash disposal found to be not justifiable.

49.19.3 Accordingly, Show Cause Notice was issued to proponent on 1/09/2021. PP submitted the response to the SCN on 29/09/2021. Further, additional submissions were made on 23/10/2021.

49.19.4 Meanwhile, M/s Vedanta Limited, Jharsuguda made a revised online application vide proposal no. IA/OR/IND/236646/2017 dated 03/11/2021 along with copy of revised EIA/EMP report and Form–2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above.

49.19.5 The revised proposal was considered by the EAC in its meeting held on 11-12th November, 2021. The observations and recommendations of EAC are as follows:

Observations of the Committee held during 11-12th November, 2021

The Committee observed the following:

i. BOD in Surface Water quality has been indicated as 0.8 to 1.6 mg/l, the method used for analysis the BOD shall be furnished.

ii. EAC noted that the public representation mentioned at para 48.14.23 quoted a NGT court case (O.A. 10/2021/EZ) National Green Tribunal Eastern Zone Bench, Kolkata. The case is arising out of disposal of fly ash in the nearby agricultural land by the proponent causing damaging on the agricultural land. As per the Hon'ble NGT Order dated 2/09/2021, the inspection report filed by the Odisha State Pollution Control Board shows several violations of Consent conditions. In this regard, the Hon'ble NGT directed to file an affidavit inter-alia the Environmental Compensation assessed on account of damage caused to the environment.

iii. PP did not provide the information of said court case in Form 2 application and also not disclosed during the presentation. EAC opined to seek an explanation from the PP in this regard.

iv. Project proponent has undertaken a study on the impact of the project on nearby agricultural fields.

v. Show Cause Notice was issued to the unit 1/09/2021 and as per the reply furnished, the unit is yet to comply with the following. Further, MoEF&CC is yet to take final view on the SCN issued to the unit.
   a. Current fluoride emission is at 10.78 Kg/T Al production and sought time till December 2021 to achieve reduced level.
   b. SPL refractory stock is 85,108 MT which is being stored in covered sheds as there is no mechanism is in place for disposal of SPL refractory stock.

c. Ash stock of 124 Lakh Metric Ton is unutilized and sought additional time for its liquidation by 31/03/2027.
d. Only one Roof Top Rainwater Harvesting (RTRW) has been commissioned and 6-RTRH, the construction activities are reported to be under progress.
e. Green belt development covering 33% of the project area will be achieved by Dec, 2021.

Recommendations of the Committee held during 11-12th November, 2021

In view of the foregoing and after detailed deliberation, the committee recommended to defer the proposal and sought for following additional information.

i. Ministry may forward the public representation to the project proponent. PP shall submit the point wise reply to the said public representation received on 12/11/2021 along with the requisite supporting documents. The details of environmental compensation made if any, shall also be submitted.
ii. Project proponent shall explain the reasons for not disclosing the court case details in Form 2 application (or) during the EAC presentation.
iii. PP shall submit the recommendation of interim report on impact of project on the crop by the plant and action plan to mitigate the impact on crop damage shall be submitted.
iv. PP shall submit the action plan for the liquidation 85000 MT SPL refractory waste inter-alia standard operating procedure for disposal of the same.
v. BOD in Surface Water quality samples have been reported as 0.8 to 1.6 mg/l, the method used for analysis the BOD parameter shall be furnished.

49.19.6 In addition to the aforementioned ADS, information has also been sought on environment impacts occurred due to the non-compliances reported at para no. 49.19.2 above along with the remedial measures undertaken by the proponent on account of the said environment impacts.

49.19.7 The proponent submitted the ADS reply through PARIVESH on 02/12/2021 and 9/12/2021. The said ADS replies as well as the reply submitted with respect to the Show Cause Notice dated 1/09/2021 was placed before the EAC for taking appropriate view on the expansion proposal and the show cause notice.

