

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

**Date of zero draft MoM sent to Chairman: 03/08/2021**

**Approval by Chairman: 06/08/2021**

**Uploading on PARIVESH: 06/08/2021**

**Summary record of the Forty First (41<sup>st</sup>) meeting of Re-Constituted Expert Appraisal Committee (REAC) held on 29-30<sup>th</sup> July, 2021 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.**

The Forty First 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 29-30<sup>th</sup> July, 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) issue. The list of EAC attendees are as follows:

S. No.	Name	Position	29/07/2021	30/07/2021
1.	Dr. Chhavi Nath Pandey	Chairman	Present	Present
2.	Dr. M.K. Gupta, 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	Present	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.	<i>Dr. Sanjay Deshmukh</i>	<i>Member</i>	<i>Absent</i>	<i>Absent</i>
10.	Prof. S.K. Singh	Member	Present	Present
11.	<i>Dr. R. Gopichandran</i>	<i>Member</i>	<i>Absent</i>	<i>Absent</i>
12.	Shri Jagannadha Rao Avasarala	Member	Present	Present
13.	Shri. J.S. Kamyotra	Member	Present	Present
<b>Officials from MoEF&amp;CC</b>				
14.	Shri. Sundar Ramanathan	Member Secretary	Present	Present
15.	Dr. Vipin Gupta	Scientist 'B'	Present	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 40<sup>th</sup> meeting held during 15-16<sup>th</sup> July, 2021 were confirmed by the EAC as already uploaded on PARIVESH.

**29<sup>th</sup> July, 2021**

41.1 Proposal for Environmental Clearance for completion of balance work of 6 MTPA Pellet Plant (Unit-2) of 12 MTPA Pellet Plant by **M/s. ArcelorMittal Nippon Steel India Limited** located at Udayabata, Post- Paradip, Tehsil Kujang, **District Jagatsinghpur, Odisha** [Online Proposal No. IA/OR/IND/204957/2021, File No. IA- J-11011/129/2007-IAII(I)] –**Environment Clearance – regarding.**

41.1.1 M/s. ArcelorMittal Nippon Steel India Limited has made an online application vide proposal no. IA/OR/IND/204957/2021 dated 17/07/2021 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 “A” of the schedule of the EIA Notification, 2006.

**Details submitted by Project proponent**

41.1.2 The details of the ToR are furnished as below:

<b>Date of application</b>	<b>Consideration</b>	<b>Details</b>	<b>Date of accord</b>
26/03/2021	34 <sup>th</sup> meeting of EAC held on 15-16 <sup>th</sup> April	Terms of Reference	03/05/2021

41.1.3 The project of M/s. ArcelorMittal Nippon Steel India Limited located at Udayabata, Post-Paradip, Tehsil Kujang, District Jagatsinghpur, Odisha is for seeking Environment Clearance for completion of balance work of 6 MTPA Pellet Plant (Unit-2) of 12 MTPA Pellet Plant.

41.1.4 Environmental Site Settings:

<b>SNo</b>	<b>Particulars</b>	<b>Details</b>	<b>Remarks</b>
i.	Total land	Total Land: 61.132 ha (151.06 Acres) (Private land: 61.132 ha.)	Land use: Industrial Land
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014.	Acquired Land: 54.657 ha. (135.06 Acres). Additional land to meet the Greenbelt requirement is 6.475 ha. (16 Acres) which is already under possession of proponent.	-
iii.	Existence of habitation & involvement of R&R, if any.	No habitation within the project site. Hence no R&R is involved.	-
iv.	Latitude and Longitude of the project site.	<b>For existing premises: 54.657 ha</b> Latitude: 20°18'55.03" N to 20°19'28.71" N Longitude: 86°38'37.24" E to 86°39'9.87" E  <b>For additional: 6.475 ha</b> Latitude:	-

SNo	Particulars	Details	Remarks
		20° 19' 19.46" N to 20° 19' 31.36" N Longitude: 86° 38' 35.97" E to 86° 38' 59.31" E	
v.	Elevation of the project site.	4 m AMSL	-
vi.	Involvement of Forest land if any	Nil	-
vii.	Water body exists within the project site as well as study area	<b>Project Area:</b> Nil  <b>Study Area:</b> Mahanadi River- 0.2 km (N) Athrabanki River- 2.7 km (S) Nuna River- 4.02 km (NW) Bay of Bengal- 7.18 km (E)	-
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Bhitarkanika Wildlife Sanctuary: 6.0 km North from the project site. The Eco Sensitive Zone for Bhitarkanika Wildlife Sanctuary was issued by MoEF&CC vide S.O.1601 (E) dated 16/06/2015. As per the said notification, the ESZ varies from 560 meters to 2 kms width from the boundary of the Bhitarkanika Wildlife Sanctuary. It was informed that the project site is located at a distance of 5.39 km from the boundary of the ESZ and permission from Standing Committee for National Board of Wildlife is not applicable. The details of reserved forests exist in the study area is given as below: Sanatubi RF- 7.4 km NE Kharanasi RF – 9.88 km NE	-
ix	CPA/SPA	The project site is located within Paradeep Severely Polluted Area.	CEPI score 60.61

41.1.5 The existing environmental clearance was originally issued to M/s. Essar Steel Orissa Limited vide Ir.no. J-11011 /129/2007-IA.II(I), dated 29/05/2008 for installation of Integrated steel plant 6 MTPA (including Pellet plant 12 MTPA) along with captive power plant (225 MW), further EC was transferred to the M/s. ArcelorMittal Nippon Steel India Limited dated 24/06/2021. Consent to operate for the existing unit for Iron Ore Pellet Plant of 6 MTPA along with 4.75 MTPA Wet Iron Ore Grinding Unit was accorded by State Pollution Control Board, Odisha vide letter no. Ref. No. 3920/IND-I-CON-6258, dated 16/03/2021. The validity of CTO is up to 31/03/2023.

41.1.6 Implementation status of the existing EC:

S. No.	Facilities	Units	As per EC dated 29.05.2008	Implementation Status as on 21.07.2021	Production as per CTO
i.	Pelletisation Plant	Phase 1 Unit-1  Phase 1 Unit-2	Unit 1: 100%;  Unit 2: 83%	Within the EC validity i.e. 28/05/2013 only 100 % installation of 1x6 MTPA pellet plant (unit-1) and 83% installation of 1x6 MTPA pellet plant (unit-2) could be completed by the earlier project proponent.	Unit 1: 6 MTPA
ii.	Blast Furnace with Pig Casting Machine	Phase 2	Dropped	Not Installed	NA
iii.	Basic Oxygen Furnace	Phase 2	Dropped	Not Installed	NA
iv.	Steel Melting & Continuous Casting shop	Phase 2	Dropped	Not Installed	NA
v.	Ladle Furnace	Phase 2	Dropped	Not Installed	NA
vi.	RH-TOB	Phase 2	Dropped	Not Installed	NA
vii.	Slab Caster	Phase 2	Dropped	Not Installed	NA
viii.	Oxygen Plant (BOO Basis)	Phase 2	Dropped	Not Installed	NA
ix.	Lime plant	Phase 2	Dropped	Not Installed	NA
x.	Dolomite Plant	Phase 2	Dropped	Not Installed	NA
xi.	Captive Power Plant	Phase 2	Dropped	Not Installed	NA
xii.	Sinter Plant	Phase 2	Dropped	Not Installed	NA

41.1.7 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
i	Palletization Plant	1 x 6MTPA	60,00,000 TPA	1 x 6MTPA	60,00,000 TPA	2 x 6MTPA	1,20,00,000

41.1.8 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			Source	Distance from Site (kms)	Mode of transportation
		Existing	Expansion	Total			
i.	Iron ore	60,00,000	60,00,000	12,00,000	Dabuna	253	Slurry

S. No	Raw Material	Quantity required per annum			Source	Distance from Site (kms)	Mode of transportation
		Existing	Expansion	Total			
	Concentrate	TPA	TPA	TPA	Beneficiation Plant		pipeline
ii.	Limestone	3,60,000 TPA	3,60,000 TPA	720000 TPA	Dubai	3200	Sea/Road
iii.	Bentonite	48,000 TPA	48,000 TPA	96000 TPA	Gujrat	2080	Sea/Road
iv.	Anthracite coal	90,000 TPA	90,000 TPA	180000 TPA	Russia	5330	Sea/Road
v.	Furnace oil	78000	78000	156000 (KL)	IOCL, Paradeep	10	Road

41.1.9 The water requirement for the project is estimated as 20448 m<sup>3</sup>/day, out of which 17856m<sup>3</sup>/day of fresh water requirement will be obtained from the slurry pipeline and the remaining requirement of 2592m<sup>3</sup>/day will be met from the Taladanda Canal. The permission for drawl of groundwater / surface water is obtained from Mahanadi South Division, Jobra vide Lr. No. 6598/WE, dated 16.07.2020 having validity till March 2021. Application for rephrasing of allocated water is submitted to Mahanadi South Division vide Lr. No. AMNS/PDP/03 dated 12/03/2021 and the same is under process.

41.1.10 The total power requirement for the existing and proposed Pellet Plant is 61 MW. From the existing power plant, power availability is 54 MW. The additional 7MW power for the proposed expansion will be sourced from TPCODL grid.

41.1.11 Baseline Environmental Studies:

Period	December, 2020 – February, 2021 (Winter Season)
AAQ parameters at 11 locations	PM <sub>2.5</sub> = 38.2 to 116.9 µg/m <sup>3</sup> PM <sub>10</sub> = 63.6 to 194.8 µg/m <sup>3</sup> SO <sub>2</sub> = 11.1 to 28.9µg/m <sup>3</sup> NO <sub>x</sub> = 5.0 to 16.6µg/m <sup>3</sup> CO = 0.1 to 3.6 mg/m <sup>3</sup>
AAQ modelling (Incremental GLC)	Max. Incremental GLC (AAQ locations): PM <sub>10</sub> = 1.074µg/m <sup>3</sup> at 0.86 km towards NE PM <sub>2.5</sub> = 0.651 µg/m <sup>3</sup> at 0.65 km towards SE SO <sub>2</sub> = 1.451µg/m <sup>3</sup> at 0.81 km towards WSW NO <sub>x</sub> = 0.957µg/m <sup>3</sup> at 0.81 km towards WSW  Max. Incremental GLC in Buffer Area (at 1.49 km, SW): PM <sub>10</sub> = 1.134µg/m <sup>3</sup> PM <sub>2.5</sub> = 0.756 µg/m <sup>3</sup> SO <sub>2</sub> = 1.56µg/m <sup>3</sup> NO <sub>x</sub> = 0.998µg/m <sup>3</sup>
Ground water quality at 10 locations	pH: 7.2 to 7.8, Total Hardness: 102 to 283mg/l, Chlorides: 19 to 732 mg/l, Fluoride: 0.2 to 2.0 mg/l. Heavy metals are within the limits

Surface water quality at 12 locations	pH: 6.5 to 8.7; DO: 3.7 to 6.8 mg/l and BOD: 1.8 to 7 mg/l. COD from 4 to 79 mg/l		
Noise levels	Ambient noise reaches 43 to 73.4 dB(A) during day time and 36.4 to 67.9 dB(A) during night time.		
Traffic assessment study findings	<b>Summary:</b> A total of 3 locations were taken up for study and traffic survey.		
	Location Name(Road Condition)	Traffic Density (Existing) (PCU/hr)	Traffic Density (After Project Expansion) (PCU/hr)
	Near AMNS main gate (2 Way 2 Lane)	859(LOS-C)	959(LOS-D)
	Near Do chakki point(2 Way 2 Lane)	2312(LOS-D)	2512(LOS-D)
	Near Toll gate(2 Way 2 Lane)	1814(LOS-C)	2014(LOS-D)
Flora & Fauna	Schedule I species reported in the study area are: Indian Python, Marsh Crocodile, Gharial, Olive ridley Sea Turtle, Hawksbill Sea Turtle, River terrapin, Bottle nose Dolphin, Hempback Dolphin  Site Specific Conservations Plan: Letter for Approval submitted vide letter no.5883/7WL-FD&WLC-46/2021 dated 22.06.2021 submitted to the DFO, Rajnagar.		

41.1.12 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)	Quantity after Expansion (TPA)	Mode of Treatment/ Disposal
i.	APCD Dust	Wind-Box Exhaust ESP	190238.4	380476.8	Dust converted to slurry and sent to thickener for reuse
ii.	APCD Dust	Hood Exhaust ESP	16473.6	32947.2	
iii.	APCD Dust	Hearth Layer Bin Scrubber	13464.0	26928.0	
iv.	APCD Dust	Hearth Layer Separation Scrubber	96624.0	193248.0	
v.	APCD Dust	Lime/Anthracite Coal Bag Filter	3168.0	6336.0	Conveyed pneumatically to respective Bins for reuse.
vi.	APCD Dust	Bentonite Bag Filter	2217.0	4434.0	
vii.	APCD Dust	Mixture Bag Filter	10454.0	20908.0	
<b>Total</b>			<b>33639.0</b>	<b>665278.0</b>	

S. No.	Category of Hazardous Waste as per the Schedules I, II & III of these rules	Waste Description	Quantity	Mode of Disposal
i.	Schedule- I Stream- 5.1	Used Oil	35 KLA	Storage in containers over the concrete floor under-ventilated covered shed followed by sale to actual users having valid authorization from SPCB, Odisha
ii	Schedule- I Stream- 5.2	Wastes/ Residues Containing Oil	15KLA	

In phase -II, the waste generation, used oil and waste/residues containing oil will be tentative 25 KL/A & 5 KL/A respectively. Accordingly, the storage shed will be extended and authorization from SPCB, Odisha will be obtained.

41.1.13 Public Consultation:

Public hearing is exempted in pursuance to the S.O. 1247 (E) dated 18/03/2021 as 83% completion of construction work. However, action plan based on need based assessment study is given as below:

S No	Major activities	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total Amount (In Lacs)	Physical targets
<b>A</b>	<b>Education</b>					
1	High School Transformational Project (smart class, science lab, etc.) partnering with Govt. of Odisha flagship project under Mo School Abhiyaan	20	20	20	60	3 Schools will be supported within 3 years i.e. 1 school per year
2	Improvement in basic amenities & teaching learning materials in Anganwadi center	5	10	10	25	In total, 25 Anganwadi center shall be supported. 5 nos of AWC in year-1 and 10 each AWCs in Year-2 & 3.
	<b>Sub Total</b>	<b>25</b>	<b>30</b>	<b>30</b>	<b>85</b>	
<b>B</b>	<b>Health &amp; Sanitation</b>					
1	Mobile Medical Van - Free Doctor consultation and medicine	60	35	35	130	1 Mobile Medical Van with Generic Medicines including COVID-Intervention
2	Health Awareness program on AIDS, Malaria, TB, Anaemia	4	4	4	12	6 Programs per year

<b>S No</b>	<b>Major activities</b>	<b>1<sup>st</sup> Year</b>	<b>2<sup>nd</sup> Year</b>	<b>3<sup>rd</sup> Year</b>	<b>Total Amount (In Lacs)</b>	<b>Physical targets</b>
	etc.					
	<b>Sub Total</b>	<b>64</b>	<b>39</b>	<b>39</b>	<b>142</b>	
<b>C</b>	<b>Infrastructure Development</b>					
1	Additional new Deep bore Well	10	10	5	25	In total, 5 Nos. of Bore-well shall be installed @ Rs. 5 Lakhs
2	Drinking water facility with overhead tank	7	14	14	35	In Total, 5 Nos. of facility shall be installed @ Rs. 7 lakhs
3	Construction of Community Centre/ AMNS Lok Vikas Kendra	-	12	-	12	1 AMNS Lok Vikas Kendra shall be constructed
4	Development of existing Playground in Nuagarh Panchayat		15	-	15	One time development
	<b>Sub Total</b>	<b>17</b>	<b>51</b>	<b>19</b>	<b>87</b>	
<b>D</b>	<b>Sustainable Livelihood</b>					
1	Vocational Skill Training for youths- Setting up Digital skill center with NSDC	34	15	15	64	1 Skill Training Centre. First year cost includes establishment and thereafter year wise operating expenses
	<b>Sub Total</b>	<b>34</b>	<b>15</b>	<b>15</b>	<b>64</b>	
<b>E</b>	<b>Sports and Youth Development</b>					
1	Supporting youths for sports tournaments	5	5	5	15	3-5 Youth Clubs will be assisted in rotation basis within a period of 3 years
2	<b>Sub Total</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>15</b>	
<b>F</b>	<b>Environment</b>					
1	Plantation and Greening Drive in villages and School premise	2.3	2.3	2.4	7.0	A total 7000 plants shall be planted with tree guards
	<b>Sub Total</b>	<b>2.3</b>	<b>2.3</b>	<b>2.4</b>	<b>7.0</b>	
	<b>Grand Total</b>	<b>147.3</b>	<b>142.3</b>	<b>110.4</b>	<b>400</b>	

41.1.14 The capital cost of the project is Rs 1450 Crores and the capital cost for environmental protection measures is proposed as Rs 15 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 1.58 Crores. The employment



generation from the expansion is 1157. The details of cost for environmental protection measures is as follows:

S No	Category	Capital Cost In Rs. Crores	Recurring Cost In Rs. Crores
1	Air pollution Equipment	8.5	0.24
2	Water Pollution Control	1.0	0.12
3	Occupational Health	1.0	0.10
4	Green Belt Development	0.32	0.10
5	Environmental Monitoring	0.25	0.52
6	Solid Waste management	1.0	0.12
7	Safety & Disaster Management	1.0	0.10
8	EMS & Capacity Development	1.0	0.10
9	Additional EMP as per SPA Action Plan	1.5	0.18
	<b>Total EMP Cost</b>	<b>15.0</b>	<b>1.58</b>
10	Budget for CER	4.0	-
	<b>Total EMP cost including CER cost</b>	<b>19.57</b>	<b>1.58</b>

41.1.15 Greenbelt will be developed in 24.511 ha (60.57 acre) which is about 40% of the total project area of 61.132 ha (151.06 acres). Green belt area in 36.2 acre of land has been developed and greenbelt within area of 24.37 acres will be developed. A 2x2 m greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per SPCB/CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare in an area of 24.511 ha (60.57 acre). Total no. of 62,200 saplings will be planted and nurtured in 24.511 hectares (60.57 acre) in 2 years.

41.1.16 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.

41.1.17 Name of the EIA consultant: M/s. Visiontek Consultancy Services Private Limited [S. No. 94, List of ACOs with their Certificate no. NABET/EIA/2023/RA 0209 valid up to 16/12/2023; Rev. 12, July 09, 2021].

#### **Certified compliance report from Regional Office**

41.1.18 The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide letter no 101-251/12/EPE dated 28/06/2021 in the name of M/s. ArcelorMittal Nippon Steel India Limited, AM/NS INDIA. The Action taken report regarding the partially/non-complied condition was submitted to Regional officer MoEF & CC, Bhubaneswar vide letter no. AMNS/26A/2021 dated 19.07.2021:

S No	Non Compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO/Response by PP
			EC date	Specific	General	
1	During monitoring, fugitive emission was observed in the conveyor belt of mixture building. It is recommended that a	Fugitive emission observed	29/05/08	iv, v	-	Sufficient enclosure shall be placed to reduce the emission level. Action taken report will be submitted.

S No	Non Compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO/Response by PP
			EC date	Specific	General	
	closed system may be used to reduce fugitive emission.					
2	It is recommended that the monitoring of ground water around the solid waste management yard be conducted and report submitted to the office.	Ground water monitoring to be carried out.	29/05/08	viii	-	NABL accredited lab is being engaged for carrying ground water monitoring around solid waste management yard and reports will be submitted.
3	The status of site specific wildlife management plan may be intimated to Regional office.	Wildlife Management plan to be submitted	29/05/08	xv	-	Site specific wild life management plan is submitted to PCCF cum CWW for necessary approval after recommendation sent by DFO, Rajnagar/ RCCF and approved copy will be submitted.
4	PA needs to monitor AAQ at another location and submit the monitoring report to the regional office.	AAQ Monitoring to be carried	29/05/08	-	iv	NABL accredited lab is being engaged for carrying AAQ monitoring and reports will be submitted to regional office.
5	It is observed from the data submitted that the noise level at the Indurations building feed end area, IDB Burner floor (North side), Balling disc area, discharge end scrubber area, ESP area were above 85 dBA. PA need to take action to reduce noise levels within the standard mentioned in the EC.	Noise level to be reduced	29/05/08	-	vi	Plant maintenance team is discussing with industrial experts to reduce the noise level to the acceptable limit. Action taken report will be submitted.
6	No rain water harvesting structures has been installed to harvest the rain water.	Rain water harvesting structures to be made.	29/05/08	-	vii	Study will be carried by project proponent through reputed agency and

S No	Non Compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO/Response by PP
			EC date	Specific	General	
						action taken report will be submitted.

### Observations of the Committee

41.1.19 The Committee observed the following:

- i. Originally, the project was accorded EC on 29/05/2008 for setting up of 6 MTPA Integrated Steel Plant.
- ii. Project proponent has commissioned only one module of 6 MTPA pellet plant and completed 83% construction of second module of 6 MTPA pellet plant against the sanctioned capacity of 6 MTPA Integrated Steel Plant.
- iii. All other units except for the 12 (2x6) MTPA Pellet plant from the original EC of 2008 have been dropped. In view of this, the total project area has reduced to 61.132 ha.
- iv. ToR was accorded for second module of 6 MTPA pellet plant as per MoEF&CC notification S.O. 1247 (E) dated 18/03/2021.
- v. Mahanadi river is flowing at a distance of 0.20 Km from the project site.
- vi. Project site is located at a distance of 5.39 km from the boundary of the ESZ and permission from Standing Committee for National Board of Wildlife is not applicable as per the MoEF&CC O.M. dated 8/8/2019 & 16/07/2020.
- vii. Project is located in a severely polluted area. Project proponent has proposed for switch over to Natural Gas fuel from LSHS/LDO, 40% green belt development and particulate matter emission level from the stacks will be less than 30 mg/Nm<sup>3</sup>.
- viii. The EAC found that the EIA/EMP report is in order reflecting the present environmental concerns and the projected scenario for all the environmental components arising out of the proposed project with respective mitigation measures.

### Recommendations of the Committee

41.1.20 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. No construction activity/infringement will take place in flood plain of Mahanadi river located at a distance of 0.20 kms from the boundary of the plant site. Project proponent shall maintain the plant level at least 4.0 meters above MSL and strengthen the existing bund/embankment along the Mahanadi river.
- ii. Particulate matter emission from all the stacks shall be less than 30mg/Nm<sup>3</sup> by installing bag filters with PTFE membrane. PM emission limit of 30 mg/Nm<sup>3</sup> for the operational

6.0 MTPA pellet plant module, shall be achieved by upgrading the existing air pollution control devices by December, 2022.

- iii. Water requirement for the project after expansion (852 m<sup>3</sup>/hr) shall be met from water recovered from iron ore slurry and Taladanda Canal. Ground water abstraction shall not be permitted.
- iv. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of MoEFCC.
- v. Fugitive emissions at work place shall be monitored monthly and report furnished to the concerned Regional Office of MoEFCC.
- vi. 40 % total land shall be covered under green belt development. This includes green belt development of 20-meter-wide towards Udayabata Village which is 600 m from the plant boundary. In addition to the 40% greenbelt mentioned above, green cover shall be developed in 16 acres of buffer area created between plant boundary and Mahanadi River as committed by the project proponent.
- vii. Project proponent shall switch over to Natural Gas fuel from LSHS/LDO by December, 2022.
- viii. Monitoring of the compliance of Environmental Clearance conditions shall be carried out by a third party and report shall be submitted to the Regional Office of the MoEF&CC.

## **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 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. 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.
- iii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- 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. 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. 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. Emergency preparedness**

- 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 report 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 environmental 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<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (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.

41.2 Integrated Steel Plant for achieving 3.0 MTPA crude steel production [Coke Oven (HRT): 2x0.5 MTPA, Sinter Plant: 2x105 m<sup>2</sup> (2.744 MTPA), Pellet Plant: 2.2 MTPA, Blast Furnace: 3 no's (1x1050 m<sup>3</sup>, 1x350 m<sup>3</sup>, 1x1700 m<sup>3</sup>); (3.0 MTPA), SMS: 4x60 T BOF, 4xT LRF, (2x5) + (2x4) strand, Billet caster: (Pig Casting: 0.35 MTPA, Rebar Mill: 1.9 MTPA & Wire Rod Mill: 0.5 MTPA), DI Pipe: 0.4 MTPA, Oxygen Plant (2 no's): 1900 MTPA, Power Plant: 2x60 MW, 1x40 MW, (3x130 TPH CFBC, 4x75 TPH WHRB), Lime Plant: (1x600 TPD) + (1x800 TPD) & Dolo Plant: 150 TPD] by **M/s. Electrosteel Steels Limited** located at Village Siyaljori, Bhagabandh, Budhibinor, Alkusha, Dhandabar, Bandhah, Hutupathar, **District- Bokaro, Jharkhand** [Online Proposal No. IA/JH/IND/217788/2020, File No. J- 11011/137/2006-IA.II(I)] –**Environment Clearance** – regarding.

41.2.1 M/s. Electrosteel Steels Limited has made an online application vide proposal no. IA/JH/IND/217788/2020 dated 16/07/2021 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 & non-ferrous)” under Category “A” of the schedule of the EIA Notification, 2006 and appraised at the Central level.

41.2.2 It was appraised to the EAC that aforesaid proposal was transferred from IA-Violation sector to IA-Industry 1 sector for appraisal by the sectoral EAC. In this regard, following experts have been co-opted for appraisal of the instant proposal consideration.

- i. Shri K. Gowrappan
- ii. Shri. Ashok Agrawal

#### **Details submitted by Project proponent**

41.2.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
03/03/2020	35 <sup>th</sup> meeting of EAC (Violation) held on 6-7 <sup>th</sup> August, 2020	Terms of Reference	25/08/2020

41.2.4 The project of M/s. Electrosteel Steels Limited located at Village Siyaljori, Bhagabandh, Budhibinor, Alkusha, Dhandabar, Bandhih, Hutupathar, District- Bokaro, Jharkhand is for Integrated Steel Plant for achieving 3.0 MTPA crude steel production [Coke Oven (HRT): 2x0.5 MTPA, Sinter Plant: 2x105 m<sup>2</sup> (2.744 MTPA), Pellet Plant: 2.2 MTPA, Blast Furnace: 3 no's (1x1050 m<sup>3</sup>, 1x350 m<sup>3</sup>, 1x1700 m<sup>3</sup>); (3.0 MTPA), SMS: 4x60 T BOF, 4xT LRF, (2x5) + (2x4) strand, Billet caster: (Pig Casting: 0.35 MTPA, Rebar Mill: 1.9 MTPA & Wire Rod Mill: 0.5 MTPA), DI Pipe: 0.4 MTPA, Oxygen Plant (2 no's): 1900 MTPA, Power Plant: 2x60 MW, 1x40 MW, (3x130 TPH CFBC, 4x75 TPH WHRB), Lime Plant: (1x600 TPD) + (1x800 TPD) & Dolo Plant: 150 TPD].

41.2.5 Environmental Site Settings:

SNo	Particulars	Details			Remarks
i.	Total land	374.81 ha [Private: 160.57 ha, Govt. Land: 30.01 ha, Forest Land: 184.23 ha]			Land use: Industrial
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014.	All land parcels are already in possession of M/s. ESL Steel Limited			Plant already existing
iii.	Existence of habitation & involvement of R&R, if any.	Nil			Plant already existing. No additional land required for the proposed proposal.
iv.	Latitude and Longitude of the project site	Points	Latitude	Longitude	-
		B1	23° 37' 34.882" N	86° 17' 10.618" E	
		B2	23° 37' 44.894" N	86° 17' 10.352" E	
		B3	23° 37' 58.620" N	86° 17' 4.271" E	
		B4	23° 38' 29.082" N	86° 17' 8.605" E	
		B5	23° 38' 56.873" N	86° 16' 41.656" E	
		B6	23° 38' 55.645" N	86° 16' 23.950" E	
		B7	23° 39' 4.181" N	86° 16' 32.227" E	
		B8	23° 39' 18.545" N	86° 15' 33.795" E	
		B9	23° 39' 47.631" N	86° 14' 45.169" E	
		B10	23° 39' 28.177" N	86° 14' 53.172" E	
		B11	23° 38' 30.192" N	86° 17' 22.459" E	
		B12	23° 38' 10.087" N	86° 17' 31.281" E	
		B13	23° 38' 20.592" N	86° 17' 28.669" E	
		B14	23° 38' 12.500" N	86° 18' 2.725" E	
		B15	23° 39' 1.750" N	86° 17' 49.001" E	
		B16	23° 39' 15.171" N	86° 18' 13.900" E	
		B17	23° 39' 51.492" N	86° 18' 6.096" E	
B18	23° 39' 49.408" N	86° 18' 16.227" E			



SNo	Particulars	Details			Remarks
		B19	23° 39' 10.234" N	86° 18' 33.998" E	
		B20	23° 38' 11.555" N	86° 18' 19.082" E	
		B21	23° 38' 6.667" N	86° 18' 44.458" E	
		B22	23° 37' 52.733" N	86° 18' 39.599" E	
v.	Elevation of the project site	184 m Above Means Sea Level (AMSL)			-
vi.	Involvement of Forest land if any.	Yes, 184.23 ha			Stage-I FC for 184.23 ha obtained from MoEF&CC vide F. No. 8-21/2019-FC dated 17/12/2019.
vii.	Water body exists within the project site as well as study area	<p><b>Project site:</b> Yes - Seasonal Nala (flowing North to South, joining Ijri River in South)</p> <p><b>Study area:</b> Yes</p> <ul style="list-style-type: none"> <li>• Damodar River: ~6.0km /N</li> <li>• Ijri River: Adjacent/ South</li> </ul>			Scheme for Nalla Protection and Conservation plan prepared and is under implementation.
viii.	Existence of ESZ/ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil. Following forests are in study area: Brindabanpur PF: ~1.5 km /N Silajori PF: ~2.7 km/NE Sabra PF: ~3.8 km/ SSE Galgaltanr PF: ~7.8 km SE			-

41.2.6 The existing project was accorded environmental clearance vide letter no J-11011/137/2006-IA II (I) dated 21/02/2008. However, the same was revoked by MoEF&CC vide order dated 20/09/2018 on account of shifting of project site beyond 5.3km from the originally approved location, encroachment of forest & Government land and non-compliance to stipulated EC conditions. Presently, the matter is under sub-judice and the unit is under operation based on the Order dated 22/09/2020 of Hon'ble Supreme Court in Special Leave Petition no. 11226 &11227 of 2020.

41.2.7 Implementation status of the EC dated 21/02/2008:

Sl. No.	Facilities	Units	As per EC dated 21/02/2008	Implementation Status as on 16/07/2021	Present capacity
1.	Coke Oven	CO1 – NR (Vertical)	0.5 MTPA (4 x 35 Ovens)	operational	0.5 MTPA
		CO2 - NR	0.5 MTPA (8 x 15)	Partially Built	--

Sl. No.	Facilities	Units	As per EC dated 21/02/2008	Implementation Status as on 16/07/2021	Present capacity
		(Horizontal)	Ovens)		
2.	Sinter Plant	SP1, SP2 (augmented)	2.744 MTPA (2x105m <sup>2</sup> )	Operational	2.74 MTPA
3.	Blast Furnace	BF1	1050 m <sup>3</sup>	Partially built	--
		BF2 & BF3	1.57 MTPA (1050 m <sup>3</sup> + 350 m <sup>3</sup> )	Operational	1.57 MTPA
4.	Pig Caster	--	0.35 MTPA	Operational	0.35 MTPA
5.	SMS	SMS1	1.5 MTPA (2x60 T BOF + 1 x60 T LRF + 2 x 5 Strand Billet Caster)	Operational	1.5 MTPA
6.	Calcination Plant	LCP1	1x800 TPD	Operational	950 TPD
		DCP1	1x150 TPD	operational	
7.	DI Pipe Plant	DIP	0.22 MTPA	Operational	0.22 MTPA
8.	Rolling Mills	WRM	0.5 MTPA	Operational	1.2 MTPA
		Rebar	0.7 MTPA	Operational	
9.	CPP	Coal Based	80 MW (2x130 TPH)	Operational	80 MW
		Waste Heat recovery	2 x 75 TPH	Operational	
10.	Oxygen Plant	ASP1	840 TPD	Operational	840 TPD
11.	Raw Material Handling System	--	Stacker-cum-Reclaimer: 01 (Iron Ore)	Partially Built	--

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

S No	Plant	Unit	Present capacity/ Configuration	Proposed capacity/ Configuration	Final capacity/ Configuration	Remarks
1.	Coke Oven	CO1 -- NR (Vertical)	0.5 MTPA (4x35 Ovens)	--	1.0 MTPA (4x35 Ovens + 8x15 Ovens)	Finishing the Partially Built Horizontal Coke CO 2 Oven Battery
		CO2 - NR (Horizontal)	--	0.5 MTPA (8x15 Ovens)		
2.	Sinter Plant	SP1, SP2 (augmented)	2.744 MTPA (2x105 m <sup>2</sup> )	--	2.744 MTPA (2 x105 m <sup>2</sup> )	No Change
3.	Pellet Plant	--	--	2.2 MTPA	2.2 MTPA	New unit
4.	Hot Metal-Blast Furnace	BF1	1050 m <sup>3</sup> (Partially built)	1.90 MTPA (1700 m <sup>3</sup> )	3.47 MTPA (1x1700 m <sup>3</sup> + 1x1050 m <sup>3</sup> + 1x350 m <sup>3</sup> )	Dismantling the Partially built BF1 and installing larger capacity BF.
		BF2 & BF3	1.57 MTPA larger capacity BF. (1050 m <sup>3</sup> + 350 m <sup>3</sup> )	--		
5.	Pig Caster	--	0.35 MTPA	--	0.35 MTPA	No Change
6.	Crude steel-SMS	SMS1	1.5 MTPA (2 x 60 T BOF + 1x60 T LRF + (2x5) Strand Billet Caster)	--	3.0 MTPA (4x60 T BOF + 4x60 T LRF + (2x5) + (2x4) Strand Billet Caster)	New SMS2 similar to existing SMS1
		SMS2	--	1.5 MTPA		

S No	Plant	Unit	Present capacity/ Configuration	Proposed capacity/ Configuration	Final capacity/ Configuration	Remarks
				(2 x 60 T BOF + 3x60 T LRF + (2x4) Strand Billet Caster)		
7.	Calcination Plant	LCP1	800 TPD	--	1550 TPD (1x800 TPD + 1x150 TPD + 1 x 600 TPD)	Installation of a new Vertical shift Lime Kiln of 600 TPD capacity
		LCP2	--	600 TPD		
		DCP1				
8.	DI Pipe Plant	DIP1	0.22 MTPA		0.4 MTPA (1x0.22 MTPA + 1x0.18 MTPA)	Expansion of existing DIP Plant by 0.18 MTPA
		DIP2		0.18 MTPA		
9.	Rolling Mills	WRM1	0.5 MTPA	--	2.4 MTPA (1x0.5 MTPA + 1x0.7 MTPA + 1x1.2 MTPA)	Installation of New Rebar Mill of 1.2 MTPA Capacity
		Rebar1	0.7 MTPA	--		
		Rebar2	--	1.2 MTPA		
10.	Captive Power Plants	Coal based	80 MW (2x130 TPH)	40 MW (1x130 TPH)	120 MW (3x130 TPH)	Installation of a new 130 TPH CFBC boiler and a 160 TPH BF gas based Boiler. Waste heat recovery from new Coke Oven Batteries
		Waste Heat Recovery	2x75 TPH	2x75 TPH	4x75 TPH	
		BF Gas based	--	1x40 MW (160 TPH)	40 MW (160 TPH)	
11.	Oxygen Plant	--	840 TPD	1150 TPD	1990 TPD (1x840 TPD + 1x1150 TPD)	Installation of a new air separation unit of 1150 TPD.
12.	RMHS		Stacker-cum-reclaimer: 01	Stacker-cum-reclaimer: 02 Wagon Tippers: 02 Truck tippers: 02	Stacker-cum-reclaimer: 03 Wagon Tippers: 02 Truck tippers: 02	Installation of 2 new Stacker-cum-reclaimers and augmentation of existing stacker-reclaimer, installation of new railway wagon tippers and truck tippers

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

SN	Raw material	Quantity required per annum		Sources	Distance from site (Kms)	Mode of Transportation
		Existing (At 1.5 MTPA Stage) (Tonnes)	Proposed (At 3.0 MTPA Stage) (Tonnes)			
<b>Coke Ovens</b>						
1	Coking Coal	671140	1342240	Imported (Australia, USA & Canada)	250	Sea / Rail
<b>Sinter Plant</b>						
2	Iron ore fines	1884800	1884800	Indigenous (Kendujhar & Sundargarh, Odisha)	200	Rail
3	Lime Stone Fines	284600	284600	Indigenous (Jukehi-Katni-Niwar, Central India)	600	Rail
4	Dolomite Fines	147000	147000	Indigenous (Sundargarh & Katni-Bilaspur)	600	Rail
5	Quartzite	30300	30300	Purchased locally	100	Rail
<b>Pellet Plant</b>						
6	Lime Stone	-	100800	Indigenous (Jukehi-Katni-Niwar, Central India)	200	Rail
7	Bentonite	-	21700	Purchased locally	50	Rail
8	Iron ore fines	-	2115900	Indigenous (Kendujhar & Sundargarh, Odisha)	200	Rail
9	Coal	-	63800	Imported	250	Sea / Rail
10	Dolomite	-	100800	Indigenous (Sundargarh & Katni-Bilaspur)	600	Rail
<b>Blast Furnace</b>						
11	Iron ore lump	614600	319000	Indigenous (Kendujhar & Sundargarh, Odisha)	200	Rail
12	Purchased Coke	70000	336600	Purchased locally	100	Rail
13	PCI Coal	209700	477500	Imported (Australia, Russia & Indonesia)	250	Sea / Rail
14	Lime stone	13400	85900	Indigenous (Jukehi-Katni-Niwar, Central India)	600	Rail
15	Dolomite	23200	76800	Indigenous (Sundargarh & Katni-Bilaspur)	600	Rail

SN	Raw material	Quantity required per annum		Sources	Distance from site (Kms)	Mode of Transportation
		Existing (At 1.5 MTPA Stage) (Tonnes)	Proposed (At 3.0 MTPA Stage) (Tonnes)			
16	Quartzite	60400	115500	Purchased locally	100	Rail
<b>Steel Melting Shop</b>						
17	Iron Ore	61700	80300	Indigenous (Kendujhar & Sundargarh, Odisha)	200	Rail
18	Ferro Alloys	9900	9900	Purchased locally	100	Rail
<b>Lime &amp; Dolo Kilns</b>						
19	Limestone	428000	835000	Imported (UAE & Oman)	250	Sea / Rail
20	Dolomite	90000	90000	Indigenous (Sundargarh & Katni-Bilaspur)	600	Rail
<b>DI Pipe plant</b>						
21	Magnesium	330	600	Imported (China)	250	Sea/Road
<b>Captive Power Plant &amp; Boilers</b>						
22	Boiler Coal	438000	657000	Indigenous (Tata mines, CCL etc.)	250	Rail

41.2.10 The water requirement for the project is estimated as 54840 m<sup>3</sup> /day, which will be obtained from the Tanughat Dam on Damodar River through pipeline. The agreement has been made vide no B758440 on 21/01/2012 with Water Resources Department (WRD), Govt. of Jharkhand for drawl of Surface water.

41.2.11 The power requirement for the project is estimated as 218 MW, out of which 120 MW will be generated from the augmented coal, based CPP, 40 MW will be generated from the BF gas power plant and balance will be procured from Damodar Valley Corporation (DVC). Agreement with DVC has made vide consumer no 34317 dated 20/07/2012.

<b>Present Power Requirement</b>		<b>135 MW</b>
1	Present CPP Generation	80 MW
2	Present DVC Import (for operation) (DVC Contract Demand is 65 MVA)	55 MW
<b>Future Power Requirement</b>		<b>218 MW</b>
1	Future CPP Generation with 3 CFBC & BF gas based Power plant	160 MW (120 MW + 40 MW)
2	Future DVC Import for 3.0 MPTA (Present DVC Contract Demand is 65 MVA)	58 MW

41.2.12 Baseline Environmental Studies:

Period	Winter Season 2019-20 (December, 2019 to February, 2020)
	Additional One Month during Post monsoon 2020 (October 2020)
	Winter Season 2019-20   Post monsoon 2020 (1 Month)

AAQ parameters at 8 locations	PM <sub>2.5</sub> = 25 to 50 µg/m <sup>3</sup> PM <sub>10</sub> = 43 to 81 µg/m <sup>3</sup> SO <sub>2</sub> = 11 to 20.8 µg/m <sup>3</sup> NO <sub>x</sub> = 11.9 to 28 µg/m <sup>3</sup>	PM <sub>2.5</sub> = 26 to 64 µg/m <sup>3</sup> PM <sub>10</sub> = 54 to 116 µg/m <sup>3</sup> SO <sub>2</sub> = 5.9 to 18.6 µg/m <sup>3</sup> NO <sub>2</sub> = 12.6 to 25.3 µg/m <sup>3</sup>
AAQ modelling (Max Incremental GLCs due to Proposed New Units)	Winter Season 2019-20 PM <sub>10</sub> = 5.86 µg/m <sup>3</sup> PM <sub>2.5</sub> = 4.98 µg/m <sup>3</sup> SO <sub>2</sub> = 8.85 µg/m <sup>3</sup> NO <sub>x</sub> = 8.24 µg/m <sup>3</sup>	Post monsoon 2020 PM <sub>10</sub> = 10.37 µg/m <sup>3</sup> PM <sub>2.5</sub> = 8.79 µg/m <sup>3</sup> SO <sub>2</sub> = 10.75 µg/m <sup>3</sup> NO <sub>x</sub> = 10 µg/m <sup>3</sup>
Ground water quality at 8 locations	Winter Season 2019-20 pH: 7.5 to 7.9, Total Hardness: 80 to 464 mg/l, Chlorides: 64 to 241 mg/l, Fluoride: 0.16 to 0.76 mg/l. Heavy metals: within limits.	Post monsoon 2020 pH: 6.58 to 6.98, Total Hardness: 84 to 588 mg/l, Chlorides: 18 to 178 mg/l, Fluoride: 0.754 to 1.35 mg/l. Heavy metals: within Permissible limits except at Bansa & Modidih
Surface water quality at 8 locations	Winter Season 2019-20 pH: 7.3 to 7.8; DO: 5.2 to 5.7 mg/l and BOD: 4.1 to 7.5 mg/l.	Post monsoon 2020 pH: 6.77 to 7.6; DO: 5.1 to 6.9 mg/l and BOD: 3 to 4 mg/l.
Noise levels	Winter Season 2019-20 Day time: 42.3 to 64.7 Night time : 36.4 to 54.2	Post monsoon 2020 Day time: 37.2 to 55.6 Night time : 36.6 to 47.3
Traffic assessment study findings	Existing infrastructure have sufficient capacities. Additionally, in future it has been proposed that the transportation will be undertaken by railway mode.	
Flora and fauna	Schedule I fauna (Indian Pangolin, Indian Rock Python) present in Study Area. Site-specific Wildlife Conservation Plan has been prepared and submitted for approval.	

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

**Solid waste**

S No	Type of Waste	Generation (TPA)			Mode of Utilization/ Disposal
		Existing	Proposed	Total	
<b>A. Coke Oven</b>					
1.	Coke breeze	75800	75800	151600	Re-used in sinter making
<b>B. Blast Furnace (BF)</b>					
2.	Blast Furnace Granulated slag	535600	649800	1185400	Selling to Cement Plants
3.	Blast Furnace Flue Dust	9910	15530	25440	Reused in sinter making
4.	Blast Furnace GCP Dust	35777	56068	91845	Reused in sinter making
<b>C. Steel Melting Shops</b>					

S No	Type of Waste	Generation (TPA)			Mode of Utilization/ Disposal
		Existing	Proposed	Total	
5.	GCP sludge	33600	75384	108984	Re-used in sinter making
6.	Ladle Furnace (LF) Slag	275610	257610	533220	<ul style="list-style-type: none"> <li>• Re-used in sinter making</li> <li>• Filling of low lying areas and road making</li> </ul>
<b>D.</b>	<b>Rolling Mill</b>				
7.	Mill scale	12061	19096	31157	Re used in Sinter
8.	Scraps	250000	123400	373400	Re used in SMS
<b>E.</b>	<b>Lime calcinations Plants</b>				
9.	Dolo undersize Fines	22974	23000	45974	Re-used in Sinter Plant.
10.	Dolo Sinter Dispatch	8875	8900	17775	Re-used in Sinter Plant.
11.	Lime undersize Fines	37537	65690	103227	Re-used in Sinter Plant.
12.	Lime Sinter Dispatch	54039	94568	148607	Re-used in sinter making
13.	Bag house Fines (Lime/ Dolo dust)	5847	10232	16079	Re-used in sinter making
<b>F.</b>	<b>Refractory</b>				
14.	Used Refractory Bricks	1,477	3310	4787	Sold to Refractory manufacturers
<b>G.</b>	<b>Captive Power Plants</b>				
15.	Bottom Ash	56,272	42204	98476	Sold to Cement Plants
16.	Fly Ash	179699	134774	314473	Sold to Cement Plants

**Hazardous waste**

S No	Category	Quantity (TPA)			Method of disposal
		Existing	Proposed	Total	
1.	Used oil & Grease	11	11	22	Sold to Authorized Recycler
2.	Zinc Dust	40	40	80	
3.	Used Batteries	10	10	20	
4.	Waste barrels containing hazardous wastes	10	10	20	
5.	Asbestos containing materials	5	5	10	
6.	ETP Sludge	30	30	60	Sent to TSDF Facility

41.2.14 Public Consultation:

<b>Details of Advertisement given</b>	of 12/11/2020
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<b>Date of Public Consultation</b>	16/12/2020
<b>Venue</b>	Maitri Kreedha Sthal (Ground), 16 Khata, Plot No.-21, Siyaljori, Tehsil- Chandankiyari, Dist. Bokaro, Jharkhand
<b>Presiding Officer</b>	Chief Municipal Commissioner, Chaas Nagar Nigam, Bokaro
<b>Major Issues Raised</b>	(i) Employment (ii) Education, Health facility (iii) Air Pollution control (iv) Monitoring system for pollution control measures (v) Area Development along with road construction.

41.2.15 The capital cost of the project is Rs. 19374 Crores and the capital cost for environmental protection measures is proposed as Rs. 610.3 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 58.2 Crores. The employment generation from the proposed project / expansion is 13200 persons (Direct: 3200, Indirect: 10,000). The details of cost for environmental protection measures is as follows:

S No	Description	Capital Cost (in Cr.)		Recur. Cost/ annum (In Cr.)
		Existing Project	Proposed Project	
1.	Air & Noise Pollution Control Systems	332	156	58
2.	Water Conservation & Pollution Control Solid/ Waste Management System	50.41	39	
3.	Rainwater harvesting Green belt development	0.89	2.3	20 Lakhs for 5 Years
4.	<b>Sub-Total Cost for Environmental Protection Measures</b>	<b>383</b>	<b>197.3</b>	<b>58.2</b>
5.	EMP cost for addressing PH issues	0.0	30	0.0
	<b>Total</b>	<b>383</b>	<b>227.3</b>	<b>58.2</b>

41.2.16 Greenbelt will be developed in 124 ha (Existing 74 ha + Proposed 50 ha) which is about 33.08% of the total project area. A 5m 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 1,18,400 trees has been planted over 74 ha existing green belt area. Additionally, total no. of 1,91,600 saplings will be planted and nurtured (1,25,000 in 50 ha + 66,600 in 74 ha) in 3 years.

41.2.17 Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration are as follows:

**Court Cases:**

S.N	Details of Court Cases	Case 1	Case 2	Case 3	Case 4
a.	Name of the Court (Districts Court/ High Court/ NGT/ Tribunals/	District Court of Bokaro	Supreme Court of India, High Court of Jharkhand	District Court of Bokaro	High Court of Jharkhand



S.N	Details of Court Cases	Case 1	Case 2	Case 3	Case 4
	Supreme Court of India)				
c.	Name of the Sub-court	Chief Judicial Magistrate	-	Principal District and Sessions Judge	-
d.	Case No.	Complaint Case 941/2020 <i>Criminal revision 32 of 2021</i>	WPC 4850 of 2018 and WPC 1873 of 2018. SLP 11226 & 11227 of 2020.	Title Appeal 33/2007	WPC 2685 of 2020
e.	Case Details	U/S 15 of the Environment (Protection) Act, 1986 Revision filed against cognizance in CP 941/2020 ( <i>Criminal revision 32 of 2021</i> )	Writ case filed against EC revocation order and non-acceptance of CTO application. Stay orders have been granted from 2018 till 2020, and the main writ is under adjudication.	Title Suit in favour of the Company and Raiyats. Divisional Forest Officer has filed an appeal, which is pending adjudication. No stay order has been granted.	Writ Petition filed for expunging specific comments from ToR which prescribe that the management is a willful defaulter.
f.	Status/ Orders / Directions of the court	Cognizance order of 21.12.2020 (in CP 941/2020) Matter pending for adjudication	The writs are pending for final disposal. Interim orders have been vacated, but have been stayed by the Hon'ble Supreme Court in the SLP.	Land in suit held to be Raiyati Land and not Forest Land. This land and such other similar patches of land are within the plant premises, where the Forest Department claims to be forest land.	No listing date allotted.

**Violation aspect:**

In compliance to the specific ToR No. i, the SPCB has undertaken credible action against M/s.ESL under the provisions of Environment (Protection) Act, 1986, by filing a court case no. 941 of 2020 before the Hon'ble Court of Chief Judicial Magistrate, Bokaro.

- 41.2.18 M/s. Electrosteel Steel Limited has been proposed Rs. 175.32 Crores for damage assessment, remediation plan and Community resources augmentation plan. Budgetary provision for the same is as given below:

S.No.	Activity proposed	Year 1	Year 2	Year 3	Total (in Crores)
a.	Damage remediation plan	12.74	21.35	26.08	60.17
b.	Natural Resources Augmentation plan	3.4	10.9	10.35	24.65

S.No.	Activity proposed	Year 1	Year 2	Year 3	Total (in Crores)
c.	Community Resources Augmentation plan	20.315	46.08	24.105	90.5
	<b>Total</b>	<b>36.455</b>	<b>78.33</b>	<b>60.535</b>	<b>175.32</b>

41.2.19 Name of the EIA consultant: M/s. MECON Limited [S. No. 49, List of ACOs with their Certificate no. NABET/EIA/2023/RA 0195 valid up to 09/02/2023 Rev. 12, July 09, 2021].