49.19.8 During the course of meeting, EAC came across an Order dated 15/12/2021 of Hon'ble High Court of Odisha in Writ Appeal No. 711 of 2021 (Subrat Bhoi Vs State of Odisha) pertaining to the public hearing held for the instant expansion proposal wherein Hon'ble Court ***"directed that if no environment clearance has been granted as of today, it shall not be granted till next date. List on 10th January, 2022".*** Further, the Committee inferred that the said case was registered in the Hon'ble High Court on 7/09/2021 and no information has been furnished by the project proponent either in Form 2 application submitted vide proposal no. IA/OR/IND/236646/2017 dated 03/11/2021 or during the EAC meeting held on 11-12th November, 2021 and response to the ADS replies submitted on 2/12/2021 & 9/12/2021. The EAC took a serious view on the approach of the project proponent regarding repeated suppression of the court cases' information which are essential for due-diligence by the EAC for taking appropriate view on the expansion proposal as well as the show cause notice issued by the Ministry on 1/09/2021.

49.19.9 In this regard, project proponent claimed during the meeting that they became aware of the existence of court case bearing Writ Appeal No. 711 of 2021 only on 15/12/2021. Hence, the case details could not be made available.

Observations of the Committee

49.19.10 The Committee noted the following:

i. As per the Order dated 15/12/2021 of Hon'ble High Court of Odisha in Writ Appeal No. 711 of 2021 (Subrat Bhoi Vs State of Odisha) pertaining to the public hearing held for the instant expansion proposal wherein Hon'ble Court ***"directed that if no environment clearance has been granted as of today, it shall not be granted till next date. List on 10th January, 2022".***

ii. The aforesaid case was registered in the Hon'ble High Court on 7/09/2021 and no information has been furnished by the proponent neither in the EC application nor during the EAC meeting held on 11-12th November, 2021 and response to the ADS replies dated 2/12/2021 & 9/12/2021.

iii. Project proponent is repeatedly suppressing the information regarding court cases relevant to the proposal under consideration which are essential for due-diligence by the EAC for taking appropriate view on the expansion proposal as well as the show cause notice issued by the Ministry on 1/09/2021. Thus, the project proponent is repeatedly trying to mislead the EAC as well as the Ministry with a malafide intention to obtain expansion EC by deliberately suppressing the vital information essential for due-diligence of the project. Further, it appears that there may be more number of court cases pending before different Hon'ble Courts pertaining to the project under consideration.

Recommendations of the Committee

49.19.11 In view of the foregoing and after deliberations, the Committee recommended to defer the consideration of the proposal and reply to the show cause notice dated 1/09/2021 till the outcome of the Writ Appeal No. 711 of 2021, pending before the Hon'ble High Court of Odisha at Cuttack or as directed by the Hon'ble High Court of Odisha from time to time. Further, the project proponent shall submit explanation regarding the suppression of the information regarding the status of court case at Odisha High Court (Writ Appeal No. 711 of 2021) and all other court cases relevant to the proposal under consideration. An affidavit containing details of all the court cases pending before different Hon'ble Courts pertaining to the project under consideration should also be submitted. All these submissions by the PP shall be considered along with their response to SCN dated 1/09/2021.

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ANNEXURE –1

GENERIC TERMS OF REFERENCE (ToR) IN RESPECT OF INDUSTRY SECTOR

1. **Executive Summary**
2. **Introduction**
   - i. Details of the EIA Consultant including NABET accreditation
   - ii. Information about the project proponent
   - iii. Importance and benefits of the project
3. **Project Description**
   - i. Cost of project and time of completion.
   - ii. Products with capacities for the proposed project.
   - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
   - iv. List of raw materials required and their source along with mode of transportation.
   - v. Other chemicals and materials required with quantities and storage capacities
   - vi. Details of Emission, effluents, hazardous waste generation and their management.
   - vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man/power requirement (regular and contract)
   - viii. The project proponent shall furnish the requisite documents from the competent authority in support of drawl of ground water and surface water and supply of electricity.
   - ix. Process description along with major equipment and machineries, process flow sheet (Quantitative) from raw material to products to be provided
   - x. Hazard identification and details of proposed safety systems.
   - xi. Expansion/modernization proposals:
     - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB/PCC shall be attached with the EIA/EMP report.
     - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005/2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
4. **Site Details**
   - i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco/sensitive areas and environmentally sensitive places)
iii. Co/ordinates (lat/long) of all four corners of the site.
iv. Google map/Earth downloaded of the project site.
v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
vii. Landuse break/up of total land of the project site (identified and acquired), government/private / agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
ix. Geological features and Geo/hydrological status of the study area shall be included.
x. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
xii. R&R details in respect of land in line with state Government policy.