### Certified compliance report from Regional Office

41.2.20 The Status of compliance of earlier EC was obtained from Integrated Regional Office (IRO), Ranchi dated 18/12/2020. M/s. Electrosteel Steels Limited was submitted the updated Action taken report to IRO, Ranchi dated 24/06/2021. Based on latest updated ATR submitted by PP, the IRO, Ranchi provide the status on 05/07/2021 as given below:

S No	Comments from RO-MoEFCC (8 <sup>th</sup> March 2021)	Comments from RO- MoEFCC (5 <sup>th</sup> July 2021)	Status as on date
1	Mist canon not observed in the raw material unloading area	During visit one mist cannon observed at site.	<b>Complied.</b> Additionally, order for hiring of 2 nos. of mist cannon has already been place vide PO No. 4900001229 dated 19 <sup>th</sup> June 2021. <b>It will be implemented by Sep 21.</b>
	Water Sprinkler has been provided to part of the raw material handling area and feeding area not to all the material handling area and feeding area.	Dry fog Installed in two ground Hopper, not in all the feeding area. Rain Guns are provided as water sprinkler near the stacker reclaim area i.e. part of the raw material handling and storage area not all the material storage area.	A scheme has already been developed for installation of fixed sprinklers all along the yard. <b>It will be implemented by Dec-2021.</b>
	Unloading Station (truck tripler) has not been observed at the site.	Unloading station yet to be provided.	It was reported that unloading station is provisioned in upcoming projects which includes Wagon tippler and the order has been finalized with M/s SDM, China for installation and commissioning by Sept 2022 subject to grant of EC and CTE.
	Covered shed not observed for the raw material storage, however part of the material were found to be covered with tarpaulin and partly uncover, which may be a source of fugitive emission	Covered shed not observed for the raw material storage, however material to be found covered with tarpaulin and partly uncover.	It is ensured that Materials storage area is being properly covered using tarpaulin. The tarpaulin cover is removed from raw materials stacks only when the feeding and unloading activity is carried out.
	Runoff water collection arrangement all over the RMHS area yet to be done	Runoff water collection arrangement provided in part of the raw material handling and storage area	Garland drains are provided along the raw material storage area. The concretized drain is provided around the yard area

S No	Comments from RO-MoEFCC (8 <sup>th</sup> March 2021)	Comments from RO- MoEFCC (5 <sup>th</sup> July 2021)	Status as on date
			to a length of approx. ~2 km and approx.3 km kaccha garland drain which is connected with the settling pond. Proposal under implementation: •Construction of additional ~3 km garland drains (completion by December 2021). •The construction process of Settling pit has been started and will be completed by 30th December 2021.
2	Online monitoring facility as per the norms yet to be provided. Manual Monitoring data furnished from stock house de-dusting, cast house de-dusting and transfer house de-dusting stack of blast furnace unit 2 for 28/09/2020 and 08/10/2020 and varies from 65.7 mg/m3 to 80.4 mg/m3.	Online Monitoring facility has been provided to blast furnace stove for SO <sub>2</sub> , NO <sub>x</sub> and CO. Online Particulate matter monitoring facility yet to be provided to the stove. Average online monitoring data reported for blast furnace cast house 2, Blast furnace stock house 2 are 14mg/Nm3 and 41 mg/Nm3 respectively for may 21. Details of online monitoring data of transfer house have not been furnished.	Complied. PO vide no. 4100000126 dated 15th April 2021 has already been placed to install separate online monitoring for each boiler, transfer house and stove. It will be installed by September 2021.
3	Separate online monitoring for each boiler yet to be provided. Online monitoring for SO <sub>2</sub> and NO <sub>x</sub> as per the norms of power plant has not been provided. Online monitoring to WHRB 1 and WHRB 2 yet to be provided	Online monitoring to each boiler separately yet to be provided. Online monitoring facility provided for WHRB 1 and WHRB 2 for SO <sub>2</sub> , NO <sub>x</sub> , CO and PM.	
6	Online monitoring system for treated effluent at ETP yet to be provided.	Vide Updated ATR dated 21/06/2021, it was reported that the installation of online effluent analyzer will be completed y 30 <sup>th</sup> August, 2021, it was also declared on the undertaking furnished by PP. the status can only be verified after 30 <sup>th</sup> August, 2021. ministry may like to take an appropriate view on the issue.	Purchase Order placed to M/s Swan Environ Pvt. Ltd on 5 <sup>th</sup> April, 2021. The material delivery and installation work shall be completed by 30 <sup>th</sup> August, 2021.
7	Covered shed not observed for raw material storage, however, part of the material were found to be covered with tarpaulin and partly uncover, which may be a source of fugitive emission. Unloading and handling of raw material at the RMHS is also a source of fugitive emission.	The unloading station is provisioned in upcoming project which includes wagon tippler. The order has been finalized with M/s. SDM, China for installation and commissioning by September, 2022. The raw material shall be transferred by wagon tippler in hoppers through closed conveyors.	Already covered in point no.1

S No	Comments from RO-MoEFCC (8 <sup>th</sup> March 2021)	Comments from RO- MoEFCC (5 <sup>th</sup> July 2021)	Status as on date
	Profuse emission observed from coal handling plant. Water sprinkler arrangement has not been provided in all the raw material handling area.	All the measures are taken to curb the emission. Fixed sprinklers are installed along the stacker reclaimer area and rain guns are positioned in the yard. Dry fog is installed in the ground hopper area and near the feeding area as control measure to mitigate dust emission. Raw materials are covered with tarpaulin and the same is removed only from the stacks where feeding and unloading activity is carried out. The coal is unloaded in shed in which fixed dust suppression system for coal handling plant will be installed by 25 <sup>th</sup> June, 2021.	
8	Final/Stage II for the diversion of 184.23 Ha of forest land yet to be obtained.	Final/Stage-II Approval for the diversion of 184.23 ha of forest land yet to be obtained. Ministry may like to take an appropriate view on the issue.	Appropriate action is being taken to comply with the conditions of Stage-I approval
9	Green Belt as per the CPCB norms along the boundary of the plant has not been developed.	Single line plantation observed in the part of the boundary not all along. Green belt as per the CPCB norms yet to be developed.	In the submitted undertaking it has been informed that greenbelt area in 80Ha is developed, 2500 Nos of tree per Ha will be planted, and Green belt development will be completed by 30 <sup>th</sup> April, 2023 for both remaining 44 Ha and strengthening of the existing one.
10	Online monitoring analyzer to all the stacks as per the norms yet to be provided. However, in reply of sl no 2 and sl no 3 it was informed that PO has been placed for opacity meter vide no. 4100014977 dated 30/12/2019 to M/s Tripurari Enterprises Pvt. Ltd. And PO for gas analyzer for CPP, WHRB-1 & 2, BF-1 &2 is placed vide PO. No 4100000049 dated 23 <sup>rd</sup> December, 2020.	In the updated action taken report it was reported that online monthly average that online monthly average data of May 21 for 23 opacity meter and five gas analyzers attached. As per the list attached with the updated action taken report, online monitoring facility provided for the particulate matter in the 20 Stack and gas analyzer provided in 5 stack (CPP, WHRB-1, WHRB-2, BF-1 &2). It was also reported that remaining 08 opacity meter will be installed by September 21 in phase wise manner. Earlier total number of stack was reported to be 47 Nos. Ministry may like to take appropriate view on the submission of PP.	In the submitted undertaking it has been informed that "Purchase Order for remaining analyzer is awarded to M/s AICPL and will be installed by September 2021 in phase wise manner". 47 is the total no. of stacks including overall capacity of 3.0 MTPA crude steel.

S No	Comments from RO-MoEFCC (8 <sup>th</sup> March 2021)	Comments from RO- MoEFCC (5 <sup>th</sup> July 2021)	Status as on date
11	Now it was informed that there are some technical problems in 2 Nos of CAAQMS (CAAQMS O2 Plant & CAAQMS-PP Plant) due to which erroneous data os displayed (copy of letter furnished attached as annexure III-2). However, data of the said station being transmitted to JSPCB and monitoring details in the replacement of 2 Nos of CAAQMS has not been furnished. As per the manual monitoring data dated 22-23/10/2020, 23-24/10/2020 and 24-25/10/2020, PM <sub>10</sub> and PM <sub>2.5</sub> was higher than the norms of annual average in three locations. (Near Coke Oven, Near DI Pipe Plant area and Near RMHS). Statistically interpreted data for CAAQMS has not been furnished for the working stations. As per the online monitoring data for dated 24/02/2021, PM <sub>2.5</sub> and PM <sub>10</sub> data displayed as 0.0µg/m <sup>3</sup> for 16 khata online monitoring station.	Vide updated ATR dated 21.06, PP Reported manual ambient air quality data of Four locations for the month of May with monitoring frequency of twice a week for 12 parameters along with CAAQMS monthly average statistically interpreted data of two location of May 21 for PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO and O <sub>3</sub> .	Purchase Order for the Non-working online ambient air quality station has been placed vide dated 30 <sup>th</sup> April, 2021 and will be installed by Sept, 2021.
12	LD Slag generation and utilization reported to be 80984 MT and utilization reported to be 92087 MT for the period Apr 20 to Sep 20 with a stock of 353 MT as on 30/09/2020. Previous stock of BF Slag was reported to be 64796MT, generation 215412 MT and Utilization 279208MT. As per the data furnished by Fly Ash generation 66266 MT, Utilization 66066 MT and Stock in the silo of capacity 550MT was 200 MT. Unutilized fly ash dump also observed. Part of the dump has been reclaimed	Fresh Plantation activity observed during site visit on the newly soil covered portion of the dump Plantation yet to be carried out in part of the soil cover dump Runoff Water collection facility has not been provided at the soil covered by fly ash dump. Details of approval from state pollution control board have not been furnished for dumping of fly ash.	Plantation activity on the newly soil covered portion of the dump is completed. The photo of the same is pasted in the next slide. Legacy dump of erstwhile management which has been biologically reclaimed, the same has been acknowledged by RO.
	Runoff Water collection facility has not been provided at the Fly Ash dumps. Details of permission from state pollution control board have not ben furnished for dumping of fly ash. Another solid waste dump was observed at the premises seems like fly ash dump	A view of plantation carried out on the fly ash dump is depicted in Photo 23 and Photo 24. Vide updated ATR it was observed reported that "Vedanta has taken over the plant in June 2018 under the IBC Process and a mixed material dump was there near RMHS Gate".	Complied.

S No	Comments from RO-MoEFCC (8 <sup>th</sup> March 2021)	Comments from RO- MoEFCC (5 <sup>th</sup> July 2021)	Status as on date
		Plantation observed on the Dump. PP Reported 5000 Nos of sampling have already been planted. Drain provided towards the inside of the plant not all along the dump (Photo 28). It was also reported that “in the current scenario, fly ash and bottom ash are 100% utilized in the cement and brick industries”.	
13	As per the Document submitted for the period Apr-19, LD Gas utilization details reported to be 100.0254% i.e; generation 56495633 Nm3. and utilization 56510016 Nm3. During visit flare was observed as depicted in photo 15.	During this visit flare was not observed from the SMS. PP Reported vide updated ATR that 97.01% and 97.75% of LD gas utilizes during the period of 2021-22 (may) respectively. Ministry may like to take appropriate view on the flared of the flue gas to which carbon % was low (<30%).	Complied.
14	Present capacity of coke oven and pig caster reported to be 0.5 MTPA and 0.35 MTPA respectively and the Gross coke production (5% Moist) reported to be 447807 MT during 2015-16.	PP reported that “It will further be ensured that the production is limited to the design capacity only” However, Production detail for the year 2020-21 has not been furnished. Ministry may like to take an appropriate view on the submission.	Undertaking submitted.
15	Load/mass-based data for the coke oven plant reported to be for quenching side of coke oven 1.745*0.001(gram/ton) and Pusher side of coke oven 0.694*0.001 (Gram/Ton). However, period of monitoring not furnished.	Period of Load/mass-based data submitted for the coke oven plant monitoring reported to be of Oct-2020.	Complied.
16	PP has shown one earthen pond and a concreted storage area of water.	Closed	Complied.
17	As per the data furnished for the upstream and downstream of Izri river and check dam for dated 31.12.2020 values reported for turbidity, PH, Total hardness, Chloride, Total Dissolves solid was less in downstream compared to upstream (Annexure III-2 & III-3). Ground water monitoring data for 26 parameter of kumartand village hand pump reported as ground water monitoring data near Fly ash Dump (Annexure III-4). However, Ground Water quality monitoring data around the fly ash dump has not been	PP furnished monitoring data of ground water quality of upwind and downwind direction of the fly ash dump. However, Runoff water quality monitoring data has been furnished. Ministry may like to take appropriate view on the submission that “Fly ash dump is biologically reclaimed, and no contaminated runoff water is generated”.	Runoff water monitoring report for the month of June 21 has been submitted.

S No	Comments from RO-MoEFCC (8 <sup>th</sup> March 2021)	Comments from RO- MoEFCC (5 <sup>th</sup> July 2021)	Status as on date
	furnished. Runoff water monitoring quality has not been furnished. Manual monitoring data of ETP treated effluent furnished for dated 20.10.2020 for 30 parameter		
18	Fly ash dumps exist indicating unutilized fly ash. PP reported 100% utilization gas is achieved. However, during visit flaring observed. MoEFCC New Delhi may like to take an appropriate view on submission of PP regarding Flaring of LD Gas is required only when the CO concentration (CO%) is less or when the line pressure exceeds as per the process safety norms. Online monitoring of all the major stacks yet to be provided. Energy recovery of top blast furnace provided in one last furnace.	Unutilized fly ash dump covered with soil and plantation has been done as indicated in photo 19 to Photo 24. Vide updated ATR dated 21.06.2021, it was reported that the Fly ash generation 147231 MT, Utilization in cement and Brick plant (125986MT+8989MT), low lying area filling for road construction 12000MT and Stock 256MT. Utilization reported to be 99.83% (period not mentioned). It was also reported that no new fly ash dump created. During this flaring not observed. PP Reported vide updated ATR that 97.01% and 97.75% of LD gas utilizes during the period of 2020-21 and 2020-22 (may) respectively and it was also reported that flaring is done when CO% is less than 30% in LD gas.	Fly ash utilization reported for the period of 20-21 as 99.83%. Complied.
	Energy recovery of top blast furnace provided in one blast furnace.	“Vedanta has taken over this plant in June 2018 and after that it came into picture that TRT is not installed in BF-2. However, Technical feasibility will be explored through experts in this regards”.	As stated, technical feasibility will be explored through experts in this regard.

41.2.21 M/s. Electrosteel Steels Limited was submitted an online application vide proposal no. IA/JH/IND/192305/2020 dated 11/01/2021 **under violation category** to IA -Violation sector and it was considered by the EAC (Industry 1) in its 30<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held on 10– 11<sup>th</sup> February, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee held during 10-11<sup>th</sup> February, 2021**

41.2.22 The Committee noted the following:

- I. Instant proposal was considered on merit by EAC – Violation and confirmed the case to be of violation of the EIA Notification, 2006. Accordingly, ToR was prescribed by EAC – Violation and granted by MoEF&CC.
- II. Significant observations have been reported by RO with respect to the environmental compliance status of the existing units.

- III. Presentation made before the does not enumerated the findings of the EIA study and covered only observation of EAC – Violation made during 6-7th August, 2020.
- IV. There is several court cases pending before the Hon’ble Supreme Court, Hon’ble High Court and Hon’ble District Court with respect to the proposal under consideration. However, the details of these cases and its present status have not been enumerated in the EIA report in compliance to the generic ToR no. 12.
- V. Authenticated English translation of the Public Consultation proceedings have not been furnished as per the general point no. iii of the ToR letter dated 25/08/2020. Action plan to address the public hearing issues as per the MoEF&CC O.M. dated 30/09/2020 with physical targets have not been furnished.
- VI. Damage Assessment, remediation and NCRAP shortcomings
  - i. Saving in EMP cost: This should be revised considering 2017-18 and 2018-19 for monitoring and as well for maintenance.
  - ii. Ecological Attributes to be considered during construction are as following: Air, Water, Land use, solid waste, OHS, noise/Vibration, impact on neighboring infra and Socio-economic impact:
    - a. Air: The progressive built up area of the plant year wise needs to be considered commencing from 2008, construction labour used and their consumption and SW, the period, etc., and accordingly damage assessment is to be assessed and corresponding remediation equating the same (PM10, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>). The discounted rate of 20% of EU 28/CPCB shall be revised to 30% considering the inflation as has been assumed in case of CPCB Guideline. The impacted area boundary shall be revisited as discussed, on the eastern side of northern boundary. Likewise, Damage assessment for operation period year wise and cumulative needs to be calculated for all the above referred attributes inclusive of RA&DM. Computation and assessment details for one sample year shall be submitted during operation.
    - b. Land: Agricultural loss shall be considered @Rs:12500/-; per acre, considering MSP from Bokaro Dist. report. Agricultural production loss due to Air emission in impacted area of 7355 ha shall be revised and damage calculated.
    - c. Water: Natural ground water recharge shall be worked out based on 100% of the land area and accordingly the reduction shall be worked using different recharge coefficients as per the area type and the reduction shall be worked out between pre- and post-construction stage. Further the damage cost shall be worked based on the present 2nos of rain water harvesting structures and deficiency has to be worked out and damage cost assessed accordingly. (Damage cost -obstruction to GW recharge for all the years)
    - d. Ground water consumption per day will get revised including the construction and labour, and hence water consumption rates will get revised to Rs: 80 per Cum, Rs: 4 per cum respectively and DA to be worked out.
    - e. Surface water assessment and the damage cost shall be revised considering the revised quantities as per BUA and Virgin area and revised no of RWH structures.
    - f. Biological Environment: No of trees to be planted @ 2500 trees per Ha as per CPCB and the cost revised.



- g. The remediation, Natural and Community Resources augmentation plan shall be worked with the revised damage cost assessed to be complied in 3 years with site specific and monitorable activities
- h. In Chapter 13.1 Hot Metal production from 2008 is given as 7.6 MTPA. Other products do not match with this production (page pdf 486).

In addition to the above, financial implications arising due to action plan or addressing Public Hearing issues should not be offset in Damage Assessment. Activities envisaged under the CSR cannot be considered under PH action plan. The expenses for Renovation of Pond and Construction of Ghats to improve water table and construction of 73km village road needs to be further clarified. Besides, the amount/money to be spent under Damage Assessment and PH action plan should be monitorable.

- VII. Raw Material Handling System (RMHS) shall be augmented with adequate pollution control measures especially fugitive dust and all the stock yards shall be paved floors surrounded by Garland drains, three tier Green belt and water sprinkling system of permanent type and much care needs to be taken in case of coal stock yards and to be located away from the village Bandidh settlement which is located abetting the plant compound.
- VIII. Likewise, Solid waste stockyards like BF Granulated Slag and fly ash needs adequate control measures to address fugitive dust generated during handling.
- IX. Two nos of Schedule -1 fauna is reported in the study area and this has to be addressed by a suitable Wildlife Conservation Plan duly approved by the Competent Authority.
- X. MSIHC Rules, 2000: The inventory levels of two of the items are beyond the upper threshold levels prescribed in the said Rules.
- XI. Green belt has been completed in less than 20% total area as against the requirement of 33% of the total plant area.

**Recommendations of the Committee held during 10-11<sup>th</sup> February, 2021**

41.2.23 In view of the foregoing observations at para 41.2.20 and deliberations, the committee recommended to return the proposal in present form.

41.2.24 M/s. Electrosteel Steels Limited (ESL) has made an online application vide proposal no. IA/JH/IND/203094/2020 dated 14/03/2021 and the proposal considered by the EAC (Industry 1) in its 33<sup>rd</sup> meeting of the Re-constituted EAC (Industry-I) held on 30 – 31<sup>st</sup> March, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee held during 30 – 31<sup>st</sup> March, 2021**

41.2.25 The Committee noted the following:

- a. Project proponent has not taken any concrete initiatives to comply with the observations of RO listed at paragraph number 41.2.20. Factual site inspection report from RO will be again required on the Action Taken Report (ATR) submitted by the proponent on 29/03/2021 to the Committee.

- b. The emission monitoring for the stacks attached to cast house de-dusting has been carried out at 1.5 meter from ground level which does not conform to the CPCB guidelines of monitoring at 8D and 2D specified in the Emission Regulation Part III of CPCB document.
- c. The air quality modeling has been conducted using flat terrain AERMOD model, whereas the project site is dotted by hills and hillocks of about 140 to 220 meter. In view of this, revised modelling is required to be conducted.
- d. The monitoring data indicates fugitive emissions from most of the processes while assessing the impacts on the ambient air quality. The contribution of fugitive emission has not been considered for modeling purpose.
- e. The particulate matter emission levels from sinter plant, lime plant and dolomite plant exceeded the permissible limit of 50 mg/Nm<sup>3</sup>.
- f. PM<sub>10</sub> and PM<sub>2.5</sub> levels in the ambient air are found to be exceeding the NAAQS, 2009 at many of the locations.
- g. Project proponent exceeded the production capacity of 0.5 MTPA coke oven plant during the financial year 2019-20.
- h. The observations with respect to the damage assessment and remediation plan have been duly incorporated and revised damage assessment and remediation plan found to be in order.
- i. Existing green belt covers only 19% of the plant area as against the requirement of 33%. The tree density in the existing green belt is found to be less than 2500 trees per hectare.
- j. Incomplete information is provided in Form 2 (For instance in section 5, 13, 21, 29, 30 etc.,) which needs to be revisited.
- k. Two numbers of Schedule -1 fauna are reported in the study area and this has to be addressed by a suitable Wildlife Conservation Plan duly approved by the Competent Authority.
- l. Action plan to address the issues raised during public hearing is not as per MoEF&CC O.M. dated 30/09/2020.
- m. No scheme to protect the natural flow and alignment of seasonal Nallah passing through the site has been furnished.
- n. Plant is under operation based on the Order of Hon'ble Supreme Court and Consent to Operate is not in place.
- o. The quality of the EIA report was not found up to the mark with respect to Appendix III of the EIA Notification, 2006 and Form 2 was also found incomplete.

**Recommendations of the Committee held during 30 - 31<sup>st</sup> March, 2021**

41.2.26 In view of the foregoing observations at para 41.2.23 and deliberations, the committee recommended to return the proposal in its present form to address the shortcomings mentioned above.

41.2.27 M/s. Electrosteel Steels Limited has made an online application vide proposal no. IA/JH/IND/217788/2020 dated 16/07/2021 and the proposal was considered by the EAC (Industry 1) in its 41<sup>st</sup> meeting of the Re-constituted EAC (Industry-I) held on 29-30<sup>th</sup> July, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee**

41.2.28 The Committee observed the following:

- i. The project was originally accorded EC by MoEF&CC on 21/02/2008 for setting up of 3.0 MTPA Integrated Steel Plant at Parbatpur in the Chandankiyari block of Bokaro district. Subsequently, the said EC was revoked by MoEF&CC on 21/09/2020 on account of shifting of project site beyond 5.3km from the originally approved location, encroachment of forest & Government land and non-compliance to stipulated EC conditions.
- ii. The project proponent has commissioned only 1.5 MTPA Integrated Steel Plant as against the sanctioned capacity of 3 MTPA. Presently, the plant is under operation based on the Order dated 22/09/2020 of Hon'ble Supreme Court in Special Leave Petition (SLP) 11226 & 11227 of 2020.
- iii. Project proponent submitted the online application vide proposal no. IA/JH/IND/128567/2019 seeking fresh ToRs for undertaking EIA/EMP study for the Integrated Steel Plant for 3.0 MTPA ISP at Village Siyaljori, Bhagabandh, Budhibinor, Alkusha, Dhandabar, Bandhdih, Hutupathar, District- Bokaro, Jharkhand.
- iv. The proposal cited above was considered by the Expert Appraisal Committee of Violation sector in its 35<sup>th</sup> meeting held on 6<sup>th</sup> - 7<sup>th</sup> August, 2020. The said proposal was considered on merit by the EAC - Violation and confirmed that the proposal to be of violation of the EIA Notification, 2006 since 2008. Accordingly, ToR was accorded for the project on 25/08/2020.
- v. Total land for the project is 374.81 ha involving 184.23 ha forest land, 30.01 ha Govt. land and 160.57 ha private land.
- vi. The project proponent has obtained Stage I Forest Clearance ex-post facto approval on 17/12/2019 for diversion of 184.23 ha of forest land under the provisions of Forest Conservation Act, 1980. Stage II Forest Clearance is yet to be obtained.
- vii. The EAC found that the EIA/EMP report is in order reflecting the present environmental concerns and the projected scenario for all the environmental components arising out of the proposed project with respective mitigation measures. The EAC also noted that the baseline data reported and incremental GLC due to the proposed project were within NAAQ standards.
- viii. The EAC also deliberated on the public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.
- ix. The EAC also deliberated upon the findings of Damage Assessment, remediation and NRAP, CRAP and site inspection report of RO followed by the action taken report of proponent and found it satisfactory.
- x. The legal action against the project proponent U/S 15 of the Environment (Protection) Act, 1986 has already been taken by the State Govt of Jharkhand by filing a case before the District Court of Bokaro (No. 941 of 2020).

- xi. The project proponent is required to deposit a bank guarantee equivalent to the amount of remediation plan and Natural and Community Resource Augmentation Plan (INR 175.32 crores) to the SPCB prior to the grant of EC.

### Recommendations of the Committee

41.2.29 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 9/8/2018 pertaining to integrated steel plants based on project specific requirements.

#### A. Specific conditions

- i. The project proponent shall abide by all orders and judicial pronouncements, made from time to time by the Hon'ble Supreme Court in Special Leave Petition number - SLP 11226 & 11227 of 2020; Hon'ble High Court of Jharkhand at Ranchi in W.P. 4850 of 2018, 1873 of 2018, 2685 of 2020 and District Court of Bokaro - Title Appeal 33/2007 and Complaint Case 941/2020.
- ii. The Environment Clearance shall become operative only after obtaining the necessary clearance under Forest Conservation Act, 1980. No construction/modernization/ activity shall be undertaken by the project proponent till the receipt of this FCA clearance for diversion of 184.23 ha of forest land. However, following works related to ensuring compliance to the non-conformities reported by the Regional Office of the MoEF&CC in its site inspection shall be undertaken.

Sl.no.	Non-conformities reported in the RO report	Current Status in terms of availability	Additional Proposed Plan	Timeline
1	Mist Cannon	01 no.	02 nos.	Sep 2021
2	Rain Gun Installation in RMHS Yard for 100% Coverage	30 nos.	30 nos.	Dec 2021
3	Settling Pits	4 nos.	3 nos.	Dec 2021
4	Unloading Station	-	02 nos. of wagon tipplers are proposed	Sep 2022
5	Fixed dust suppression system for coal handling plant (Power Plant Coal feeding area)	Nil	2 fog guns	Dec-2021
6	124 Ha Greenbelt Development	80 Ha	44 Ha	Oct-2022
7	Installation of continuous online opacity monitoring system on stacks	23	08	Sep-2021
8	CAAQMS installation	02	02	Sep-2021
9	Installation of Online Effluent Analyser	Nil	01	Aug-2021

Sl.no.	Non-conformities reported in the RO report	Current Status in terms of availability	Additional Proposed Plan	Timeline
10	Concretized Garland Drain construction in RMHS area	2 km	3 km	Dec-21
11	Covered shed for coal storage	-	30,000 sq. m	May-22

- iii. Damage remediation measures @ cost of Rs. 175.32 Crores shall be implemented in three years as per the action plan given below.

**Action plan (Implementation schedule) for damage remediation measures**

	Activities	Particular	Physical Target/ Cost	Year 1	Year 2	Year 3	Total
<b>Air &amp; Noise Environment</b>							
1	Two nos. of 28 KL mist cannon for public road	It will be used in the road from Bandhdih to four lane Dhandabar, Alkusha village.	No. of Units	0	1	1	2
			(Rs. In Crore)	0	1.25	1.25	2.5
2	Procurement of 2 nos. of Mechanical Sweeper machine for cleaning of road dust during transportation in the public road		No. of Units	0	1	2	3
			(Rs. In Crore)	0	0.95	1.9	2.85
			<b>Sub-Total</b>	<b>0.</b>	<b>2.2</b>	<b>3.15</b>	<b>5.35</b>
<b>Water Environment</b>							
3	Construction of village PCC Roads in place of earthen roads for better connectivity in the villages. (per KM)	Coverage: 7 Villages: Siyaljori, Buribinor, Bhagabandh, Hutupathar, Alkusa, Dhandabar & Bandhdi.	No. of Units	17	22	29	68
			(Rs. In Crore)	9.35	12.16	15.83	37.34
4	Development of Biodiversity Park	Babugram	No. of Units	0	1	Continuing	1
			(Rs. In Crore)	0	0.6	0.69	1.29
			<b>Sub-Total</b>	<b>9.35</b>	<b>12.76</b>	<b>16.52</b>	<b>38.63</b>
<b>Land Environment</b>							
5	Roof top rain water harvesting in the govt. buildings/Schools	Coverage: 7 Villages: Siyaljori, Buribinor, Bhagabandh, Hutupathar, Alkusa, Dhandabar & Bandhdi.	No. of Units	6	7	7	20
			(Rs. In Crore)	0.1	0.1	0.1	0.3
6	• Construction of new Pond & Ghat with Changing rooms for improving water table through better catchment area. • Renovation of Pond & construction of ghat with Changing rooms for improving water table through better catchment area.		No. of Units	9	11	12	32
			(Rs. In Crore)	3	3.5	3.5	10
7	Waste Treatment Plant (10 tons) for villages	Coverage: 7 Villages: Siyaljori,	No. of Units	0	1	1	2
			(Rs. In Crore)	0	2.5	2.5	5

	Activities	Particular	Physical Target/ Cost	Year 1	Year 2	Year 3	Total
		Buribinor, Bhagabandh, Hutupathar, Alkusa, Dhandabar & Bandhdi.					
			<b>Sub-Total</b>	<b>3.1</b>	<b>6.1</b>	<b>6.1</b>	<b>15.3</b>
	<b>Biological Environment</b>						
8	Tractor Trolley for waste lifting for villages	Coverage: 7 Villages: Siyaljori, Buribinor, Bhagabandh, Hutupathar, Alkusa, Dhandabar & Bandhdi	No. of Units (Rs. In Crore)	2 0.04	2 0.04	3 0.06	7 0.14
9	Grafted Fruit Plant Distribution in villages	Bhagabandh, Hutupathar, Alkusa, Dhandabar & Bandhdi	No. of Units (Rs. In Crore)	3333 0.25	3333 0.25	3334 0.25	10000 0.75
			<b>Sub-Total</b>	<b>0.29</b>	<b>0.29</b>	<b>0.31</b>	<b>0.89</b>
	<b>Total</b>			<b>12.74</b>	<b>21.35</b>	<b>26.08</b>	<b>60.17</b>

#### Action plan towards Natural Resources Augmentation Plan

S No	Activities	Particular	Physical Target/ Cost	Year 1	Year 2	Year 3	Total
	<b>Water Environment</b>						
1	Construction of Check dams for storage of water	In village Siyaljori and Hutupathar	No. of Units (Rs. In Crore)	1 0.6	1 0.6	0 0	2 1.2
2	• Construction of Hand pump platforms & soak pits for better drainage of water, it will also support to augment the water level of the area. • Renovation and cleaning of wells	Coverage:8 Villages: Siyaljori, Buribinor, Chandaha, Bhagabandh, Hutupathar, Alkusa, Dhandabar & Bandhdi.	No. of Units (Rs. In Crore)	111 0.3	111 0.3	132 0.35	354 0.95
			<b>Sub-Total</b>	<b>0.9</b>	<b>0.9</b>	<b>0.35</b>	<b>2.15</b>
	<b>Energy conservation</b>						
	5 MW Solar Power Plant	Babugram	No. of Units (Rs. In Crore)	1 2.5	Continue 10	complete 10	1 22.5
			<b>Sub-Total</b>	<b>2.5</b>	<b>10</b>	<b>10</b>	<b>22.5</b>
	<b>Total</b>			<b>3.4</b>	<b>10.9</b>	<b>10.35</b>	<b>24.65</b>

#### Action plan towards community resources augmentation plan

S No	Activities	Particular	Physical Target/ Cost	Year 1	Year 2	Year 3	Total
	<b>Infrastructure Development</b>						
1	Lift Irrigation System from check dam for agriculture purpose	Check dam will be developed in Siyaljori and Hutthupathar village on Izri River	No. of Units (Rs. In Crore)	1 0.3	1 0.3	0 0	2 0.6

S No	Activities	Particular	Physical Target/ Cost	Year 1	Year 2	Year 3	Total
2	Establishment of 100 bed Super specialist hospital with modern equipment.	In Chandankiyari Block	No. of Units	1	continue	complete	1
			(Rs. In Crore)	4	10	10	24
3	Renovation of existing PHC centres for improving health	Sabra, Mohal, Dhandabar, Chandaha & Batbinor	No. of Units	1	2	2	5
			(Rs. In Crore)	0.5	0.75	0.75	2
4	Establishment of Animal Health Care centres	In Chas & Chandankiyari Block	No. of Units	1	1	0	2
			(Rs. In Crore)	0.15	0.15	0	0.3
5	Establishment of integrated centre for skill based vocational training centre & archery stadium with sports complex and play ground	To support the existing ITI centre of govt. in Chas/Chandankiyari block	No. of Units	1	continue	complete	1
			(Rs. In Crore)	1.5	0	0	1.5
6	Renovation of Existing Aanganwadi centres to improve the government ICDS infrastructure (Nand Ghar Project)	Coverage in Bokaro dist.	No. of Units	50	25	0	75
			(Rs. In Crore)	1.68	1.7	0	3.38
7	Establishment of Community Centre for social activities in the villages	Siyaljori, Chandaha, Buribinor, Alkusha, Dhandabar, Bhandidh, Hutthupathar & Bhagabandh village	No. of Units	2	3	3	8
			(Rs. In Crore)	0.24	0.36	0.36	0.96
8	Drainage system is to be developed in the villages.	Hutthupathar & Bhagabandh village	No. of Units	2	3	3	8
			(Rs. In Crore)	0.6	0.9	0.9	2.4
9	Infrastructure development of Govt. Schools (Building, Toilets, Kitchen, Boundary, integration of smart class facilities, etc.)		No. of Units	5	10	5	20
			(Rs. In Crore)	0.91	1.51	0.92	3.34
10	Establishment of Model College	One Model college will be established in Chas/Chandankiyari area	No. of Units	0	1	0	1
			(Rs. In Crore)	0	15	0	15
11	Establishment of School for Disabled Children	In Chas Block	No. of Units	0	0	1	1
			(Rs. In Crore)	0	0	0.46	0.46
12	Establishment of Rural Market	In Chas and Chandankiyari Block	No. of Units	0	1	1	2
			(Rs. In Crore)	0	0.5	0.5	1
13	Construction of Marriage Ha	Location - Siyaljori, Budhibinor, Bhagabandh, Hutupathar, Alkusa, bandhdih,	No. of Units	2	3	2	7
			(Rs. In Crore)	1	1.5	1	3.5

S No	Activities	Particular	Physical Target/ Cost	Year 1	Year 2	Year 3	Total
		Dhandabar					
14	Availability of tap Drinking water from check dam	Coverage - 4 villages : Bhagabandh, Siyaljori, Udalbani, Huthupathar	No. of Units	1	1	2	4
			(Rs. In Crore)	2	2	4	8
15	Developing archery stadium with sports complex and play ground	16 Khata Siyaljori	No. of Units	1	complete	0	1
			(Rs. In Crore)	1	1	0	2
16	Smart Classes in Govt./Society. Schools	Villages to be covered -Siyaljori, chandaha, Buribinor, Alkusha, dhandabar, Bhandih, Huthupathar & Bhagabandh	No. of Units	5	10	5	20
			(Rs. In Crore)	0.175	0.35	0.175	0.7
			<b>Sub-total</b>	<b>14.055</b>	<b>36.02</b>	<b>19.065</b>	<b>69.14</b>
<b>Energy Conservation Activity</b>							
1	Solar high mast Light at com. Loc.	Vill. Alkusa, Bhandidh, Bijulia, Buribinor, Huthupathar, Bhagabandh, Dhandabar, Siyaljori	No. of Units	8	0	0	8
			(Rs. In Crore)	0.4	0	0	0.4
2	Solar Water ATM for safe drinking	Huthupathar, Bhagabandh, Dhandabar, Siyaljori	No. of Units	20	20	22	62
			(Rs. In Crore)	4.4	4.4	4.84	13.64
3	Installation of Solar Street Light	Siyaljori	No. of Units	185	185	0	370
			(Rs. In Crore)	0.46	0.46	0	0.92
			<b>Sub-total</b>	<b>5.26</b>	<b>4.86</b>	<b>4.84</b>	<b>14.96</b>
<b>Improving Socio-Economic &amp; Health Conditions During The Pandemic (COVID 19)</b>							
1	Purchasing of Ambulance	Location - Chas & Chandankiyari PHC	No. of Units	0	1	1	2
			(Rs. In Crore)	0	0.2	0.2	0.4
2	Infrastructural development for Child Nutrition in community	Centralized mid day meal kitchen will be established for Govt. schools of chas & Chandankiyari Block	No. of Units	0	1	0	1
			(Rs. In Crore)	0	5	0	5
3	Facilitate to children for better quality education in English medium school	Siyaljori, Chandaha, Buribinor, Bhagabandh, Udalbani	No. of Units	4	0	0	4
			(Rs. In Crore)	1	0	0	1
			<b>Sub-total</b>	<b>1</b>	<b>5.2</b>	<b>0.2</b>	<b>6.4</b>
<b>Community Resource Augmentation Plan (Grand Total)</b>				<b>20.315</b>	<b>46.08</b>	<b>24.105</b>	<b>90.5</b>

- iv. Project proponent shall be required to submit a bank guarantee for an amount of Rs.175.32 crores to the SPCB prior to the grant of EC. The plan shall be completed in three years whereas the bank guarantee shall be for five years. The bank



guarantee shall be released by the SPCB after successful implementation of Remediation plan, Natural Resource Augmentation Plan and Community Resource Augmentation plan.

- v. Solid waste utilization
  - Maximum 90 days of slag storage area shall be permitted inside the plant.
  - PP shall install a slag crusher to convert the steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making.
  - PP shall recycle/reuse 100 % solid waste generated in the plant.
  - Used refractories shall be recycled as far as possible.
- vi. Sinter cooler waste recovery system shall be installed to generate process steam or power.
- vii. Coke Oven Plant (After the proposed expansion)
  - Coke Dry Quenching (CDQ) shall be installed.
  - Coke Oven Gas shall be desulfurized.
  - Tar sludge shall be mixed with coal and reused.
- viii. Existing Blast Furnace shall be equipped with Top Recovery Turbine.
- ix. Existing and proposed blast furnace shall be equipped with stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.
- x. New blast furnace shall be equipped with dry gas cleaning system
- xi. An area of 124 ha area shall brought under green belt in the next two years with a density of 2500 trees per ha. within the Project Area. This shall include green belt development of 20 m wide towards Bhagabandh village and three tier green belt around all the raw material stock yards.
- xii. Micro fines generated in the plant shall be briquetted and recycled to sinter plant.
- xiii. Dry Gas Cleaning Plant shall be used for Basic Oxygen Furnace (BOF) and the sensible heat of BOF gases shall be utilized to generate low pressure steam.
- xiv. Secondary Fume Extraction system with a dog house shall be provided for BOF converters.
- xv. Air cooled condensers shall be used in the power plant.
- xvi. Pellet plant shall operate with Blast Furnace(BF) gas as fuel.
- xvii. Plant shall treat all effluents generated and recycle and reuse the entire treated water.
- xviii. Process stack emissions for new units shall be less than 30 mg/Nm<sup>3</sup>. Air Pollution Control Devices installed with all the existing stacks shall be upgraded to meet the PM emission norm of 30 mg/Nm<sup>3</sup> within the next two years.
- xix. 100% solid waste utilization shall be achieved.
- xx. Water consumption of the plant shall be as per CREP guidelines of CPCB.
- xxi. Project proponent shall install wind curtain of minimum 3km length along the plant compound abetting the nearby habitations by Dec 2022, deployment of industrial vacuum cleaner by Dec 2021, Replacement of bags with PTFE membrane bags by Dec 2021 for control of fugitive emissions.
- xxii. Paved flooring of 72000 sqm in raw material handling system shall be provided by Dec 2022.

- xxiii. Protection of Seasonal Nallah by providing gully plugs, concrete parapet wall, stone pitching followed by Check Dam and three tier plantation all along the nallah shall be completed by December, 2021, apart from periodical maintenance.
- xxiv. Project proponent shall comply with the following action plan to address the issues raised during the public consultation.

Sl.no.	Description of Physical Activities	Unit	Year 1	Year 2	Year 3	Total	Budget (Lakhs )
1	Construction of 5 kms Road connecting Gidhtand to four lane road.	Road Length	5 Km	-	-	5 KM	275
2	ESL Skill School will be established to provide job linked vocational training to youths from nearby villages.	No. of Youths	225	225	100	550	180
3	1500 SHG Women will be linked to sustainable livelihood through mushroom cultivation, phenyl production, puff rice production, etc. in next 3 years	No. of Women	500	500	500	1500	120
4	Project will be started for 500 farmers in which 500ac. of land will be used for orchard dev., irrigation facilities & inter-cropping to ensure secured income.	No. of Farmers	200	300	Continue with the farmers	500	125
5	Siyaljori Govt. School will be Upgraded with better infrastructure & other facilities (Renovation of building, construction of room and toilet and providing desk and chairs)	No. of Schools	-	01	-	01	24

Sl.no.	Description of Physical Activities	Unit	Year 1	Year 2	Year 3	Total	Budget (Lakhs)
6	Students will be supported for engineering entrance preparations under Excel 30 programme and they will also be awarded with the PRERNA Scholarship based on their merit.	No. of students	30	30	30	90	120
7	Government ITI of Chandankyari Block will be upgraded with infrastructure & Supported. (Renovation of building, construction of room and toilet and providing desk and chairs, equipments for ITI an Library)	No. of Institutes	01	-	-	01	100
8	Construction of Health Clinic for Siyaljori Village.	No. of Clinics	01	-	-	01	25
9	Existing Health Sub Centre at Dhandabar village will be renovated & converted into Vedanta ESL Health Clinic with facilities of treatment, medicines and lab testing etc. Mobile Health Van will be attached to provide free healthcare facilities in surrounding villages.	No. of Clinics	01	Upgradation of same Centre	Upgradation of same Centre	01	156
10	Greenbelt Development / Avenue Plantation in	No. of Trees	10,000 (GB) + 40000 (sapling	-	-	50000	260

Sl.no.	Description of Physical Activities	Unit	Year 1	Year 2	Year 3	Total	Budget (Lakhs)
	Villages and plant sapling distribution		)				
11	Developing solar based structures in the villages a) Community based drinking water facility – 20 units b) Solar based electricity facility in the schools /community structure -20 units c)Tubewells for irrigation facility -50 units	Nos.	30	30	30	90	370
12	Installation of two units for construction of Paver Block	Nos.	0	01	01	02	50
13	Curbing of Road Dust due to transportation of vehicles • Black Top Road coating and pavement of approach road connecting villages.	Road length	-	11.4 km	-	11.4 km	1000
	• Nallah protection	Nos.	01	-	-	01	195
						<b>Total</b>	<b>3000</b>

- xxv. Ductile Iron Pipe (DIP) shall have bag houses at Induction furnace, Mg Treatment, Zinc coating and scrubber shall be provided in Bitumen coating area. A separate CETP shall be installed in DIP.
- xxvi. In house laboratory shall be set up for monitoring of environmental parameters.
- xxvii. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.
- xxviii. Dedicated railway siding within the steel plant complex shall be established by the proponent by July, 2023 for the transportation of materials as committed.
- xxix. Based on the traffic assessment study and considering the Passenger Car Unit (PCU) per day of traffic and Million Standard Axle (MSA) load on the road (in to

& out of the plant), suitable slip road connecting the project site and Highway shall be made as per laid down specifications of Indian Road Congress.

- xxx. Paved Parking area for trucks/dumpers shall be provided within the steel plant and besides provision of sanitation and canteen facilities for the employees. No truck/dumper shall be parked outside the steel plant premises.
- xxxii. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of MoEFCC.

## **B. General conditions**

### **I. Statutory compliance:**

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

### **II. Air quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- iv. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- v. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- vi. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- vii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- viii. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- ix. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).
- x. Land-based APC system shall be installed to control coke pushing emissions.

- xi. Monitor CO, HC and O<sub>2</sub> in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.
- 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.
- xiii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xiv. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

### **III. Water quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31<sup>st</sup> March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30<sup>th</sup> May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7<sup>th</sup> December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31<sup>st</sup> March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30<sup>th</sup> May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7<sup>th</sup> December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;
- iv. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- 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.
- vi. Tyre washing facilities shall be provided at the entrance of the plant gates.
- vii. Treated water from ETP of COBP shall not be used for coke quenching.
- viii. Water meters shall be provided at the inlet to all unit processes in the steel plants.

### **IV. Noise monitoring and prevention**

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

### **V. Energy Conservation measures**

- i. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
- ii. Restrict Gas flaring to < 1%.

- iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- iv. Provide Roof rainwater harvesting system for all the buildings, offices and residential.
- v. Provide LED lights in their offices and residential areas apart from energy conservation measures.
- vi. Implementation of Solid waste management system in compliance of SW(M) Rules 2016.
- vii. Kitchen waste shall be composted or converted to biogas for further use
- viii. Ensure installation of regenerative type burners on all reheating furnaces.

#### **VI. Waste management**

- i. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.

#### **VII. Green Belt**

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

#### **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 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 report 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<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (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.

41.3 Proposed Steel unit for production of 3,57,000 TPA of Steel Billets (Induction Furnace: 2x30T) and 3,47,900 TPA of Steel wire rods by **M/s. Allied Recycling Limited** located at VPO- Budhewal, Chandigarh Road, Tehsil- Kum Kalan, **District- Ludhiana, Punjab** [Online Proposal No. IA/PB/IND/214761/2021; File no: IA-J-11011/243/2021-IA-II(I)] – **Prescribing for Terms of Reference**– regarding

41.3.1 M/s. Allied Recycling Limited has made an application online vide proposal no. IA/PB/IND/214761/2021, dated 15/07/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a): Metallurgical Industries (ferrous & non-ferrous) under Category “B” of the schedule of the EIA Notification, 2006 and attracts general condition i.e. the project site falls at a distance of 3.6 km from the “Critically Polluted Area” in Ludhiana. Hence, the proposal was appraised at Central Level.

**Details submitted by Project proponent**

41.3.2 The project of M/s. Allied Recycling Limited is located at Budhewal Village, Kum Kalan Tehsil, Ludhiana District, Punjab is for Proposed Steel unit for production of 3,57,000 TPA of Steel Billets (Induction Furnace: 2x30T) and 3,47,900 TPA of Steel wire rods.

41.3.3 Environmental site settings:

S	Particulars	Details		
i.	Total land	2.83ha (Private: 2.83 ha) Land use: Industrial zone as per the Master Plan of Ludhiana		
ii.	Existence of habitation & Involvement of R&R, if any.	The site is vacant plot. Hence, No R&R is involved.		
iii.	Latitude and Longitude of the project site.	Corner	Latitudes	Longitudes
		A	30°53'20.01"N	75°59'37.90"E
		B	30°53'22.10"N	75°59'38.03"E
		C	30°53'22.20"N	75°59'25.72"E
		D	30°53'18.23"N	75°59'25.33"E
		E	30°53'18.30"N	75°59'30.42"E
iv.	Elevation of the project site.	253.29 m		
v.	Involvement of Forest land, if any.	Nil		

S	Particulars	Details
vi.	Water body exists within the project site as well as study area.	<b>Project site:</b> Nil. <b>Study area:</b> 1. Buddha Nala, Approx. 4.6 km, N 2. Sirhind Canal, approx. 9.4 km, SE
vii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil. Following forest is present in study area: Mattewara RF (Approx. 9.0km, N

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

S No	Facility	Configuration	Production (TPA)
i.	Steel Billets	IF: 2x30 T	3,57,000 TPA
ii.	Steel wire rods	Rolling mill	3,47,900 TPA

41.3.5 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 Scrap/ Sponge Iron and Ferro Alloys	1,071 TPD	Mostly from Local Market & Import	7 km	By road through trucks (approx. 54 trucks per day)

41.3.6 The water requirement for the project is estimated as 102.5 m<sup>3</sup>/day, out of which 94 m<sup>3</sup>/day of fresh water will be obtained from the 2 no of bore wells and the remaining requirement of 8.5 m<sup>3</sup>/day will be met from the proposed STP of capacity 12 KLD. The permission for drawl of groundwater will be obtained from Punjab Water Regulation and Development Authority (PWRDA).

41.3.7 The power requirement for the project is estimated as 30 MW, out of which 30 MW will be obtained from the Punjab State Power Corporation Limited (PSPCL).

41.3.8 The capital cost of the project is Rs. 92.95 Crores and the capital cost for environmental protection measures is proposed as Rs. 1.38 Crores. The employment generation from the proposed project will be 250 persons. Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration shall be furnished.

41.3.9 Proposed Terms of Reference (**Baseline data collection period: March to May, 2021**):

Attributes	Sampling		Remarks
	No. of stations	Frequency	
A. Air			

Attributes	Sampling		Remarks	
		No. of stations		Frequency
a. Meteorological parameters	At project site	1	3 months	Previous 1 year data & 3 months site data
b. AAQ parameters	12 parameters as per NAAQS 2009 within the Study area of 10 Km	8	24	Twice a week on two consecutive days
B. Noise	Ambient Noise dB(A) within the Study area of 10 Km	5	2	Day and Night time
<b>C. Water</b>				
a. Surface water		a.2	a. 1	a. Upstream and downstream
b. Ground water quality		b. 8	b. 1	
<b>D. Land</b>				
a. Soil quality		a. 8	a. 1	Land use pattern for 10 km of study area
b. Land use		b. --	b. --	
<b>E. Biological</b>				
a. Aquatic		--	--	--
b. Terrestrial		Core zone & buffer zone	1	
F. Socio-economic		8	1	--

41.3.10 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.

41.3.11 Name of the EIA Consultant: M/s. Chandigarh Pollution Testing Laboratory- EIA Division [S. No. 95, Certificate No. NABET/EIA/1922/RA0146, Valid Up to 12/02/2022; Rev. 12, July 09, 2021].

41.3.12 The proposal was considered by the EAC (Industry 1) in its 41<sup>st</sup> meeting of the Re-constituted EAC (Industry-I) held on 29-30<sup>th</sup> July, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee**

41.3.13 The EAC noted the following:

- i. Terms of Reference is being sought for a green field project to manufacture 357000 TPA billets with 2x30T IF at Kum Kalan, Punjab.
- ii. Total land in possession is 2.83 ha in Industrial area.

- iii. 94 KLD water shall be extracted from ground. Permission for GW abstraction will be obtained.
- iv. Site is located 3.6 Km from Ludhiana a Critically Polluted Area.
- v. Slag from IF shall be used for concrete block making.
- vi. 12 KLD STP will be installed.
- vii. 1.132 ha land shall be used for Green Belt Development.
- viii. There is another unit of the project proponent adjacent to the boundary (of the present proposal under consideration) for which expansion is proposed and TOR for the same has already been issued.
- ix. The proponent sought for accord of ToR in the name of M/s. Allied Recycling Limited Unit II. However, the Committee did not accede to the request of PP and the PP was informed that ToR will only be recommended in the company name and not in Unit name.

### Recommendations of the Committee

- 41.3.14 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. The project proponent shall submit action plan for reuse/ recycling of entire wastewater after treatment.
  - ii. Action plan to limit the dust emission from all the stacks below 30 mg/Nm<sup>3</sup> 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 40% of the plant area shall be submitted.
  - 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. Action plan for gradual shifting of 94 KLD ground water usage to surface water shall be submitted.
  - ix. Cumulative impact assessment of Unit I and Unit II shall be carried out.
- 41.4 34 Million Tonnes Per Annum (MTPA) Iron Ore Beneficiation Plant (IOBP) by **M/s. Rungta Mines Limited (RML)** at Bhanjapalli & Teherei Village area in **Sundargarh district, Odisha** [Online Proposal No. IA/OR/IND/219104/2021; File no: IA-J-11011/279/2021-IA-II(I)] – **Prescribing of Terms of Reference – regarding**
- 41.4.1 M/s. Rungta Mines Limited (RML) has made an application online vide proposal no. IA/OR/IND/219104/2021, dated 14/07/2021 along with the application in prescribed format (Form-I), copy of revised 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. 2(b) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at the Central level.