5. **Forest and wildlife related issues (if applicable):**

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).
ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha).*
iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis/à/vis the project location and the recommendations or comments of the Chief Wildlife Warden/thereon.
v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.
vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6. **Environmental Status**

i. Determination of atmospheric inversion level at the project site and site/specific micro/meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.

ii. AAQ data (except monsoon) at 8 locations for PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre/dominant wind direction, population zone and sensitive receptors including reserved forests.

iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 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.

iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.

v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.

vi. Ground water monitoring at minimum at 8 locations shall be included.

vii. Noise levels monitoring at 8 locations within the study area.

viii. Soil Characteristic as per CPCB guidelines.

ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.

x. 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. If Schedule/I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio/economic status of the study area.

7. **Impact Assessment and Environment Management Plan**

i. Assessment of ground level concentration of pollutants from the stack emission based on site/specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail/cum road transport or conveyor/cum/rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards.

vi. Measures for fugitive emission control

vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste/minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

xii. Action plan for post/project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man/made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. **Occupational health**

i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre/designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre/placement and periodical examinations give the details of the same. Details regarding last month analysed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

iii. Annual report of health status of workers with special reference to Occupational Health and Safety.

iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

9. **Corporate Environment Policy**

i. 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.

ii. 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.

iii. 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.

iv. Does the company have 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? This reporting mechanism shall be detailed in the EIA report

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. To address the Public Hearing issues, provisions contained under Ministry's Office Memorandum vide F.No. 22/65/2017/IA.III dated 30/09/2020 shall be complied.
12. 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.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA/EMP reports along with Public Hearing Proceedings (wherever stipulated).

<u>The following general points shall be noted:</u>

i. All documents shall be properly indexed, page numbered.
ii. Period/date of data collection shall be clearly indicated.
iii. Authenticated English translation of all material in Regional languages shall be provided.
iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA/EMP Report.
vi. The index of the final EIA/EMP report must indicate the specific chapter and page no. of the EIA/EMP Report
vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J/11013/41/2006/IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCl)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation

details shall be posted on the EIA/EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.

ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA/EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA/EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district/wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA/EMP Report in a separate chapter and summarized in a tabular chart with financial budget (capital and revenue) along with time/schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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ANNEXURE/2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. 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
3. For Large ISPs, 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.
4. Recent land/use map based on satellite imagery. High/resolution satellite image data having 1m/5m spatial resolution like quickbird, Ikonos, IRS P/6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land/cover mapping of the area.
5. 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.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. 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.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

ADDITIONAL ToRs FOR PELLET PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. 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
3. Recent land/use map based on satellite imagery. High/resolution satellite image data having 1m/5m spatial resolution like quickbird, Ikonos, IRS P/6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land/cover mapping of the area.
4. 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.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

ADDITIONAL ToRs FOR CEMENT INDUSTRY

1. Limestone and coal linkage documents along with the status of environmental clearance of limestone and coal mines
2. Quantum of production of coal and limestone from coal & limestone mines and the projects they cater to;
3. Present land use shall be prepared based on satellite imagery. High/resolution satellite image data having 1m/5m spatial resolution like quickbird, Ikonos, IRS P/6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land/cover mapping of the area.
4. If the raw materials used have trace elements, an environment management plan shall also be included.
5. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.
6. Energy consumption per ton of clinker and cement grinding
7. Provision of waste heat recovery boiler
8. Arrangement for co/processing of hazardous waste in cement plant.
9. Trace metals in waste material especially slag.

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

i. A note on pulp washing system capable of handling wood pulp shall be included.
ii. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
iii. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.
iv. Commitment that only elemental Chlorine/free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.
v. A commitment that no extra chlorine base bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills. Plan for reduction of water consumption.

ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY

1. Justification for engaging a particular type of process (raw hide/skin into semi finishing or finished leather, semi/finished leather to finished leather, dry finishing operations, chrome/vegetable tanning, *etc.).*
2. Details regarding complete leather/ skin/ hide processing including the usage of sulphides, nitrogen compounds, chromium or other tanning agents, post/tanning chemicals, biocides, *etc.*, along with the material balance shall be provided.
3. In case of chrome tanning, details of the chrome recovery plant, management of shavings/solid waste including safe disposal.
4. Details on reuse of soak liquor / saline stream from membrane system, if applicable, to the extent possible in pickling activity after required treatment. Also, mention the salt recovery measures.

ADDITIONAL ToRs FOR COKE OVEN PLANT

1. Justification for selecting recovery/non/recovery (beehive) type batteries with the proposed unit size.
2. Details of proposed layout clearly demarcating various facilities such as coal storages, coke making, by/product recovery area,*etc* within the plant.
3. Details of coke oven plant (recovery/non/recovery type) including coal handling, coke oven battery operations, coke handling and preparation.
4. Scheme for coal changing, charging emission centre, Coke quenching technology, pushing emission control.
5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.

ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

1. Type of the project – new/expansion/modernization
2. Type of fibres used (Asbestos and others) and preference of selection from techno/environmental angle should be furnished
3. As asbestos is used in several products and as the level of precautions differ from milling to usage in cement products, friction products gasketing, textiles and also differ with the process used, it is necessary to give process description and reasons for the choice for selection of process
4. Technology adopted, flow chart, process description and layout marking areas of potential environmental impacts
5. National standards and codes of practice in the use of asbestos particular to the industry should be furnished
6. In case of newly introduced technology, it should include the consequences of any failure of equipment/ technology and the product on environmental status.
7. In case of expansion project asbestos fibre to be measured at slack emission and work zone area, besides base line air quality.
8. In case of green field project asbestos fibre to be measured at ambient air.

ADDITIONAL ToRs FOR METALLURGICAL INDUSTRY (FERROUS AND NON/FERROUS)

1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Emission from sulphuric acid plant and sulphur muck management.
3. Details on installation of Continuous Emission Monitoring System with recording with proper calibration system
4. Details on toxic metals including fluoride emissions
5. Details on stack height.
6. Details on ash disposal and management
7. Complete process flow diagram describing process of lead/zinc/copper/ aluminium, *etc.*
8. Details on smelting, thermal refining, melting, slag fuming, and Waelz kiln operation
9. Details on Holding and de/gassing of molten metal from primary and secondary aluminium, materials pre/treatment, and from melting and smelting of secondary aluminium
10. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
11. Trace metals in waste material especially slag.
12. Plan for trace metal recovery
13. Trace metals in water

Executive Summary

Executive summary of the report in about 8/10 pages incorporating the following:

i. Project name and location (Village, Dist, State, Industrial Estate (if applicable)
ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)
iv. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes. Materials balance shall be presented.
v. Measures for mitigating the impact on the environment and mode of discharge or disposal.
vi. Capital cost of the project, estimated time of completion
vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of is acquisition, nearby (in 2/3 km.) water body, population, with in 10km other industries, forest, eco/sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)
viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio/economic condition of the nearby population
ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
x. Likely impact of the project on air, water, land, flora/fauna and nearby population
xi. Emergency preparedness plan in case of natural or in plant emergencies
xii. Issues raised during public hearing (if applicable) and response given
xiii. CSR plan with proposed expenditure.
xiv. Occupational Health Measures
xv. Post project monitoring plan

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Email **Sundar Ramanathan**

Re: CONSOLIDATED DRAFT MOM OF 49 EAC HELD ON 16/12/2021 TO 17/12/2021

From : cnpandey@iitgn.ac.in Tue, Dec 28, 2021 12:57 PM

Subject : Re: CONSOLIDATED DRAFT MOM OF 49 EAC HELD ON 16/12/2021 TO 17/12/2021 1 attachment

To : Sundar Ramanathan <r.sundar@nic.in>

Dear Mr. Sundar,
Please find the approved MoM for the 49th EAC held on 16th and 17th December, 2021. You are requested to go ahead and publish this on Parivesh.
With best wishes,
C. N. Pandey,
Chairman,
EAC (Industry I), MoEFCC, Govt Of India.