**Details submitted by Project proponent**

41.4.2 The project of M/s. Rungta Mines Limited (RML) located at Bhanjapalli & Teherei Village area in Sundargarh district, Odisha is for 34 Million Tonnes Per Annum (MTPA) Iron Ore Beneficiation Plant (IOBP).

41.4.3 Environmental site settings:

SNo	Particulars	Details	Remarks
i.	Total Land	151.90 ha	Land use: Private: 65.85 ha, Forest: 70.72 ha Govt: 15.33 ha
ii.	Existence of habitation & involvement of R&R, if any.	Nil	Entire land is vacant from any habitation
iii.	Latitude and Longitude of the project site	Latitude 21°53'33.87'' to 21°54'52.98'' N Longitude 85°16'36.41'' to 85°17'13.80'' E	
iv.	Elevation of the project site	about 621-695 m AMSL	
v.	Involvement of Forest land if any.	70.72 ha (174.760 acres)	Forest clearance application submitted vide proposal no. FP/OR/IND/119204/2021 dated 11.01.2021 (under process)
vi.	Water body exists within the project site as well as study area	<b>Project site:</b> One pond, few seasonal nalas  <b>Study area:</b> Several ponds in many villages. Nearest river is Suna Nadi (3.2 km, E) and nearest nala is Teherei Nala (0.3 km, E). 37 other nalas, nadi (River), etc are also present in study area.	Elevation of Suna Nadi is around 620 m AMSL at nearest pond and Teherei Nala is around 600 m AMSL.
vii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil. 9 nos. of Reserved forest are present in study area at distance from 0.5 Km (N) to 8.9 km.	

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

S No	Name	Proposed Configuration	Proposed Production
1	Iron Ore Beneficiation Plant	3 nos. module x (2 streams x6 MTPA)	34 MTPA (throughput); 20 MTPA (beneficiated iron ore)

The beneficiated Iron ore is planned to be sent to end use steel plants at Kamanda, Karakhendra, Karakolha and Dhenkanal, in different parts of Odisha through slurry pipeline while tailing is proposed for transportation to tailing dam at Ganighasha through tailing pipeline. If there is delay in laying of Slurry/Tailing pipeline due to some unavoidable reasons and/or problems in pipeline operation, it is proposed to transport Concentrate/Tailings through road/rail. It is also proposed to sell the concentrate/ tailings in the market, depending upon the demand for the same.

41.4.5 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, MTPA	Source	Distance from site, kms	Mode of transportation
1	Iron Ore	34	Surrounding iron ore mines in Koida & Joda region of Odisha	0.5-30 km	Road

41.4.6 The water requirement for the project is estimated as 58,104m<sup>3</sup>/day, which will be obtained from Bramhani River. An application for seeking permission for drawl of 5.05 cuses (12,355 KLD) & 18.7 cusecs (45,751 KLD) surface water from Bramhani River in favor of M/s. Rungta Mines Limited had been submitted to Industrial Promotion & Investment Corporation of Odisha Limited (IPICOL), who has recommended it for its allocation to DoWR vide its letter no. CGM/SLNA/Rungta/231/20 dated 11/09/2020 and CGM/SLNA/Rungta/232/20 dated 11/09/2020 respectively.

41.4.7 The power requirement for the project is estimated as 63 MW, which will be obtained from the 132/33 KV Grid substation Barbil, Odisha Power Transmission Corporation Limited.

41.4.8 The capital cost of the project is Rs. 4075 Crores and the capital cost for environmental protection measures is proposed as Rs. 20 Crores. The employment generation from the proposed project is 300 Nos.

41.4.9 Proposed Terms of Reference (**Baseline data collection period: 01.03.2021 to 31.05.2021**):

Attributes	Parameters	Sampling	
		No. Of stations	Frequency
A. Air			
a. Meteorological Parameters	Wind speed, direction, relative humidity, temperature and rainfall	1 (Core Zone of IOBP plant)	measured at hourly duration for 3 months

Attributes	Parameters	Sampling	
		No. Of stations	Frequency
b. AAQ parameters	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO	10 (one in IOBP core zone, 2 near Tailing dam core zone, 7 in buffer zone of IOBP)	24 hourly samples, twice a week for 3 months
	Benzene, NH <sub>3</sub> , BaP, Arsenic, Selenium and Lead	10 (one in core zone of IOBP, 2 near tailing dam, and 7 in buffer zones of IOBP)	Twice a week at IOBP for 3 months and for 1 week near tailing dam and in buffer zone of IOBP
B. Noise	Leq (Day), Leq (Night)	11 (one in core zone of IOBP, 2 near tailing dam, and 8 In buffer zones of IOBP)	Hourly readings taken for 24 hours, once in 3 months
C. Water			
Surface water/ Ground water quality parameters	<b>Ground Water:</b> Odour, turbidity, pH, EC, TDS, TSS, Hardness, Alkalinity, Sulphate, Chloride, Calcium, Sodium, Potassium, Magnesium, Iron, Fluorides, Aluminium, Silver, Barium, Boron, Bismuth, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Nickel, Selenium, Arsenic, Zinc, Mercury, Molybdenum, Nitrate <b>Surface Water:</b> in addition to above parameters- DO, BOD, COD, Oil & Grease, Total Coliform, E. Coli	Ground water - 13 (8 around the IOBP and 5 around the tailing dam) and surface water - 14 (8 in & around the IOBP and 6 around the tailing dam)	Once in monitoring period
D. Land			
a. Soil quality	pH, EC, CaCO <sub>3</sub> , Specific Gravity, Moisture, Sodium, Potassium, Textural Classification, Grain Size analysis, Colour, Organic Carbon, Organic Matter, Phosphorous, Nitrate-	9 (5 in & around the IOBP and 4 in & around the tailing dam)	Once in monitoring period

Attributes	Parameters	Sampling	
		No. Of stations	Frequency
	Nitrogen		
b. Land use	Satellite Imagery interpretation, Land use details	Of 10 km study area	Once
<b>E. Biological</b>			
a. Aquatic	Flora and Fauna species	Of 10 km study area	Once
b. Terrestrial	Flora and Fauna species	Of 10 km study area	Once
F. Socio-Economic Parameter	1) Various amenities, demography, employment pattern, 2) Need assessment for CSR	1) Of 10 km study area 2) nearby villages	1) Census data 2) sample survey- once
G. Traffic	Traffic volume (PCU)	4 (buffer zone of IOBP)	Once in monitoring period

41.4.10 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.

**Observations of the Committee**

41.4.11 The EAC noted the following:

- i. TOR is requested for undertaking EIA study for the green field Iron Ore Beneficiation Plant (IOBP) of 36 MTPA design capacity in Odisha.
- ii. Total land required for the plant is 151.90 ha (375.35 acres) and involves 70.72 ha Forest land. Application for forest clearance has been submitted to Forest Department, Odisha on 11.1.2021.
- iii. Total land required for tailing dam is 625 acres.
- iv. Iron ore slurry from this plant shall be pumped through slurry pipelines to the PP's Dhenkanal plant 238.5 Km from site; to Kamanda plant 11.0 Km and Karakhendra Plant 42.5 km.
- v. The tailings shall be pumped through 68.0 km long pipeline to the tailing pond area and water shall be brought from Brahmani River through 72.8 Km long pipeline. There is no national park or ESZ on the route of these pipe lines.
- vi. ROW application for pipe route is to be submitted and 625 Acre land required for tailing dam is also to be acquired.
- vii. Suna River flows 3.2 km from site.
- viii. IOBP scope involves three modules each module having 2x6 MTPA capacity. 34 MTPA iron ore shall be procured from nearby mines and the beneficiation process shall produce 20 MTPA iron ore concentrate and 14 MTPA tailings.
- ix. PP has also proposed to transport the concentrate and tailings by road in case the pipelines are not ready and also in emergency.



- x. It is also proposed that the concentrate and tailings shall be sold to prospective buyers on market demand.
- xi. 45751 KLD water shall be obtained from Brahmani River through a 72.8 km long pipe line.
- xii. There is a public road passing through the plot.
- xiii. The site is having one water pond and several seasonal nallah.
- xiv. Korda Village is 1 km from site. Bhanjapali and Taherie villages are adjacent to plant site on west.
- xv. A 24-inch pipe shall carry tailings and another 24-inch line shall bring recovered water back to the plant.
- xvi. Filter presses of large capacity shall be required to dewater the concentrate and tailings.

### **Recommendations of the Committee**

41.4.12 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. Details of the scheme for pumping of Iron ore slurry from this plant to the project proponent Dhenkanal plant 238.5 Km; to Kamanda plant 11 Km and Karakhendra Plant 42.5 km shall be provided in the EIA report.
- ii. Details of scheme for pumping of tailings/recovered water to/from (plant to tailing pond and back) 68 km long pipeline and for pumping of water from Brahmani River 72.8 Km away through pipeline (including the pump house) shall be provided in the EIA report.
- iii. Project involves 70.72 ha Forest land. Requisite FCA clearance as per MoEFCC OM dated 9<sup>th</sup> September, 2011 shall be obtained and submitted alongwith EIA report.
- iv. Right of Way (ROW) for pipe routes shall be obtained and details shall be furnished in EIA report.
- v. Details of Pumping system for return water and recovery of seepage water from tailing pond shall be provided.
- vi. Scheme for green belt development in 124 acres of land at plant site shall be furnished. This shall include development of green belt towards Bhanjapali and Taherie villages located adjacent to plant site on west. A plan for additional green belt at tailing dam site shall also be furnished.
- vii. Action plan for developing green belt from NH 520 to the plant site shall be submitted.
- viii. Action plan for protecting the existing natural drainage of the area shall be submitted which would also include a plan protection of water bodies existing within the site.
- ix. Details of a public road passing through the plant area shall be furnished. The PP shall ensure that status of the road and usage is not altered due to the proposed project.
- x. Scheme to dewater the concentrate and tailings from IOBP shall be furnished.
- xi. Action plan to limit the dust emission from all the stacks below 30 mg/Nm<sup>3</sup> shall be furnished.
- xii. Action plan for fugitive emission control in the plant premises shall be provided.
- xiii. Action plan for rain water harvesting shall be submitted.
- xiv. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

- xv. Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by road with anticipated vehicle details, line source modelling and road strengthening details etc., These details shall be included in the EIA report.
  - xvi. The list of flora and fauna with its schedule exists in the study area shall duly be authenticated by the Divisional Forest Officer and submitted along with the EIA report.
  - xvii. Mass balance of Iron Ore Grinding and De-Sliming Plant (Beneficiation Plant) shall be submitted in the EIA report.
  - xviii. A separate chapter on slime management inter-alia including slime pond location, pipeline route, pumping arrangement envisaged, lining arrangement at the bottom of the slime pond, leachate collection system and its monitoring etc., shall be prepared and included in the EIA report.
  - xix. Risk assessment, safety and surveillance system to be adopted in the pipeline route shall be included in the EIA report.
- 41.5 Proposed to set up a green field Cement Grinding Unit with Cement Production Capacity of 4.5 Million Metric Tons per Annum (MMTPA) and 0.5 Million Metric Tons per Annum (MMTPA) Fly ash/ Slag Processing Unit by **M/s. Adani Cementation Limited (ACL)** at Village – Shahbaj, Taluka – Alibag, **District – Raigad, Maharashtra** [Online Proposal No. IA/MH/IND/216334/2021; file no: IA-J-11011/261/2021-IA-II(I)]- **Prescribing of Terms of Reference**– regarding.
- 41.5.1 M/s. Adani Cementation Limited (ACL) has made an online application vide proposal no. IA/MH/IND/216334/2021, dated 09/07/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above.
- 41.5.2 The proposed project activity is listed at S. No. 3(b) under Category “B” (All Stand Alone Grinding Unit. Accordingly, the project proponent approached SEIAA, Maharashtra. SEIAA Maharashtra vide their letter dated 23/04/2021 opined that construction of Jetty and Cement plant are interdependent activities and both the units cannot be treated as independent projects Jetty and cement plant is an integrated activity, and which cannot be appraised in isolation and environment clearance Hence, project proponent should apply to MoEF&CC, New Delhi as an integrated project for Jetty and Cement Plant.
- 41.5.3 The EAC noted that as per MoEF&CC O.M. dated 24/12/2010 pertaining to consideration of integrated and inter-linked projects, the project proponent is supposed to prepare a common EIA report after obtaining ToR from the concerned sectoral EAC. During EC process, the common EIA report will be appraised by the concerned sectoral EAC and make their recommendations relating to their particular component. Accordingly, the project proponent has obtained ToR for their jetty facility from Infra sector of MoEF&CC vide letter no. 10 77 2018 IA III dated 09/10/2019 and applied for ToR for cement grinding unit to Industry 1 sector of MoEF&CC. In view of this and the communication received from SEIAA – Maharashtra, the proposal was appraised as Category ‘A’ at Central level.

**Details submitted by Project proponent**

41.5.4 The project of M/s. Adani Cementation Limited (ACL) located at Village – Shahbaj, Taluka – Alibag, District – Raigad, Maharashtra is for Proposes to set up a green field Cement Grinding Unit with Cement Production Capacity of 4.5 Million Metric Tons per Annum (MMTPA) and 0.5 Million Metric Tons per Annum (MMTPA) Fly ash/ Slag Processing Unit.

41.5.5 Environmental site settings:

SNo	Particulars	Details	Remarks
i.	Total land	10ha. (Private:10 ha)	Land use: Agriculture
ii.	Existence of habitation & involvement of R&R, if any.	Nil	Not Applicable
iii.	Latitude and Longitude of the project site	Project Coordinates: 1) 18°42'30.30"N 73° 1'13.44"E 2) 18°42'37.34"N 73° 1'2.47"E 3) 18°42'31.67"N 73° 0'54.76"E 4) 18°42'26.58"N 73° 0'56.18"E 5) 18°42'24.20"N 73° 0'59.04"E 6) 18°42'27.97"N 73° 1'4.56"E 7) 18°42'31.27"N 73° 1'6.30"E 8) 18°42'27.84"N 73° 1'10.74"E	
iv.	Elevation of the project site	Existing elevation of proposed project area varies between 4.66m to 4.86m from CD.	
v.	Involvement of Forest land if any.	Forest land is not involved in “Raigad Cement Grinding Plant & Fly ash/Slag Processing Unit” Project.	
vi.	Water body exists within the project site as well as study area	<b>Project site:</b> Nil <b>Study area</b> Amba River at 0.4km/ E Bhogvathi river at 8.2 km/ NE Teenvira dam at 6.1 km/ SW Shreegaon dam at 6.0 km/ SW	Highest Flood Level of Amba River near the site is around +4.4m with respect to CD. Authenticated HFL data will be collected during detailed EIA study.
vii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/tiger reserve/ elephant Reserve etc. if any within the study area	Nil  Mangroves: ~0.05Km (N and E)	

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

S No	Facility	configuration	Production (MTPA)
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i.	Cement Grinding unit	2 x 325 TPH (Vertical Roller Mill)	4.5
ii.	Fly Ash/ Slag processing unit	1x 75 TPH (Ball Mill)	0.5

41.5.7 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 (TPD)			Source	Mode of Transportation	Basis
		100% OPC	100% PPC	100% PSC			
1.	clinker	12954	8183	6817	Lakhpur Cement Works / Domestic Plants / Imported.	By Truck /Sea/Rail	--
2.	Fly Ash	--	4722	--	Fly ash sourced from Tiroda Thermal Power Plant	By truck/ By Railway	Considering 5% of total cement
3.	Gypsum	680	680	680	Purchase from Market / Imported	By truck/ By Railway	Considering 35% of total PPC cement
4.	Slag	--	--	6136	From nearby steel plant in vicinity/ Imported.	By Truck	Considering 45% of total PSC cement

41.5.8 The water requirement for the project is estimated as 800 m<sup>3</sup>/day, out of which 800 m<sup>3</sup>/day of fresh water requirement will be obtained from MIDC / Local Vendors. The permission for drawl of ground water/ surface water will be obtained and provided with EIA study report.

41.5.9 The power requirement for the project is estimated as 26MW, out of which 26MW will be obtained from the state DISCOM.

41.5.10 The capital cost of the project is about Rs.990 Crores and the capital cost for Environmental protection measures is proposed as about Rs. 25 Crores. The employment generation from the proposed project is around 65 (on-roll) and approximately 350 (contract) during operation phase.

41.5.11 Proposed Terms of Reference (To be collected)

Attributes		Sampling		Remarks
		No. of stations	Frequency	
A. Air				
a. Meteorological parameters	temperature, wind speed, wind direction, relative humidity (min & max), rainfall, and cloud cover	1	For three months	The survey will be supported by the meteorological data for the area analysed from IMD, Mumbai and trend analysis of micrometeorological data generated at the site.

Attributes		Sampling		Remarks
b. AAQ parameters	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub>	8	Twice a week	During one non monsoon season
B. Noise	L <sub>10</sub> , L <sub>50</sub> , L <sub>90</sub> , L <sub>eq</sub> , L <sub>day</sub> , L <sub>night</sub> and L <sub>dn</sub>	8	On hourly observations for 24 h at each location	By using Integrated noise meter
C. Water				
Surface water/ Ground water quality parameters	Surface Water Ground Water	8 3	-	The samples will be analysed as per IS-10500 and EPA Act as applicable.
D. Land				
Attributes		Sampling		Remarks
a. Soil quality	a. grain size, pH, salinity, electrical conductivity, organic carbon, NPK, TDS, Na, Mg, Ca, Cl <sup>-</sup> , F <sup>-</sup> etc.	a. 8	-	a. Up to a depth of 90 cm
b. Land use	b. Land use classification	b. 10Km radius area of project site		b. The study will be carried out using secondary sources of information.
F. Biological a. Aquatic b. Terrestrial	assessment of the species diversity, density, abundance etc	-	-	<ul style="list-style-type: none"> <li>• Primary as well as secondary data will be analysed for flora and fauna of the study area.</li> <li>• Formulation of ecological indices, assessment of likely changes on flora and fauna due to the project related activities, suggestions for conservation and protection of flora and fauna in the study area.</li> </ul>
G. Socio-economic parameters	-	Villages falling in Study area	-	<ul style="list-style-type: none"> <li>• Based on the Census documents and NIC database.</li> <li>• Local and District administration will be contacted for collecting the required data.</li> </ul>

41.5.12 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.

### Observations of the Committee

- 41.5.13 The EAC noted the following:
- i. TOR is requested for undertaking EIA study for the green field 4.5 MTPA cement grinding and 0.5 MTPA slag and Fly ash processing facility in Raigarh.
  - ii. 10 ha land is proposed to be acquired.
  - iii. Amba River is passing 400 m from site.
  - iv. 800 KLD water shall be sourced from MIDC.
  - v. 3.3-acre land is earmarked for Green Belt Development at the plant site.
  - vi. Project is interlinked with Jetty for which separate ToR has been obtained by the proponent.
  - vii. Mangroves are at a distance of 50.0 metres from plant site.
  - viii. All raw materials and product shall be moved by Sea /Rail.

### Recommendations of the Committee

- 41.5.14 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. No construction activity/infringement will take place in flood plain of Amba river situated in the vicinity of the project site. Authenticated HFL data of Amba river and protection measures to be adopted for conservation of riverine ecology shall be submitted.
  - ii. Action plan to limit the dust emission from all the stacks below 30 mg/Nm<sup>3</sup> 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 area all along the periphery of the project site shall be submitted. This shall include the development of green belt with a width of 50 meters towards the mangroves side.
  - v. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
  - vi. 800 KLD water shall be sourced from MIDC. No ground water abstraction shall be permitted.
  - vii. Drainage mapping of the area shall be prepared and natural drainage pattern of the site shall not be altered.
  - viii. Action plan for providing covered sheds for raw material storage yard and garland drains around the stockpiles shall be submitted.

41.6 Integrated Steel Plant of 1.0 Million TPA (Finished Steel) with 153 MW Captive Power Plant by **M/s. Rashmi Forgings India Private Limited** at Mouza - Chakganesh, Malipur, & Baradiha, P.S – Kharagpur (L), **District Paschim Medinipur, West Bengal** [Online Proposal No. IA/WB/IND/218435/2021; File no: IA-J- 11011/242/2021-IA-II(I)] – **Prescribing of Terms of Reference – regarding.**

41.6.1 M/s. Rashmi Forgings India Private Limited has made an online application vide proposal no. IA/WB/IND/218435/2021 dated 06/07/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3 (Material Production), Project Activity '3 (a)'

Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and being appraised at Central Level.

**Details submitted by the project proponent**

41.6.2 The project of M/s. Rashmi Forgings India Private Limited located at Mouza - Chakganesh, Malipur, & Baradiha, P.S – Kharagpur (L), Dist. Paschim Medinipur, West Bengal is for Integrated Steel Plant of 1.0 Million TPA (Finished Steel) with 153 MW Captive Power Plant.

41.6.3 Environmental site settings:

SNo	Particulars	Details	Remarks
i.	Total land	102.39 ha [Private: 60.30 ha; Govt.: 42.09 ha (Industrial)]	The proposed unit will be located on a piece of vacant land (industrial/undeveloped) measuring 253 Acres (102.39 Hectares). The land is sufficient for setting the proposed integrated steel plant. Out of the 253 acres of land for 104 acres (41%) of land in principal Memorandum of Understanding is signed on 24/03/2021 and for rest of land (149 Acres) final stage negotiation from private rayat is in progress.
ii.	Existence of habitation & involvement of R&R, if any.	No rehabilitation and resettlement is involved for the subject project.	
iii.	Latitude and Longitude of the project site	Latitude: 22°21'45.37"N to 22°22'45.90"N Longitude: 87°22'07.86"E to 87°22'52.24"E	
iv.	Elevation of the project site	26 m to 30 m AMSL.	
v.	Involvement of Forest land if any.	No forest land involved.	No forest land is involved.
vi.	Water body exists within the project site as well as study area	<b>Project site:</b> Nil <b>Study area:</b> Kangsabati River: 3.0 Km/ N	

SNo	Particulars	Details	Remarks
vii.	Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area	<b>Study area</b> Two protected forest is present within 10 Km area of the project. ~8.0 km in SSW direction ~7.0 km in SSW direction	

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

S No	Particulars of Facilities	Proposed		Product
		Configuration	Capacity	
1.	Blast Furnace	1x550 m <sup>3</sup>	0.50 Million TPA	Molten Liquid Metal
	PCM	2x800 TPD		Pig Iron
	LD Converter /BOF	1x50 T		High Quality Liquid Steel
2.	Sinter	1x70 Sq. m	0.70 Million TPA	Sinter
3.	DRI	4x700 TPD	0.70 Million TPA	Sized Sponge Iron
4.	SMS with Matching LRF/AOD, CCM and oxygen optimized furnace	5x25 T + 5x30 T	0.70 Million TPA	Billet, Slab
5.	SMS Slag Crusher	2x200 TPD	400 TPD	Metal recovery
6.	Ferro Alloy Plant with Jigging plant and matching Briquette plant	2x9 MVA	0.024 Million TPA	FeMn, FeSi, SiMn & FeCr
7.	Non-recovery type Coke Oven Plant	2x0.2 MTPA	0.40 Million TPA	Metallurgical Coke
8.	Lime Dolomite Plant	1x200 TPD	200 TPD	Calcined lime/ Dolo
9.	Oxygen Plant	2x200 TPD	400 TPD	Oxygen
10.	Bar/ Wire Rod Mill and Wire drawing with stand by reheating furnace	0.2 Million TPA		TMT Bar, Wire Rod & Wire
	Annealing, Pickling & Galvanising Line			Galvanized product
11.	Strip Mill/ CRM	0.7 Million TPA		H.R. Plate, Flat products
12.	Ductile Iron Pipe Unit, Fitting & Accessories Plant	0.1 Million TPA		Ductile Iron Pipe, Fitting & Accessories Plant
13.	Captive Power Plant	<b>108 MW-WHRB Based</b> (68 MW from DRI Plant +	153 MW	Power



S No	Particulars of Facilities	Proposed		Product
		Configuration	Capacity	
		40 MW from Coke Oven Plant, TRT BF) <b>45 MW CFBC</b> (Coal & Dolochar Mix based)		
14.	Pellet Plant with matching beneficiation	2x2.5 MTPA	5.0 Million TPA	Iron Ore Pellet
15.	Producer Gas Plant	8x12,500 Nm <sup>3</sup> /hr	1,00,000 Nm <sup>3</sup> /hr	Producer Gas
16.	Railway Siding	01 No.	01 No.	--

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

S No	Name of the Raw Materials	Quantity (TPA)	Source	Distance of source from	Mode of Transportation
1	Iron Ore Fines & Lump	6,776,364	Purchased from Barbil-Joda, Orissa	270-300	Rail /Road
2	Non-coking coal	1,242,369	CCL, MCL & Imported Coal.	300-500	Rail /Road
3	Coking Coal	536,000	E-Auction, Purchased from BCCL, Dhanbad or Imported	300-500	Rail /Road
4	Dolomite	126,420	From Birmitrapur, Orissa / Bilaspur, CG	270-350	Rail /Road
5	Limestone	304,488	From Birmitrapur, Orissa / Bilaspur, Raipur CG / Katni MP	270-350	Rail /Road
6	Manganese / Chrome Ore	62,400	From Balaghat, MP & Orissa	1000	Rail /Road
7	Quartzite	181,000	From Belpahar Orissa / Bilaspur, Raipur CG	500	Rail /Road
8	Pyroxenite	15,000	From Jharkhand, Orissa	500	Rail /Road
9	Mould powder	2,606	Local Market	---	Road
10	Refractory	796	Local Market	---	Road
11	Inoculant	90	Local Market	---	Road
12	Slag Coagulant	145	Local Market	---	Road
13	Runner Coat	495	Local Market	---	Road
14	Magnesium	167	Local Market	---	Road
15	Cement	350	Local Market	---	Road

S No	Name of the Raw Materials	Quantity (TPA)	Source	Distance of source from	Mode of Transportation
16	Bituminous / Epoxy Solution	582	WRAS* Approved vendor	---	Road
17	Zinc	213	Local Market	---	Road
18	Bentonite	100,000	From Kutch, Gujrat	2500-3000	Rail/Road
19	Sand	4,830	Local Market	<150	Road
20	Binder & Resin, Hot Metal Glue	250	Local Market	---	Road
21	Latex Emulsion	20	Local Market	---	Road
22	Castable High Aluminium	1.0	Local Market	---	Road
23	Expandable Polystyrene, Plastic Sheet	80	Local Market	---	Road
24	Shot Blasting Grit, Steel Shots	260	Local Market	---	Road
25	Paper Tips, Thermocole Block, Hollow Sprue, Steel Straps	Variable	Local Market	---	Road

41.6.6 The water requirement for the project is estimated as 6,768m<sup>3</sup> /day, water requirement will be obtained from WBIDC supply system/Surface Water (Kangsabati River) and Rainwater Harvesting Structure and ground water 100-120m<sup>3</sup>/day (during construction phase only). An application has already been made to Irrigation & Water Ways Department, Govt. of West Bengal for allocation of surface water vide letter dated 13/05/2021.

41.6.7 The power requirement for the project is estimated as 228 MW, out of which 153 MW will be obtained from proposed Captive Power Plant (WHRB-108 MW, CFBC-45 MW) and balance 75 MW from WBSEDCL. Further the management will have 10 x 720 KVA DG sets to meet the emergency power requirement. WBSEDCL issued bulk power supply confirmation vide letter dated 10/05/2021.

41.6.8 The capital cost of the project is Rs 1,700 Crores and the capital cost for environmental protection measures & EMP for social & infrastructure development is proposed as Rs 119 Crores. The employment generation from the proposed project is 4,000 [3,000 Direct (Regular – 1,000 & Contractual – 2,000) and 1,000 Indirect].

41.6.9 Proposed Terms of Reference (**Baseline data collection period: March'21 to May'21**):

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
<b>A. Air</b>				
a. Meteorological parameters	Wind speed, wind direction, Relative	<b>01</b>	Hourly micro-meteorology	Nearest Regional Micrometeorological Centre Kharagpur

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
	humidity, Temperature, Rainfall		data for three months. (Total No. of Samples – 90)	
b. AAQ parameters	PM <sub>10</sub> µg/m <sup>3</sup> , PM <sub>2.5</sub> µg/m <sup>3</sup> , Sulphur Dioxide (SO <sub>2</sub> ) µg/m <sup>3</sup> Nitrogen Dioxide (NO <sub>2</sub> ) µg/m <sup>3</sup> Carbon Monoxide mg/m <sup>3</sup> , Lead (Pb) µg/m <sup>3</sup> Arsenic (As) ng/m <sup>3</sup> Nickel (Ni) ng/m <sup>3</sup> Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	<b>09</b>	Twice a week  (Total No. of Samples – 216)	Setup based on 5 years data and wind rose of IMD.
<b>B. Noise</b>	Noise	<b>09</b>	Hourly basis for a continuous period of 24	
<b>C. Water</b>				
Surface water/Ground water quality parameters	<b>Surface water:</b> Parameters tested for physical and chemical and biological parameters as well as according to applicable standards	<b>08</b>	Once in a months.  (Total No. of Samples – 24)	<b>WATER:-As per IS 2296: 1982 / As per IS 10500: 2012 quality parameters.</b> Water samples collected from various locations in core and buffer zone (10 km radius).
	<b>Ground water:</b> Parameters tested for physical and chemical and biological parameters as	<b>09</b>	Once in a months.  (Total No. of Samples – 27)	

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
	well as according to applicable standards			
<b>D. Land</b>				
a. Soil quality b. Land use	--	5 Locations/ Primary data/ Secondary data 10 Km Buffer Zone Secondary data	Once	
<b>E. Biological</b>				
a. Aquatic b. Terrestrial	--	Core and Buffer Zone Primary data / Secondary data	Once	
<b>F. Socio-economic parameters</b>	Demographic structure Infrastructure resource base. Economic resource base. Cultural and aesthetic attributes, Health Education	Core and Buffer Zone Primary data / Secondary data	Once	
<b>G. Traffic Density Study (any other item)</b>	Study of existing traffic volume / load	<b>01</b>	Once Primary data – 24 Hours study	

41.6.10 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.

- 41.6.11 Name of the EIA Consultant: M/s. Centre for Envotech & Management Consultancy Pvt. Ltd [S. No. 93, Certificate No. NABET/EIA/1821/SA 0126, Valid Up to 17/12/2021; Rev. 12, July 09, 2021].
- 41.6.12 M/s. Rashmi Forgings India Private Limited has made an application online vide proposal no. IA/WB/IND/211972/2021 dated 26/05/2021. The proposal was listed for consideration before the EAC in its meeting held on 31/05/2021 to 01/06/2021. However, the project proponent requested the EAC and Ministry to withdraw their proposal as they would like to modify their proposal. In this regard, project proponent also sent an email to the Ministry as well as EAC members on 24/05/2021. In view of this, the Committee recommended for accepting the withdrawal of the instant proposal.
- 41.6.13 The proponent again submitted a revised application vide proposal no. IA/WB/IND/214920/2021 on 11/06/2021. The proposal was listed for consideration before the EAC in its meeting held on 30<sup>th</sup> June – 1<sup>st</sup> July, 2021. The proponent again was requested for withdrawal of the proposal vide email dated 28/06/2021.
- 41.6.14 The Committee noted that instant proposal has been withdrawn for making corrections in PFR. It was noted that PP has made the proposal and withdrawn the same twice so far. EAC was of the opinion that PP does not have clarity of what they want and by applying for TOR again and again they are wasting Committee's time. After deliberations, the Committee recommended that warning letter may be issued to the proponent to submit the proposals only after fulfilling the technical requirements envisaged by the proponent.
- 41.6.15 M/s. Rashmi Forgings India Private Limited has again made an online application vide proposal no. IA/WB/IND/218435/2021 dated 06/07/2021. The proposal was considered by the EAC (Industry 1) in its 41<sup>st</sup> meeting of the Re-constituted EAC (Industry-I) held on 29-30<sup>th</sup> July, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee**

- 41.6.16 The EAC noted the following:
- i. Terms of Reference is being sought for undertaking EIA study for 1 MTPA Integrated Steel Plant along with 153 MW CPP.
  - ii. Earlier the proposal was listed in 37 & 38<sup>th</sup> EAC meeting of Industry 1 sector. However, PP did not attend the meeting and withdrawn their proposal.
  - iii. Water availability report for Kansabati is not available as the river is already under pressure from many other industries in the area.
  - iv. As per the KML file, there are several human habitations residing in the vicinity of the project site.

**Recommendations of the Committee**

- 41.6.17 In view of the foregoing and after detailed deliberations, the Committee opined that the selection location of the plant needs further detailing from the point of view of availability of water in river Kansabati including summer season, environmental impacts on the habitats residing around the plant site and traffic congestion etc. In view of this, the Committee recommended that proposal to be returned in its present form to address the shortcomings.

41.7 Proposed 3x9 MVA Ferro Alloys Plant (Ferro Manganese: 61,365 TPA, Silico Manganese: 45,256 TPA, Ferro Silicon: 21,049 TPA) with adding Sinter Plant of 30TPD by **M/s. Nilkanth Ferro Limited** at Village Radha Madhavpur, Mouza Chousal, **District: Bankura, West Bengal** [Online Proposal No. IA/WB/IND/218155/2021; file no: J-11011/10/2011-IA.II(I)] – **Amendment in Terms of Reference**– regarding.

41.7.1 M/s. Nilkanth Ferro Limited has made an online application vide proposal no. IA/WB/IND/218155/2021 dated 05/07/2021 along with Form 3 and sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. J-11011/10/2011-IA.II(I) dated 01/07/2021. The proposed project activity is listed at 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006 and the proposal is appraised at central level.

**Details submitted by the project proponent**

41.7.2 M/s. Nilkanth Ferro Limited had obtained Environmental Clearance for 3X9 MVA Ferro alloy plant from MoEF&CC vide letter no. J-11011/10/2011-IA(II) dated 26.09.2012. However, the validity of the EC had lapsed on 25/09/2019, where after, it could not be renewed as the company was applied after the 90 days of EC validity period permitted for such a request as per notification no. S.O. 2944 (E) dt. 14.09.2016. Hence, the company had requested for fresh Terms of Reference with a request for exemption in PH (as per Notification dated 18/03/2021). The ToR for the same has been granted vide letter no. J-11011/10/2011-IA.II(I) dated 01/07/2021 stipulating public hearing. Since, public hearing is required, M/s. Nilkanth Ferro Limited would like to add a 30 TPD sinter plant with jaw crusher for reuse of solid waste and get the public hearing done for the same also.

41.7.3 The configuration & capacity of units granted in TOR vis-à-vis the proposed modification is given below:

Sl. No.	Configuration/ capacity	As per ToR dated 01/07/2021	Proposed configuration/ Configuration	Capacity (TPA)
<b>1.</b>	<b>Submerged Arc Furnace</b>			
a.	Ferro Manganese	9 MVA	-	61,365
b.	Silico Manganese	9 MVA	-	45,256
c.	Ferro Silicon	9 MVA	-	21,049
<b>2.</b>	<b>Sinter Plant</b> with jaw crusher	-	30 TPD	10,316

41.7.4 The Details as per the granted ToR dated 01.07.2021 vis-à-vis proposed changes are as follows:

Ref	As per Existing ToR dated 01/07/2021	Amendment Proposed
Subject	Proposed 3x9 MVA Ferro Alloys Plant [Ferro Manganese: 61,365 TPA, Silico Manganese: 45,256 TPA, Ferro Silicon: 21,049 TPA] by M/s Nilkanth Ferro Limited at villages Radha Madhavpur, Mouza&P.O.: Chousal, District: Bankura, West Bengal - Prescribing of Terms of Reference - regarding.	Proposed 3x9 MVA Ferro Alloys Plant [Ferro Manganese: 61,365 TPA, Silico Manganese: 45,256 TPA, Ferro Silicon: 21,049 TPA] <b>and 30 TPD Sinter Plant</b> by M/s Nilkanth Ferro Limited at villages Radha Madhavpur, Mouza&P.O.: Chousal, District: Bankura, West Bengal - Prescribing of Terms of Reference - regarding.
Point no.	The project of M/s Nilkanth Ferro Limited at	The project of M/s Nilkanth Ferro Limited

Ref	As per Existing ToR dated 01/07/2021	Amendment Proposed																																																																																																												
3	villages Radha Madhavpur, Mouza&P.O.: Chousal, District: Bankura, West Bengal is for Proposed 3x9 MVA Ferro Alloys Plant [Ferro Manganese: 61,365 TPA, Silico Manganese: 45,256 TPA, Ferro Silicon: 21,049 TPA]	at villages Radha Madhavpur, Mouza&P.O.: Chousal, District: Bankura, West Bengal is for Proposed 3x9 MVA Ferro Alloys Plant [Ferro Manganese: 61,365 TPA, Silico Manganese: 45,256 TPA, Ferro Silicon: 21,049 TPA] <b>and 30 TPD Sinter Plant</b>																																																																																																												
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Ref	As per Existing ToR dated 01/07/2021		Amendment Proposed	
	10	Return fines and bag filter dust	790	In-house
Point no. 9	The water requirement for the project is estimated as 40.5 m <sup>3</sup> /day, which will be obtained from Bore well and rainwater. The permission for drawl of groundwater / surface water is obtained from State Water Investigation Directorate (SWID).		The water requirement for the project is estimated as <b>43.5 m<sup>3</sup>/day</b> , which will be obtained from Bore well and rainwater. The permission for drawl of groundwater / surface water is obtained from State Water Investigation Directorate (SWID).	
Point no. 10	The power requirement for the project is estimated as 25 MW, which will be obtained from the Damodar Valley Corporation. During power failure, 2X125 MVA DG sets are proposed.		The power requirement for the project is estimated as <b>27.3 MW</b> , which will be obtained from the Damodar Valley Corporation. During power failure, 2X125 MVA DG sets are proposed.	
Point no. 11	The capital cost of the project is Rs 49.26 Crores and the capital cost for environmental protection measures is proposed as Rs 4.5 Crores. The employment generation from the proposed project is 350.		The capital cost of the project is <b>Rs 51.08 Crores</b> and the capital cost for environmental protection measures is proposed as Rs 4.5 Crores. The employment generation from the proposed project is 350.	

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

#### Observations of the Committee

41.7.6 The Committee noted the following:

- i. TOR was issued on 1/07/2021 for undertaking EIA study for the project titled proposed 3x9 MVA Ferro Alloys Plant (Ferro Manganese: 61,365 TPA, Silico Manganese: 45,256 TPA, Ferro Silicon: 21,049 TPA) at Village Radha Madhavpur, Mouza Chousal, District: Bankura, West Bengal.
- ii. Project proponent now requested to add 30 TPD sinter plant in the aforesaid ToR.

#### Recommendations of the Committee

41.7.7 In view of the foregoing and after deliberations, the Committee recommended for amendment in the ToR dated 01/07/2020 as mentioned at para 41.7.3 and 41.7.4 above.

41.8 Proposed Integrated Steel Plant of 2.5 MTPA (Finished Steel) with 256 MW Captive Power Plant by **M/s. Rashmi Iron & Steel Private Limited** at Mouza- Gopinathpur, Fathemahammad, Jethia, Changual & Khatranga, P.S– Kharagpur, **Dist. Paschim Medinipur, West Bengal** [Online Proposal No. IA/WB/IND/218378/2021; file no: IA-J-11011/273/2021-IA-II(I)] – **Prescribing for Terms of Reference**– regarding.

41.8.1 M/s. Rashmi Iron & Steel Private Limited has made an online application vide proposal no. IA/WB/IND/218378/2021 dated 06/07/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3 (Material Production), Project Activity ‘3 (a)’ Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and being appraised at Central Level.



**Details submitted by the project proponent**

41.8.2 The project of M/s. Rashmi Iron & Steel Private Limited located at Mouza- Gopinathpur, Fathemahammad, Jethia, Changual & Khatranga, P.S– Kharagpur, Dist. Paschim Medinipur, West Bengal is for Proposed Integrated Steel Plant of 2.5 MTPA (Finished Steel) with 256 MW Captive Power Plant.

41.8.3 Environmental site settings:

S.No.	Particulars	Details	Remarks
i.	Total land	186.16 ha (460 Acre) [Private: 186.16 ha] (Industrial/Undeveloped)	Out of the 460 acres land Memorandum of Understanding is signed for 250 acres of land in principal and for rest of 210 Acres land final stage negotiation from private rayat is in progress. WBIDC vide letter dated 12.02.2021 confirms to provide support for acquisition of 250.52 acres of land. As on July 2021, out of the said 250 acres of land for 140 acres of land tie up/purchase is made by M/s. Rashmi Iron & Steel
ii.	Existence of habitation & involvement of R&R, if any.	No rehabilitation and resettlement is involved for the subject project.	
iii.	Latitude and Longitude of the project site	Latitude: 22°18'40.21"N to 22°20'02.61" N Longitude: 87°23'45.97"E to 87°24'30.21" E	
iv.	Elevation of the project site	24 m to 27 m AMSL.	
v.	Involvement of Forest land if any.	No forest land involved.	
vi.	Water body exists within the project site as well as study area	<b>Project site:</b> Nil  <b>Study area:</b> Kangsabati River: 6.5 Km in N	
vii.	Existence of ESZ/ESA/national park/wildlife sanctuary/ biosphere	<b>Study area</b> Two protected forest is present within 10 Km area	

S.No.	Particulars	Details	Remarks
	reserve/ tiger reserve/ elephant reserve etc. if any within the study area	of the project. ~8.5 km in SSW direction ~10.0km in SSW direction	

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

S. No.	Particulars of Facilities	Configuration	Capacity	Product
1.	Blast Furnace with matching	1x680 m <sup>3</sup> + 1x1000m <sup>3</sup>	1.6 MTPA	Molten Metal
	PCM	2 x 1500 TPD		Pig Iron
	LD Converter & CCM	100 T		High Quality Billets, Slab
2.	Sinter	1x105 m <sup>2</sup> + 1x115 m <sup>2</sup>	2.1 MTPA	Iron Ore Sinter
3.	DRI	4x 800 TPD	1.0 MTPA	Sponge Iron
4.	SMS with matching LRF/AOD, CCM and oxygen optimized furnace	8x30 T IF + 5x25 T IF	1.0 MTPA	Billets, Slab
5.	SMS Slag Crusher	2x500 TPD	1000 TPD	Metal Recovery
6.	Ferro Alloy Plant	3x12 MVA	0.036 MTPA	FeMn, FeSi, SiMn, FeCr
7.	Chrome Briquette Manufacturing plant	1x480 TPD	480 TPD	Chrome Briquette
8.	Zigging plant	2x20 TPD	40 TPD	Metal Recovery
9.	Non-recovery type Coke Oven Plant	2x0.38 MTPA	0.76 MTPA	Coke
10.	Lime Dolomite Plant	2x200 TPD	400 TPD	Lime Dolomite
11.	Oxygen Plant	3x200 TPD	600 TPD	Oxygen
12.	Bar/ Wire Rod & Wire Drawing Mill /Seamless tube line	--	1.0 MTPA	TMT Bar, Wire Rod & Wire, Seamless tube & pipe
13.	Strip Mill/ CRM	--	0.5 MTPA	H.R. Plate , Flat Products
	Pickling Line & Galvanizing Line	--		Galvanised Product
14.	Ductile Iron Pipe Unit, Fitting & Accessories Plant	--	1.0 MTPA	Ductile Iron Pipe, Fitting & Accessories
15.	Captive Power Plant	<b>166 MW WHRB</b> Based (96 MW from DRI Plant + 65 MW from Coke Oven Plant	256 MW	Power

S. No.	Particulars of Facilities	Configuration	Capacity	Product
		+ 5 MW from TRT MBF) <b>90 MW CFBC</b> (2 x 45 MW Coal & Dolochar Mix Based)		
16.	Pellet Plant with matching beneficiation	2x3.0 Million TPA	6.0 MTPA	Iron Ore Pellet
17.	Producer Gas Plant	10x12,500 Nm <sup>3</sup> /hr	1,25,000 Nm <sup>3</sup> /Hr	Producer Gas
18.	Cement Grinding Unit	3x600 TPD Ball Mill + 1x2500 TPD VRM	1.30 MTPA	OPC, PSC, PPC & Composite Cement
19.	Railway Siding	01 No.	01 No.	Transportation of material

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

Sl. No.	Raw Materials	Quantity (TPA)	Source	Distance of source from	Mode of Transportation
1	Iron Ore Fines & Lump	9,906,289	Purchased from Barbil-Joda, Orissa	270-300	Rail /Road
2	Non-coking coal	1,962,631	CCL, MCL & Imported Coal.	300-500	Rail /Road
3	Coking Coal	1,018,401	E-Auction, Purchased from BCCL, Dhanbad or Imported	300-500	Rail /Road
4	Coke fines	122,832	Imported, E-Auction	300	Rail /Road
5	Dolomite	290,540	From Birmitrapur, Orissa / Bilaspur, CG	270-350	Rail /Road
6	Limestone	513,454	From Birmitrapur, Orissa / Bilaspur, Raipur CG / Katni MP	270-350	Rail /Road
7	Manganese / Chrome Ore	93,600	From Balaghat, MP & Orissa	1000	Rail /Road
8	Quartzite	569,000	From Belpahar Orissa / Bilaspur, Raipur CG	500	Rail /Road
9	Ferro Alloy	37,240	From West Bengal (Associate Company)	<50	Road

Sl. No.	Raw Materials	Quantity (TPA)	Source	Distance of source from	Mode of Transportation
10	Clinker	12,35,000	From Rajasthan, Chhattisgarh & Madhya Pradesh	<2000	Rail /Road
11	Gypsum	65,000	From Rajasthan, Odisha & West Bengal	<1500	Rail /Road
12	Pyroxenite	48,000	From Jharkhand, Orissa	500	Rail /Road
13	Mould powder	26,055	Local Market	---	Road
14	Refractory	7,960	Local Market	---	Road
15	Inoculant	900	Local Market	---	Road
16	Slag Coagulant	1,450	Local Market	---	Road
17	Runner Coat	4,950	Local Market	---	Road
18	Magnesium	1,665	Local Market	---	Road
19	Bituminous / Epoxy Solution	5,823	WRAS* Approved vendor	---	Road
20	Zinc	2,125	Local Market	---	Road
21	Bentonite	120,000	From Kutch, Gujrat	2500-3000	Rail/Road
22	Sand	48,300	Local Market	<150	Road
23	Binder & Resin, Hot Metal Glue	2500	Local Market	---	Road
24	Latex Emulsion	200	Local Market	---	Road
25	Castable High Aluminum	8.5	Local Market	---	Road
26	Expandable Polystyrene, Plastic Sheet	800	Local Market	---	Road
27	Shot Blasting Grit, Steel Shots	2,600	Local Market	---	Road
28	Paper Tips, Thermocole Block, Hollow Sprue, Steel Straps	Variable	Local Market	---	Road
<b>Total (TPA)</b>		<b>14,852,323</b>			

41.8.6 The water requirement for the project is estimated as 14,088m<sup>3</sup> /day, water requirement will be obtained from WBIDC supply system (WBIDC vide letter dated 01/03/2021 confirms supply of 2.0 MGD of raw surface water from water supply system)/Surface Water (Kangsabati River) and Rainwater Harvesting Structure and ground water 250-300m<sup>3</sup>/day (during construction phase only). An application has already been made to

Irrigation & Water Ways Department, Govt. of West Bengal for allocation of surface water vide letter dated 13.05.2021.

41.8.7 The power requirement for the project is estimated as 400MW, out of which 256MW will be obtained from proposed Captive Power Plant (WHRB-166 MW, CFBC-90 MW) and balance 144 MW from WBSEDCL. Further the management will have 10 x 720 KVA DG sets to meet the emergency power requirement. WBSEDCL issued bulk power supply confirmation vide letter dated 12/05/2021.

41.8.8 The capital cost of the project is ₹3,500 Crores and the capital cost for environmental protection measures & EMP for social & infrastructure development is proposed as ₹210 Crores. The employment generation from the proposed project is 6,000 [4,000 Direct (Regular – 1,500 & Contractual – 2,500) and 2,000 Indirect].

41.8.9 Proposed Terms of Reference (**Baseline data collection period: March'21 to May'21**):

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
<b>A. Air</b>				
c. Meteorological parameters	Wind speed, wind direction, Relative humidity, Temperature, Rainfall	<b>01</b>	Hourly micro-meteorology data for three months.  (Total No. of Samples –90)	Nearest Regional Micrometeorological Centre Kharagpur
d. AAQ parameters	PM <sub>10</sub> µg/m <sup>3</sup> , PM <sub>2.5</sub> µg/m <sup>3</sup> , Sulphur Dioxide (SO <sub>2</sub> ) µg/m <sup>3</sup> , Nitrogen Dioxide (NO <sub>x</sub> ) µg/m <sup>3</sup> , Carbon Monoxide mg/m <sup>3</sup> , Lead (Pb) µg/m <sup>3</sup> , Arsenic (As) ng/m <sup>3</sup> , Nickel (Ni) ng/m <sup>3</sup> , Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	<b>09</b>	Twice a week  (Total No. of Samples – 216)	Setup based on 5 years data and wind rose of IMD.
<b>B. Noise</b>	Noise	<b>09</b>	Hourly basis for a	

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
			continuous period of 24	
<b>C. Water</b>				
Surface water/Ground water quality parameters	<b>Surface water:</b> Parameters tested for physical and chemical and biological parameters as well as according to applicable standards	<b>08</b>	Once in a months.  (Total No. of Samples – 24)	<b>WATER:-As per IS 2296: 1982 / As per IS 10500: 2012 quality parameters.</b> Water samples collected from various locations in core and buffer zone (10 km radius).
	<b>Ground water:</b> Parameters tested for physical and chemical and biological parameters as well as according to applicable standards	<b>08</b>	Once in a months.  (Total No. of Samples – 24)	
<b>D. Land</b>				
a. Soil quality b. Land use	--	5 Locations/ Primary data/ Secondary data 10 Km Buffer Zone Secondary data	Once	
<b>E. Biological</b>				
a. Aquatic b. Terrestrial	--	Core and Buffer Zone Primary data / Secondary data	Once	
<b>F. Socio-economic parameters</b>	Demographic structure Infrastructure resource base. Economic resource base.	Core and Buffer Zone Primary data / Secondary data	Once	

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
	Cultural and aesthetic attributes, Health Education			

41.8.10 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.

41.8.11 Name of the EIA Consultant: M/s. Centre for Envotech & Management Consultancy Pvt. Ltd [S. No. 93, Certificate No. NABET/EIA/1821/SA 0126, Valid Up to 17/12/2021; Rev. 12, July 09, 2021].

#### **Observations of the Committee**

41.8.12 The EAC noted the following:

- i. Terms of Reference is being sought for undertaking EIA study for 2.5 MTPA Integrated Steel Plant along with 256 MW CPP.
- ii. Water availability report for Kansabati is not available as the river is already under pressure from many other industries in the area.
- iii. As per the KML file, there are several human habitations residing in the vicinity of the project site.

#### **Recommendations of the Committee**

41.8.13 In view of the foregoing and after detailed deliberations, the Committee opined that the selection location of the plant needs further detailing from the point of view of availability of water in river Kansabati including summer season, environmental impacts on the habitats residing around the plant site and traffic congestion etc. In view of this, the Committee recommended that proposal to be returned in its present form to address the shortcomings.

### **30<sup>th</sup> JULY, 2021**

41.9 Proposed expansion cum modification of existing integrated steel plant for ultimate production of 3.0 MTPA by **M/s. Shyam Sel & Power Limited** located at Village Dhasna, Tehsil Jamuria, **District Pachim Bardhman, West Bengal** [Online Proposal No. IA/WB/IND/6700/2008; File no: IA/WB/IND/6700/2008 File No: J- 11011/887/2007-IA.II(I)] – **Environmental Clearance**– regarding

41.9.1 M/s. Shyam Sel & Power Limited has made an online application vide proposal no. IA/WB/IND/6700/2008 dated 22/07/2021 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) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

41.9.2 The EIA consultant M/s. Envirotech East India Private Limited gave a presentation before the Committee wherein the consultant projected the illegible copy of the KML file of the project site under consideration. In this regard, the Committee asked the consultant to exhibit the legible copy of the KML file. However, the consultant expressed his inability to exhibit the same. In view of this, the Committee asked the Member Secretary to exhibit the KML file. Accordingly, the KML file was made available to all the participants. On perusal of the KML file, the Committee noted that there is a presence of primary school, dwellings, water bodies and brick kilns within the proposed expansion project site. The Consultant was asked to explain the site features based on KML file viz., environmental/ and ecological features etc. However, the consultant was unable to explain the site features as shown in KML file and even contradicting statements have been made before the Committee with respect to the presence of primary school and dwellings exists within the expansion project site. Besides, the project proponent was also unable to explain the natural features of KML file.

#### **Observations of the Committee**

41.9.3 The Committee noted the following:

- i. As per form 2 and structure of the EIA report, KML file is an important document which facilitates the EAC to carryout due diligence of the proposal. However, the consultant failed to explain the features of the KML file and made the appraisal process infructuous.
- ii. The Consultant misinform the EAC deliberately by not disclosing the natural features of the site as indicated by the KML file.

#### **Recommendations of the Committee**

41.9.4 After deliberations, the Committee recommended that the consultant may be issued a show cause notice for deliberately misinforming the EAC about the natural features of the site as indicated in the KML file. The Committee also recommended to return the proposal in its present form.

41.10 Expansion of existing Sponge Iron Plant production capacity from 1,05,000 TPA to 2,50,000 TPA & Power generation through WHRB from 8 MW to 16 MW, installation of SMS with Induction Furnace, LRF & CCM to produce M.S. Billets of 2,50,000 TPA, Rolling Mill to produce 2,50,000 TPA of Wire Rods/TMT bars, Pellet plant of 0.6 mtpa & CFBC based Power plants of 2x16 MW **by M/s. MGM Minerals Limited (Steel Division)** located at Nimidha, Haldiabahal & Uparpal Villages, P.S. Motanga, Odapada Tehsil, **Dhenkanal District, Orissa** [Online Proposal No. IA/OR/IND/5005/2007; File No: J-11011/438/2007-IA.II(I)] – **Environment Clearance – regarding.**

41.10.1 M/s. MGM Minerals Limited (Steel Division) has made an online application vide proposal no. IA/OR/IND/5005/2007 dated 19/06/2021 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) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

#### **Details submitted by Project proponent**

41.10.2 The details of the ToR are furnished as below:



Date of Application	Consideration	Details	Date of Accord
24 <sup>th</sup> June 2020	Standard TOR issued	TOR issued	13 <sup>th</sup> May, 2020

41.10.3 The project of M/s. MGM Minerals Limited (Steel Division) located in Nimidha, Haldiabahal & Uparpal Village, Odapada Tehsil, Dhenkanal District, Odisha has proposed Expansion of existing Sponge Iron Plant production capacity from 1,05,000 TPA to 2,50,000 TPA & Power generation through WHRB from 8 MW to 16 MW, installation of SMS with Induction Furnace, LRF & CCM to produce M.S. Billets of 2,50,000 TPA, Rolling Mill to produce 2,50,000 TPA of Wire Rods/TMT bars, Pellet plant of 0.6 MTPA & CFBC based Power plants of 2x16 MW.

41.10.4 Environmental Site Settings:

S.o	Particulars	Details	Remarks
i.	Total land	74.39 ha (183.82 acres). All land in possession of M/s. MGM Mineral Limited (Steel Division)	Land Use: Industrial
ii.	Land acquisition details as per MoEF&CC, O.M. dated 7/10/2014	Already Acquired (through IDCO, Govt. of Odisha)	--
iii.	Existence of habitation & involvement of R&R, if any.	No habitation exists in the plant site	--
iv.	Latitude and Longitude of the project site	Latitude 20°46'04.93"N to 20°46'47.50"N Longitude 85°20'06.85"E to 85°20'53.14"E	--
v.	Elevation of the project site	310 - 315 m AMSL	--
vi.	Involvement of Forest Land, if any	Nil	--
vii.	Water body exists within the project site as well as study area	<b>Project Site:</b> A seasonal dry nala is passing through the plant site and one water body present in project site.  <b>Study area:</b> Brahmani River (N)/ 3.3 Km Nigra or Lingara Nadi (W) /2.8 Km Barha Jor Nadi (E) / 6.2 Km Agana Nadi (SE) / 8.3 Km Kisinda Jhor (NW) / 4.6 Km Kusumder Jhor (SE) / 2.9 Km Ria Jor (N) / 3.6 km Rengali Right Main Canal (NW)/ 0.1 Km	--
viii.	Existence of ESZ / ESA / National Park / Wildlife Sanctuary / Biosphere	Nil However, movement of Elephants is observed within 10 Km radius of the	Conservation plan is approved by

S.o	Particulars	Details	Remarks
	Reserve / Tiger Reserve / Elephant Reserve etc. if any within the study area	plant, as per the secondary source. Conservation plan is prepared.	PCCF with budget of Rs. 248.36 Lakhs to be spent over a period of 10 years.

41.10.5 The existing project was accorded environmental clearance vide lr. no. J-11011/438/2007-IA.II(I) dt. 02.02.2009 Extension of E.C. has been obtained on 10.11.2016 for three years, i.e. up to 01.02.2019. Subsequently E.C. has been transferred from MGM Steels Limited. Consent to Operate for the existing unit was accorded by Chhattisgarh Environment Conservation Board (CECB) vide lr. no. 5097 / IND-I – CON – 6374 dated 26-03-2021, which is valid up to 31-03-2024.

41.10.6 Implementation status of the existing EC

Facilities Envisaged	Production capacity	Consent Status	Remarks	
DRI Kilns (Sponge Iron)	2,10,000 TPA	1,05,000 TPA (in Operation)	<b>Note:</b> ** for the remaining units construction could not start before the E.C. validity period.	
Induction Furnace (MS Billets / Ingots)	2,50,000 TPA** (Crude steel) 2,42,553 TPA** (Billets)	Not Implemented		
Pig Iron	62,000 TPA**	Not Implemented		
Hot Metal	1,31,000 TPA**	Not Implemented		
Coal Washery	5,00,000 TPA**	Not Implemented		
Power Plant	WHRB	16 MW**		8 MW (in Operation)
	AFBC	16MW** (AFBC)		Not Implemented

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

S. No.	Unit	Total Capacity as per the EC issued vide dated 02.02.2009 & 10.11.2016	Total Capacity implemented as per the EC issued vide Letter dated 02.02.2009 **	Present Expansion	Total production capacity After Present Expansion
1	DRI Kiln for Production of Sponge Iron	2,10,000 TPA	1,05,000 TPA (1x350 TPD)	Capacity Enhancement of existing 350 TPD DRI kiln i.e. from 1,05,000 TPA to 1,25,000 TPA & Additional 350 TPD DRI kiln of 1,25,000 TPA capacity	2,50,000 TPA (2x 350 TPD DRI kilns)
2	Induction furnace	2,50,000 TPA**	Nil	2,50,000 TPA of	2,50,000 TPA

S. No.	Unit	Total Capacity as per the EC issued vide dated 02.02.2009 & 10.11.2016	Total Capacity implemented as per the EC issued vide Letter dated 02.02.2009 **	Present Expansion	Total production capacity After Present Expansion
	with LRF &CCM to produce Crude Steel / MS billets	(Crude steel) 2,42,553 TPA** (Billets)		Billets (8x 10 Ton IF + 2x20 Ton LRF + 2 Nos. 6/11 - 2 Strand Continuous Casters)	of Billets (8x 10 Ton IF + 2x20 Ton LRF + 2 Nos. 6/11 - 2 Strand Continuous Casters)
3.	Pig Iron	62,000 TPA**	Nil	---	---
4.	Hot Metal	1,31,000 TPA**	Nil	---	---
5.	Coal Washery	5,00,000 TPA**	Nil	---	---
6.	Rolling Mill to produce either Wire Rods or TMT bars with 85% Hot charging	Nil	Nil	2,50,000 TPA	2,50,000 TPA
7.	Power generation through WHRB	16 MW**	8 MW	8 MW	16 MW
8.	Power Plant through CFBC Boiler	16 MW** (AFBC)	Nil	2x16 MW (CFBC)	32 MW (CFBC)
9.	Pellet Plant	Nil	Nil	0.6 mTPA	0.6 mTPA
<b>Note:</b>					
** The remaining units / products are unimplemented as the EC accorded in 2009 and EC has been expired.					

41.10.8 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)	SOURCES	MODE OF TRANSPORT
<b>1. For manufacturing Sponge Iron of 1,25,000 TPA</b>				
a.	Iron Ore	1,89,400	From owned I/O mines at Patabeda / In-house produced pellet	By Road (Covered Trucks)
b.	Dolomite	3,890	Chhattisgarh	By Road (Covered Trucks)
c.	Coal (Mixed)	Indian Coal	Talcher / Chhatisgarh	By Road (Covered Trucks)
		Imported Coal	Indonesia / South Africa / Australia	From Paradeep / Gangavaram Port By Sea, by Road(Covered trucks)
<b>2. For manufacturing HotMS Billets through Induction Furnaces - 2,50,000 TPA</b>				
a)	Sponge Iron	2,50,000	In-house	Covered Conveyor
b)	Pig Iron	14,860	Angul / Dhenkanal	By Road (Covered Trucks)
c)	Scrap	26640	Angul / Dhenkanal	By Road (Covered Trucks)
d)	Ferro Alloys (Si-Mn)	2,560	Angul / Dhenkanal	By Road (Covered Trucks)
e)	Ferro Alloys (Fe-Mn)	1020	Angul / Dhenkanal	By Road (Covered Trucks)
f)	Lime	520	Angul / Dhenkanal	By Road (Covered Trucks)
<b>3. For manufacturing Wire Rods / TMT bars through Rolling Mill – 2,50,000 TPA</b>				
a.	Hot charging of MS Billets	2,50,000	In house generation	Covered Conveyor

S.No.	RAW MATERIAL	QUANTITY (TPA)	SOURCES	MODE OF TRANSPORT	
b.	M.S. Billets (external purchase)	13,500	External purchase	By Road (Covered & sealed Trucks)	
c.	LDO / LSHS*	8,250	Local	By Road through tanker	
<b>4. For Power Generation –CFBC based power plant of 2x16 MW</b>					
a.	Coal	Indian	1,74,200	Talcher / Chhatisgarh	By Road through covered trucks
		OR			
		Imported	94,500	Indonesia / South Africa / Australia	From Paradeep / Gangavaram Port By Sea, by Road(Covered trucks)
b.	Dolochar	62,500	In-house production	Closed conveyor	
<b>5. For manufacturing Pellets – 6,00,000 TPA</b>					
a)	Iron ore fines	6,74,000	From owned I.O. Mines at Patabeda	By Road (Covered Trucks)	
b)	Bentonite	4,800	Angul / Dhenkanal	By Road (Covered Trucks)	
c)	Limestone	36,000	Angul / Dhenkanal	By Road (Covered Trucks)	
d)	Coal (Bituminous)	6,000	Angul / Dhenkanal	By Road (Covered Trucks)	
e)	Fuel (Anthracite Coal)	26,040	Angul / Dhenkanal	By Road (Covered Trucks)	
<p>Note:</p> <p>1) There will be provision for installation of Re-heating Furnace. In that case LDO/ LSHS will be used as Fuel.</p> <p>2) LDO/ LSHS will also be used for burners of drying system for raw material of pelletization plant. Also in case of drop in temperature of Travelling Grate Furnace of Pelletisation plant, supporting heating arrangement with LDO/ LSHS is considered.</p>					

41.10.9 The water requirement for the existing & proposed expansion project is estimated as 6662 KLD, and same will be sourced from Brahmani River. Water withdrawal permission has already been obtained for 1.63 Cusec i.e. 166.16 Cum/hr (3988 KLD) from Water Resources Department, Govt. of Odisha and a recommendation letter given by IPICOL, Govt. of Odisha for withdrawal of additional water of 1.04 Cusecs i.e. 107.25 Cum/hr (2574 KLD), about 100 m<sup>3</sup>/day Water for domestic purpose will be sourced from existing Bore well.

41.10.10 Power required for the existing & present proposal is estimated **57.14 MW**, which will be partly met from **48 MW** Captive Power Plant & remaining **9.14 MW** will be imported from State Grid.

41.10.11 Baseline Environmental Studies:

Period	1 <sup>st</sup> December 2019 to 29 <sup>th</sup> February 2020.
AAQ parameters at 8 locations	PM <sub>2.5</sub> = 17.9 to 35.2 µg/m <sup>3</sup> PM <sub>10</sub> = 35.6 to 60.5 µg/m <sup>3</sup> SO <sub>2</sub> = 5.9 to 11.4 µg/m <sup>3</sup> NO <sub>x</sub> = 6.1 to 15.6 µg/m <sup>3</sup> CO = 316 to 912 µg/m <sup>3</sup>
AAQ modelling	PM <sub>10</sub> = 1.95 µg/m <sup>3</sup> (1200 m in SWW) SO <sub>2</sub> = 5.97 µg/m <sup>3</sup> (1200 m in SWW) NO <sub>x</sub> = 13.24 µg/m <sup>3</sup> (1200 m in SWW) CO = 3.04 µg/m <sup>3</sup> (1200 m in SWW)
Ground water quality at 8	pH : 6.8 to 7.6; Total hardness : 242 to 488 mg/L

locations	Chlorides : 274 to 566 mg/L ;Fluoride : 0.45 to 0.88 mg/L Heavy metals : 0.04 to 0.14 mg/L
Surface water quality at 6 locations	pH =7.1 to 7.9 ; DO = 5.1 to 6.8 mg/L TDS = 161 to 392 mg/L ; Chlorides = 85 to 189 mg/L Sulphates = 52 to 144 mg/L
Noise levels	43.6 to 65.8 dBA for day time ; 36.9 to 59.4 dBA for night time
Traffic assessment study findings	Traffic load (Baseline): 12,717.5 PCU/day Additional Traffic load during operation of the Expansion project: 1,555.5 PCU/day Total Traffic load during operation of expansion project load: 1,4273 PCU/day Traffic Capacity as per the IRC 73:1980 for Highways 20000 PCU/day. Hence existing road can cater to this additional traffic due to the proposed project.
Flora and fauna	In buffer zone following scheduled -I fauna are present Elephant (Elephas maximus) (as per the secondary source Elephant movement was observed in the study area) Conservation Plan has been prepared & it is approved by PCCF, Odisha and allotted budget of Rs. 248.36 Lakhs to be spent over a period of 10 years.

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

S.No	Waste	Quantity (TPA)			Method of disposal	Agreement Details of Disposal
		Existing	Proposed	Total		
1	Ash from Anthracite Coal	Nil	5210	5210	Utilization in captive Brick Manufacturing Unit.	Captive
2	Ash from DRI	23,750	23,750	47,500	Utilization in own Brick Manufacturing Unit.	Captive
3	Dolochar	31,250	31,250	62,500	Will be utilized in the Captive CFBC power plant	Captive
4	Kiln Accretion Slag	1,250	1,250	2,500	Utilization in captive Brick Manufacturing Unit.	Captive
5	Wet Scraper Sludge	3,750	3,750	7,500	Utilization in captive Brick Manufacturing Unit.	Captive
6	SMS Slag	Nil	35,000	35,000	Utilization in Ready mix plant after crushing followed by iron Recovery	Given to M/s. Supreme Concrete & infrastructure company for Ready Mix
7	Mill scales from Rolling Mill	Nil	2,500	2,500	Given to ferro alloy plant	Willingness Letters from M/s. Shyam Steels & AB Metaliks

8	End cutting from Rolling Mill	Nil	6,250	6,250	Utilization In Induction Furnace	NA
9	Ash From CPP Using Indian Coal and Dolochar	Nil	1,07,200	1,07,200	Utilization in captive Brick Manufacturing Unit.	NA
10	STP Sludge	0.1 TPD	0.2 TPD	0.3 TPD	Utilization in Green Belt Development	NA

**Hazardous waste Generation:** Waste Oil: 30 KL/Annum; **Disposal:** This will be stored in covered HDPE drums in a designated area and will be given to SPCB approved vendors.

41.10.13 Public Consultation:

Details of advertisement given	12/02/2021 & 13/02/2021
Date of Public Consultation	16 <sup>th</sup> March, 2021
Venue	Balramprasad Village (Plot no.5092 & 5093 of Khata no.315) of Odapada Tehsil, Dhenkanal Dist., Odisha.
Presiding Officer	Additional District Magistrate
Major issues raised	<ul style="list-style-type: none"> <li>• Adoption of Nimidha Village</li> <li>• Relaying of Road</li> <li>• Air and water Pollution Control measures</li> <li>• Employment to Locals</li> <li>• Protection of nearby forest</li> <li>• protection of crops from elephants</li> <li>• Employment to Land sellers</li> <li>• Medical facilities</li> <li>• Street light facility</li> <li>• Pension scheme to women senior citizen</li> <li>• Dust control measures</li> <li>• Additional facilities in schools</li> <li>• Drinking water facilities</li> <li>• Social &amp; infrastructural development activities</li> </ul>

**Action plan as per MoEF&CC O.M. dated 30/9/2020**

SNo	Issue raised	Management Response	Time schedule	Budgetary allocation
1.	Employment opportunity for the land sellers & unemployed persons from the nearby villages.	<p>PP has acquired the Land through Industrial Development Corporation of Odisha (IDCO), Govt .of Odisha.</p> <p>Total direct &amp; indirect employment in existing plant is 556. Out of this 533 nos. are from the state. In Dhenkanal district alone 308.</p> <p>In the expansion employment will be provided to 650 people directly and 650 people indirectly during operation of the expansion. Local people will be given priority in employment based on their qualification and it will be continued after expansion also.</p>	---	---

SNo	Issue raised	Management Response	Time schedule	Budgetary allocation
2.	Repair and maintenance of nearby village roads	The management of existing plant is already doing repair & maintenance of Nimidha, Uparpal, Haldiabahal village roads.  Similar practice will be continued after expansion also under CSR activities as per company's act 2014.	2022-23 2023-24 2024-25  Every year	Rs. 18 lacs Rs. 16 lacs Rs. 16 lacs <b>Total Rs. 50 Lacs</b>  Rs. 2 Lacs
3.	Provision of regular health checkup facility	Keeping in view of the health of the local people, the company has already appointed one Doctor on contract basis in this area for regular health checkup for the locals on every fort-night basis. Primary Health Care facility with ambulance will be provided in Nimidha & Haldabahal villages.	2023-24 2024-25	Rs. 30 lacs Rs. 30 lacs <b>Total Rs. 60 Lacs</b>
4.	Street light facility in the nearby villages	Management will provide Street light facilities in Nimidha, Haldiabahal ,uparpal villages.	2022-23 2023-24 2024-25	Rs. 4.0 lacs Rs. 4.0 lacs Rs. 4.0 lacs <b>Total Rs. 12 Lacs</b>
5.	Adequate air pollution control measures	In the existing plant all required air emission control measures such as bag filters, ESP, Dust suppression system, covered conveyers have been installed and operated duly complying with the stipulated norms.  In the proposed expansion project following air emission measures will be provided for duly complying with norms stipulated by MOEF&CC /OSPCB: <ul style="list-style-type: none"> <li>• ESPs will be provided to Pellet Plant &amp;DRI Kilns to bring down the particulate emission to less than 30 mg/Nm<sup>3</sup>.</li> <li>• ESP will be provided to Power plant to bring down the particulate emission to less than 30 mg/Nm<sup>3</sup>.</li> <li>• Fume Extraction &amp; Cleaning system with bag filters (<b>PTFE type</b>) will be provided to SMS Units to bring down the particulate matter emission to less than 30 mg/Nm<sup>3</sup>.</li> <li>• All conveyors will be fully covered with GI sheets to control the fugitive dust emission. Interlocking system will be provided to ESP. This will ensure that whenever ESP fails, the raw material feed to the unit will be stopped and will commence production only after ESP is rectified to comply with the norms.</li> <li>• Net resultant Ground level concentrations during operation of the expansion project after superimposing the incremental concentrations over the maximum baseline concentrations are well within the National Ambient Air Quality Standards.</li> <li>• Ash will be stored in silos only.</li> </ul>	2022-24 2024-26 2026-28	Rs. 8.4 Cr Rs. 4.2 Cr Rs. 2.3 Cr <b>Total Rs 14.9 Crores</b>

SNo	Issue raised	Management Response	Time schedule	Budgetary allocation
		<ul style="list-style-type: none"> <li>Greenbelt has been developed in <b>24.6 Ha (60.8 Acres)</b> of land and <b>50,310 nos.</b> of plants are existing. Now it is proposed to develop additional <b>15,000 nos.</b> of plants by <b>October, 2021</b> to further mitigate the emissions.</li> <li>All these environmental protection systems will be installed and operated to comply with the norms. Hence there will not be any significant impact on the environment due to the proposed expansion.</li> </ul>		
6.	Construction of additional room for Haladiabahal village school	Additional rooms will be constructed in Haldiabahal village school.	2022-23	12 Lacs
7.	Provision of drinking water supply to Haladiabahal village	RO plants will be provided in Haldiabahal, Nimidha, Uparpal villages	2022-23 2023-24 2024-25	Rs. 6.5 lacs Rs. 6.5 lacs Rs. 6.5 lacs <b>Total Rs. 19.5 Lacs</b>
8.	Construction of additional class rooms for Nimidha village High school with Teacher	Additional rooms will be constructed in Nimidha village High school.	2023-24	15 Lacs
9.	Repair and maintenance of Lord Shiva Temple of Nimidha village	Repair and maintenance of Lord Shiva Temple of Nimidha village will be taken –up	2023-24	Rs.20 Lacs
10	Adoption of Nimidha village for more CSR development	Adoption of Nimidha Village will be done in Consultation with village panchayat & District Administration.	2022-23 2023-24 2024-25	Rs. 7 lacs Rs. 15 lacs Rs. 15 lacs <b>Total Rs. 37 Lacs</b>
11	Protection of nearby forest.	In the proposed expansion all required environment protection measures such as bagfilters ( <b>PTFE type</b> ), ESPs, Dust suppression system, covered conveyers, mechanical dust sweepers, ZLD system; solid waste disposal as per norms will be followed duly complying with the stipulated norms. Hence there will not be any adverse impact of forest due to the proposed expansion project	2022-24 2024-26 2026-28	Rs. 8.4 Cr Rs. 4.2 Cr Rs. 2.3 Cr <b>Total Rs 14.9 Crores</b>
12	Construction of additional room for Nimidha village High school with Teacher	Additional rooms will be constructed in Nimidha village High school.	2023-24	15 Lacs
13	Pension facility for senior citizen (women).	Company will provide financial assistance to Self Help Groups (SHG) of women and elderly persons of Nimidha, Uperpal & Haladiabahal villages	2022-23 2023-24 2024-25	Rs 6.0 Lacs Rs 6.0 Lacs Rs 6.0 Lacs <b>Total Rs. 18.0 Lacs</b>
14	Provision of Gochar type land to Nimidha	2 Acres of grazing land will be purchased and given.	2023-24	Rs. 20 Lacs



SNo	Issue raised	Management Response	Time schedule	Budgetary allocation
	village			
15	Adequate plantation.	Plantation has already been developed within the plant premises. Additional 15,000 Nos. of plants will be planted by October, 2021.	2022-23	Rs 30 lacs
16	He expressed that MGM Company has acquired 5 acres of land from Sri. Rameswar Baba and till date company has not given any type of assistance to him.	Land has been acquired through IDCO, Govt. of Odisha. Company will certainly assist him in providing some contract work depending on his experience.	---	---
17	Provision for Industrial Training facility for the local people who completed HigherSecondary exam or Matriculation exam.	Every year Company is sponsoring 10 candidates for ITI training through CIPET. Now as part of expansion Skill development center will be established and help the youth in getting placements in our company & other companies also.	2022-23 2023-24 2024-25	Rs. 30 Lacs Rs. 30 Lacs Rs. 30 Lacs <b>Total Rs. 90 Lacs</b>
18	street light facility on village roads	Management will provide 6 nos. of Street lights in Malibida village	2023-24	Rs. 1.5 Lacs
19	drinking water to their village	Mineral water plants will be provided in Malibida village.	2024-25	Rs.6.5 Lacs
20	About one acre of his land also encroached illegally by the company and till date company has not taken any steps to solve his land acquired problem.	No land has been encroached by the company and the land has been acquired through IDCO, Govt. of Odisha.	---	---
21	About 15 Acres of Gochar land also encroached by MGM company. During land acquisition time MGM Company assured to the villagers that they will provide another 15 acres of land outside their industrial area against the villagers Gochar land. Till date no steps taken by this company.	Land has been acquired through IDCO, Govt. of Odisha. There is no Gochar land in the plant area.	---	---
22	Provide necessary assistance towards higher education for the students of Haladiabahal village	Management has proposed to provide scholarships to top 10 Merit students belong to Class-10 of Nimidha, Uparpal & Haldiabahal Villages under CSR.	Every Year	Rs.1.5 Lacs
23	He urged to the company authority to take necessary steps for more CSR work in this area.	Social & infrastructural developmental activities will be taken up as part of expansion.	2022-23 2023-24 2024-25	Rs. 83.5 Lacs Rs. 172 Lacs Rs. 160.5 Lacs <b>Rs. 416</b>

SNo	Issue raised	Management Response	Time schedule	Budgetary allocation
				Lacs
24	He mentioned that there are so many accidents happened on the National Highway where the temple exists adjacent to NH.	Presently expansion of Highway activities is being carried out by the govt. of Odisha. Once the expansion of Highway completed, adequate safety measures will be provided. Awareness programs will be conducted in the villages regarding road safety measures.	---	---
25	He urged to MGM company to provide necessary assistance for develop the temple so that various pujas may be performed daily at various times of the day.	Company assures to provide financial assistance for conducting various pujas every year under CSR activity as per companies act 2014	Every year	Rs 2.0 lacs
26	He demanded to the MGM Company that necessary assistance shall be provided to this temple committee for completion of lighting facility around the temple premises, drinking water supply and development of park adjacent to temple at Balaramprasad Village.	One RO water plant & 8 nos. of Street lighting arrangement will be provided in the temple.	2023-24 2024-25	Rs. 2.0 Lacs Rs. 6.5 Lacs

### **BUDGET ALLOCATED FOR SOCIAL WELFARE ACTIVITIES**

S No	MAJOR ACTIVITY HEADS	YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lacs)	
		1 <sup>st</sup> Year (Rs. in Lacs)	2 <sup>nd</sup> Year (Rs. in Lacs)	3 <sup>rd</sup> Year (Rs. in Lacs)		
<b>A). Based on Need Based &amp; SIA Study</b>						
1	<b>Community &amp; Infrastructure Development Programmes</b>					
	i) Construction of public toilets	<b>Physical Nos. &amp; village</b>	---	3 nos. in Uparpal (V)	1 no. in Haldiabahal (V)	6
		<b>Budget in Lacs</b>	0.0	3	3	
	ii) Providing LED Street lighting with solar panels	<b>Physical Nos. &amp; village</b>	----	16 nos. in Haldiabahal (V)	8 nos. in Uparpal (V) 8 nos. Mermundali (V)	8
		<b>Budget in Lacs</b>	0.0	4	4	
	iii) Relaying of road	<b>Physical Nos. &amp; village</b>	---	1000 m in Uparpal village	1000 m in Haldiabahal village	32
		<b>Budget in Lacs</b>	0.0	16	16	
					<b>Total</b>	<b>46</b>
2	<b>Education</b>					
	i) Providing Sport kits for	<b>Physical Nos. &amp;</b>	----	In Uparpal Village	in Haldiabahal Village	4.0

S No	MAJOR ACTIVITY HEADS		YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lacs)
			1 <sup>st</sup> Year (Rs. in Lacs)	2 <sup>nd</sup> Year (Rs. in Lacs)	3 <sup>rd</sup> Year (Rs. in Lacs)	
	schools	village				
		Budget in Lacs	0.0	2.0	2.0	
	ii). Construction of toilets in surrounding schools & its maintenance	Physical Nos. & village	----	3 nos. in Haldiabahal (V) 3 nos. in Uparpal (V)	3 nos. in Mermundali (V) 3 nos. in Balramprasad (V)	6.0
		Budget in Lacs	0.0	3.0	3.0	
					<b>Total</b>	<b>10</b>
3	Distribution of tricycles for handicapped	Physical Nos. & village	10 nos. of tricycles in Nimidha (V) 10 nos. of tricycles in Uparpal (V)	10 nos. of tricycles in Mermundali (V) 10 nos. of tricycles in Haldiabahal (V)	10 nos. of tricycles in Bhagirathipur (V) 10 nos. of tricycles in Chintapokhari (V)	6.0
		Budget in Lacs	2	2	2	
4	RWH pits in the surrounding villages & De-siltation of ponds	Physical Nos. & village	2 nos. in Primary School, Nimidha Village 2 nos. in Panchayat Office 2 nos. in Govt. upper primary School, Dhalapur Village, 2 nos. in sarswathi shishu mandir, Bhagirathipur Village	Increase of 1.0 m depth in storage due to De-siltation of pond in Nimidha Village (20°45'58.77"N, 85°20'18.88"E) Increase of 1.0 m depth in storage due to De-siltation of pond in Uparpal Village (20°47'25.71"N, 85°20'5.77"E)	Increase of 1.0 m depth in storage due to De-siltation of pond in Haldiabahal Village (20°47'19.03"N, 85°20'52.62"E)	29
		Budget in Lacs	4.0	10	15	
					<b>TOTAL (A)</b>	<b>91</b>
<b>B). Based on Public Consultation/Hearing</b>						
1	Impart training to the local villagers for skill development. a) DISHA Centre" along with necessary infrastructure for various vocational	Physical Nos. & village	Vocational training to unemployed youth 25 nos. from Nimidha (V) 25 nos. from Uparpal (V)	Vocational training to unemployed youth 25 nos. from Haldiaahal (V) 25 nos. from Mermundali (V)	Vocational training to unemployed youth 25 nos. from Balramprasad (V) 25 nos. from Kalusahukateni (V)	90
		Budget in Lacs	30	30	30	

S No	MAJOR ACTIVITY HEADS	YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lacs)	
		1 <sup>st</sup> Year (Rs. in Lacs)	2 <sup>nd</sup> Year (Rs. in Lacs)	3 <sup>rd</sup> Year (Rs. in Lacs)		
	training program for employment generation in association with <i>National Skill Development Mission</i> (Automobile Repair, Welding, Electrical, Computer Hardware, Soft skills like computer programs etc.)					
2	Financial assistance to Self Help Groups (SHG) of women and elderly persons	<b>Physical Nos. &amp; village</b>	Women SHG - 10 groups in Nimidha Village	Women SHG - 10 groups in Uparpal Village	Women SHG - 10 groups in Haldiaahal Village	<b>18</b>
		<b>Budget in Lacs</b>	6	6	6	
3	Strengthening & maintenance of Nimidha Village Road upto High School	<b>Physical Nos. &amp; village</b>	1200 m in Nimidha Village	---	---	<b>18</b>
		<b>Budget in Lacs</b>	18	---	---	
4	Adaptation of Nimidha Village for more CSR development including schools	<b>Physical Nos. &amp; village</b>	Developmental activities in Nimidha Village Gram panchayat such as providing 16 nos. LED Street lights, 3 nos. of Toilets in School & 3 nos. of Toilets in village	Renovation of School building & 3 nos. of class rooms in Nimidha Village	Providing Computer & Library facilities and Furniture in School of Nimidha Village	<b>37</b>
		<b>Budget in Lacs</b>	7	15	15	
5	2 acres of Gochar land to Nimidha Village	<b>Physical Nos. &amp; village</b>	---	2 acres of Gochar land to Nimidha Village	---	<b>20</b>
		<b>Budget in Lacs</b>	0.0	20	0.0	
6	Provision of Better educational facilities with	<b>Physical Nos. &amp; village</b>	Renovation of School building & 3 nos. of class rooms in	Providing School Furniture for 3 nos. of class rooms in	Providing Computer & Library facilities in School of	<b>20</b>

S No	MAJOR ACTIVITY HEADS		YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lacs)
			1 <sup>st</sup> Year (Rs. in Lacs)	2 <sup>nd</sup> Year (Rs. in Lacs)	3 <sup>rd</sup> Year (Rs. in Lacs)	
	additional classrooms for Primary School and High School at Haladiabahal village		Haladiabahal village	Haladiabahal village	Haladiabahal village	
		<b>Budget in Lacs</b>	8	4	8	
7	Renovation of Shiva Temple in Nimidha Village	<b>Physical Nos. &amp; village</b>	----	Renovation of Shiva Temple in Nimidha Village	----	<b>10</b>
		<b>Budget in Lacs</b>	----	10	----	
8	Provision of drinking water facility	<b>Physical Nos. &amp; village</b>	RO plant in Nimidha Village	RO plant in Uparpal Village	RO plant in Haldiaahal Village	<b>19.5</b>
		<b>Budget in Lacs</b>	6.5	6.5	6.5	
9	Plantation development	<b>Physical Nos. &amp; village</b>	1000 plants in Nimidha Village	1000 plants in Uparpal village	1000 plants in Haldiabahal village	<b>6</b>
		<b>Budget in Lacs</b>	2	2	2	
10	Primary Health Centre with Ambulance to Haladiabahal, Nimidha villages	<b>Physical Nos. &amp; village</b>	---	Primary Health Centre with Ambulance facility in Nimidha Village	Primary Health Centre with Ambulance facility in Haladiabahal Village	<b>70</b>
		<b>Budget in Lacs</b>	---	35	35	
11	Provision of drinking water facility, Street lights in Malibida Village	<b>Physical Nos. &amp; village</b>	---	6 nos. Street lights in Malibida Village	RO plant for Drinking water in Malibirha Village	<b>8.0</b>
		<b>Budget in Lacs</b>	---	1.5	6.5	
12	Provision of drinking water facility, Street lights in Balramprasad Village	<b>Physical Nos. &amp; village</b>	---	8 nos. Street lights in Balramprasad Village	RO plant for Drinking water in Balramprasad Village	<b>8.5</b>
		<b>Budget in Lacs</b>	---	2.0	6.5	
				<b>Total (B)</b>	<b>325</b>	
		<b>TOTAL</b>	<b>83.5</b>	<b>172</b>	<b>160.5</b>	<b>416</b>
				<b>Grand Total(A+B)</b>	<b>416</b>	
<b>Recurring expenditures under CSR as per companies Act 2014</b>						
<ul style="list-style-type: none"> <li>Health checkup will be carried out periodically in surrounding villages i.e. Haladiabahal, Uparpal, Nimidha and Ranibania villages @ Rs 5.0 Lacs every year</li> <li>Provision for Ambulance with one regular Doctor @ Rs 5.0 Lacs every year</li> <li>Providing Scholarships to Class 10 Merit Students (Top 15 merit students in Nimidha, Uparpal &amp; Haldiabahal Villages) @ Rs 1.5 Lacs every year</li> </ul>						

S No	MAJOR ACTIVITY HEADS	YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lacs)
		1 <sup>st</sup> Year (Rs. in Lacs)	2 <sup>nd</sup> Year (Rs. in Lacs)	3 <sup>rd</sup> Year (Rs. in Lacs)	
		<ul style="list-style-type: none"> <li>• Providing Monthly salaries to additional teaching staff (5 nos.) in school at Nimidha village @ Rs. 8.0 Lacs every year</li> <li>• Repair &amp; maintenance of Nimidha, Haldiabahal &amp; Uparpal village roads @ Rs. 2.0 Lacs every year</li> <li>• financial assistance for conducting various pujas @ Rs. 2.0 Lacs every year</li> </ul>			

41.10.14 The capital cost of the expansion project is **Rs.677 Crores** and the capital cost for environmental protection measures (including 4.16 crores earmarked for issues raised during public hearing and need based assessment) is proposed as **Rs.28.6436 Crores**. The annual recurring cost towards the environmental protection measures is proposed as **Rs.3.64 Crores**. The employment generation from the proposed expansion project is 1300. The details of cost for environmental protection measures is as follows:

S No	Particulars	Capital Cost (Rs. in Crores)				Recurring Cost /Annum (Rs. in Crores)
		2022-2024	2024-2026	2026-2028	Total	
1.	<b>Air Emission Management</b>	8.4	4.2	2.3	<b>14.9</b>	2.0
2.	<b>Wastewater Management</b>	0.2	0.4	---	<b>0.6</b>	0.50
3.	<b>Solid waste Management</b>	1.35	0.65	0.5	<b>2.5</b>	0.29
4.	Greenbelt development, RWH etc.	0.3	0.1	---	<b>0.4</b>	0.40
5.	Fire Safety Systems	1.0	1.0	---	<b>2.0</b>	0.05
6.	<b>Environmental Monitoring</b>					
	• CAAQMS (already 4 nos. are already existing)	---	---	---	---	0.04
	• CEMS	0.25	0.20	0.05	<b>0.5</b>	0.01
7.	<b>Occupational Health &amp; Safety</b>	0.40	0.25	0.45	<b>1.1</b>	<b>0.35</b>
8	Budget for Social & Infrastructure Development Activities	2.555	1.605	---	<b>4.16</b>	----
	<b>Sub Total</b>	<b>14.455</b>	<b>8.405</b>	<b>3.3</b>	<b>26.16</b>	<b>3.64</b>
9	<b>Budget for</b>	<b>Rs. 2.4836 Crores</b>				---

	<b>Conservation plan</b>	<b>(to be spent over a period of 10 years)</b>	
	<b>GRAND TOTAL</b>	<b>28.6436 Crores</b>	

- 41.10.15 Total Greenbelt (inclusive of existing) will be 60.8 Acres (24.6 Ha.) which is 33.3% of the total project area. 10 m to 145 m wide greenbelt, consisting of 3 tier plantation will be maintained. Local and native species will be planted with a density of 2500 trees per hectare. 50,310 no. of plants are exists till date (survival rate 85%). Other 15,000 nos saplings will be planted by October, 2021.
- 41.10.16 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.
- 41.10.17 Name of the EIA Consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No.129 in the List of ACOs and NABET certificate vide no. NABET/EIA/1922/RA0149 valid till 22-03-2022; Rev. 12, July 09, 2021].

**Certified compliance report from Regional Office**

- 41.10.18 The Status of compliance of earlier E.C. was obtained from Regional Office, Bhubaneswar, Odisha vide letter no. J- 101-296/07/EPE Dated 04-12-2020. The Action taken report (ATR) regarding the partially/non-complied condition was submitted to Regional officer, MoEF&CC, IRO, Bhubaneswar, Odisha vide letter dated 04-02-2021. The present status as furnished by the PP is given as below:

<b>S No</b>	<b>Non-compliance Reported if any</b>	<b>Corrective action taken</b>	<b>Present status</b>
1.	<b>(Specific condition No.i &amp; General Condition No. iv)</b> PAs need to install the three online AAQ monitoring systems and to conduct AAQ monitoring in 4 locations.	PP have installed total 4 nos of online Ambient Air Quality (AAQ) Monitoring Systems. AAQ monitoring is being carried out at 4 locations with the above AAQMS.	Complied
2.	<b>Specific condition No.vii, viii</b> It was observed that water in the form of a nallah was flowing from the rainwater harvesting reservoir to the outside of the project site. PAs informed that excess water from the water reservoir was flowing out. It is recommended that the reservoir capacity may be re-examined and finalized as per the rainfall data.	Water flows out of the reservoir only during the rainy season through a seasonal nallah, When the reservoir is full due to rainfall & surface runoff. The reservoir capacity will be enhanced. In addition to this 2 nos. of rainwater harvesting ponds of size 75 m X 75 m X 8 m & 45 m x 45 m X 3 m which have been constructed will be merged and the total depth for the entire pond will be 8 m.	To be complied by May 2022
3.	<b>Specific condition No. xiii</b> PAs have not submitted the report regarding toxic metal content in the waste material.	Copy of test reports of waste generated (fly-ash) has already been submitted on 04/02/2021. Currently the only waste generated in plant is	Complied

S No	Non-compliance Reported if any	Corrective action taken	Present status
	The same needs to be submitted to the Regional Office.	Fly Ash. TCLP test has been conducted on the same & it has been found that all the parameters are within the permissible limits to be categorized as non-hazardous. A copy of test report is enclosed.	
4.	<b>Specific Condition xiv</b> PAs need to submit information with respect to proper utilization of the remaining amount of fly ash for the two years mentioned	We have been allotted excavated & abandoned Vacant Stone quarry of 4.58 Acres for filling of Fly Ash and reclaiming the land by OSPCB vide Consent order no. 872/2020-2021/RO-SPCB/ANGUL (APC & WPC) dated 25-02-2021. Entire flyash will be filled in the above abandoned stone quarry.	Complied
5.	<b>General Condition No.i</b> CTE is required to be received in the name of M/s MGM Minerals Limited and not in the name of M/s MGM Steels Ltd. CTO is also required to be received in the name of M/s MGM Minerals Limited and not in the name of M/s MGM Minerals Ltd, Steel Division. Hazardous waste authorization letter has been accorded to M/s MGM Minerals Limited, Steel Division. It is required to be received in the name of M/s MGM Minerals Limited and not in the name of M/s MGM Minerals Ltd, Steel Division.	Our submission for clarification for the name in CTE, CTO & Hazardous Waste authorization: The Company MGM Minerals Limited is having two divisions as mentioned below a) MGM Minerals Limited (Steel Division) at Nimidha, Dhenkanal b) MGM Minerals Limited- (Mines Division) at Patabeda, Sundargarh. So for the sake of clarity at all Government offices, we are specifying the particulars of division for which permission is sought. So CTE, CTO & Hazardous Waste authorization for our plant have been obtained in the name of MGM Minerals Limited (Steel Division) to differentiate it from our Mining Operations.	Complied

#### Observations of the Committee

41.10.19 The Committee observed the following:

- i. 254 Trucks shall ply every day. Carrying capacity of roads is not presented in EIA report.
- ii. Nimidha Village is 300 m from site and the forest is adjacent on East side of the plant. Measures to Protect Nimisha forest adjacent to the plant have not been given.



- iii. Details of proposed residential colony and its environmental impacts have not been enumerated in the EIA report. The EIA report does not mention about the colony. Cumulative impact of colony and plant has not been done.

**Recommendations of the Committee**

41.10.20 In view of the foregoing and after deliberations, the Committee deferred the consideration of the proposal and sought for following additional information:

- i. A seasonal nallah passes through the plant site. Scheme to protect the natural drain shall be furnished.
- ii. Traffic study shall be carried out to determine the carrying capacity of the road and submitted.
- iii. 3988 KLD water shall be sourced from Brahmani River. Permission for withdrawal of additional 2445 KLD water (or) application copy along with its present status shall be furnished.
- iv. Action plan to address the observations made in the RO report dated 4/12/2020 shall be submitted.
- v. Nimisha Village is 300 m from site and the forest is adjacent to plant site on East. Scheme to protect the forest and the village shall be furnished.
- vi. Details of residential colony and its impact on project and neighborhood shall be furnished.

41.11 Proposed Greenfield project of Pellet plant of 2,22,750 TPA (3x225 TPD), Sponge Iron Plant of 1,48,500 TPA (DRI Kiln: 3x150 TPD), MS Billets 99,000 TPA (IF: 1x30T) and Captive Power Plant 15 MW (12MW from WHRB and 3 MW from AFBC) by **M/s. Vinayak Metal & Power Private Limited** at Village Akkenapally, Mandal Narketpally, **District Nalgonda, Telangana** [Online Proposal No. IA/TG/IND/220374/2021; file no: IA-J-11011/78/2021-IA-II(I)] – **Prescribing of Terms of Reference**– regarding.

41.11.1 M/s. Vinayak Metal & Power Private Limited has made an application online vide proposal no. IA/TG/IND/220374/2021, dated 16/07/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 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**

41.11.2 The project of M/s. Vinayak Metal & Power Private Limited located at Village Akkenapally, Mandal Narketpally, District Nalgonda, Telangana is for Proposed Greenfield project of Pellet plant of 2,22,750 TPA (3x225 TPD), Sponge Iron Plant of 1,48,500 TPA (DRI Kiln: 3x150 TPD), MS Billets 99,000 TPA (IF: 1x30T) and Captive Power Plant 15 MW (12MW from WHRB and 3 MW from AFBC).

41.11.3 Environmental site settings:

SNo	Particulars	Details	Remarks
i.	Total land	19.68 ha (Private: 19.68 ha), Land is already in possession of the	Land use: Un-irrigated single

SNo	Particulars	Details	Remarks
		management.	croup rain fed Agriculture Land
ii.	Existence of habitation & involvement of R&R, if any.	No Rehabilitation and resettlement (R&R) are required as the proposed project site is not having any habitations.	-
iii.	Latitude and Longitude of the project site	Latitude: 17°17'12.79"– 17°17'34.14" N Longitude: 79°12'54.80" – 79°13'12.35" E	-
iv.	Elevation of the project site	292-302 m MSL	-
v.	Involvement of Forest land if any	No forest Land involved,	-
vi.	Water body exists within the project site as well as study area	<b>Project Site:</b> Nil. <b>Study area</b> Asif Nehar canal– 1.2km/ North Musi River– 7.4km/ NW	-
vii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve etc. if any within the study area	Nil,	-

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

S. No	Production Unit	Product	Plant Configuration	Production Capacity
1.	Pellet Plant	Pellets	3 x 225 TPD	222750 TPA
2.	DRI Kilns	Sponge Iron	3 x 150 TPD	148500 TPA
3.	Steel Melting Shop	MS Billets	Induction Furnace: 1 x 30 TH	99000 TPA
<b>Power Plant</b>				
4.	WHRB	Electricity	1 x 12 MW	12 MW
	AFBC	Electricity	1 x 3 MW	3 MW
<b>* Waste heat recovery Boiler (WHRB), TH – Tons for heat, TPD- Tons per day.</b>				

41.11.5 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	Description	Quantity, TPA	Source	Distance from site (Km)	Mode of Transportation
1.	Iron Ore	2,45,025	From local	<200	By Road (Covered

S No	Description	Quantity, TPA	Source	Distance from site (Km)	Mode of Transportation
			Mine leases		Trucks)
2.	Iron ore Pellets	2,22,750	In plant generation	-	By Covered Conveyor
3.	Bentonite	17,820	Rajasthan / Gujarat	1000 km	By rail & road (through covered trucks)
4.	Sponge Iron	1,48,500	In plant generation	-	By Conveyor
5.	Coal	1,75,236	Imported coal,	250	Through sea route, rail route & by road (through covered trucks)
6.	Limestone	14,850	From local Mine leases	<100	By Road (Covered Trucks)

41.11.6 The water requirement for the project is estimated as 495 KLD, out of which 430 KLD of fresh water requirement will be obtained from the Ground water and the remaining requirement of 65 KLD will be met from the recycled water in ZLD system. The permission for drawl of Ground water from CGWA/SWGA will be obtained. The effluent generated from DRI kilns units will be recycled with closed loop cooling water system. Sanitary wastewater / sewage generated will be treated in STP. Garland drains will be provided around all the raw material stacking areas. Zero Liquid effluent discharge system will be maintained in the proposed project. Rain water harvesting ponds shall also be developed for enhancing water conservation majors.

41.11.7 The power requirement for the proposed project will be about 18.0MW, out of which 15MW will be obtained from the Captive Power plant (i.e 3 x 4 MW WHRB and 1 x 3 MW AFBC) and remaining 3 MW power will be sourced from TSTRANCSCO. 3x750 KVA DG sets will be installed to meet the emergency power requirement.

41.11.8 The quantity of wastes to be generated (liquid and solid) and scheme for their management/disposal is as follows:

Description	Unit	Quantity	Remarks
Char and Dolochar	TPA	31,300	Sent to AFBC boiler
Iron ore / iron oxides	TPA	10,500	Reused in the process/sold to cement plants
Dust from ESP and bag filters from DRI Plant	TPA	19,000	Reused/Sold to brick manufacturers
Fly ash from AFBC process	TPA	27,632	Sold to brick manufacturers
Slag	TPA	20,000	Used as building construction material/Robo sand making
Used oil	KL/ yr	8	Shall be used for oiling conveyor idlers, rollers / sold to authorized recyclers.

Description	Unit	Quantity	Remarks
Used Batteries	Nos./year	15	Sent to authorized recyclers

Note:

\*All the solid wastes are subjected to TCLP test to ascertain that it is non-hazardous, before disposal.

\* Slag Storage area shall be provided with a stable liner of bentonite and PCC bed, and garland drain connected to a settling tank.

41.11.9 The capital cost of the project is Rs. 140.0 Crores and the capital cost for environmental protection measures is proposed as Rs.17.50Crores. The employment generation from the proposed project is 250through direct employment and 150 nos. through indirect employment.

41.11.10 Proposed Terms of Reference (**Baseline data collection period: March to May, 2021**):

Attributes	Sampling		Remarks
	No. of stations	Frequency	
A. Air			
a. Meteorological parameters	1	On hourly basis for one season	<ul style="list-style-type: none"> <li>• Wind speed,</li> <li>• Wind direction,</li> <li>• Temperature,</li> <li>• Relative Humidity,</li> <li>• Pressure,</li> <li>• Solar radiation,</li> <li>• Cloud cover,</li> <li>• Rainfall, etc</li> </ul>
b. AAQ parameters	8	24 hourly Twice a week for One Season	<ul style="list-style-type: none"> <li>• Particulate Matter (PM<sub>10</sub>, PM<sub>2.5</sub>),</li> <li>• Sulphur Dioxide (SO<sub>2</sub>),</li> <li>• Oxides of Nitrogen (NO<sub>x</sub>)</li> <li>• Carbon Monoxide (CO) etc.</li> </ul>
B. Noise	8	On hourly basis for 24 Hrs. at each station	Parameters Monitored: <ul style="list-style-type: none"> <li>• Day equivalent</li> <li>• Night equivalent</li> </ul>
C. Water			
a. Surface water	4	One sample at each of the locations	Parameters Monitored: as per IS: 2296
b. Ground water	8	One sample at each of the locations	Parameters Monitored: as per IS: 10500
D. Land			
a. Soil quality	8	One sample at each of the locations	Parameters Monitored: Texture, infiltration rate, Porosity, SAR, bulk density, pH, Ca, Mg, Na, K, Zn, Mn
b. Land Use	Study area		LU map will be prepared
E. Biological	Study area	Once in Season	
a. Aquatic			

Attributes	Sampling		Remarks
	No. of stations	Frequency	
b. Terrestrial			
F. Socio-economic parameters	Study area	Once in Season	Social Impact Assessment

41.11.11 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.

41.11.12 Name of the EIA Consultant: M/s. Team Labs and Consultants [S. No. 139, Certificate No. NABET/EIA/1821/SA 0114, Valid Up to 24<sup>th</sup> September, 2021; Rev. 12, July 09, 2021].

41.11.13 M/s. Vinayak Metal and Power Pvt. Ltd has earlier made an application online vide proposal no. IA/TG/IND/199603/2021 dated 06/03/2021. The proposal was considered by EAC (Industry 1) in its 32<sup>nd</sup> meeting of the Re-constituted EAC (Industry-I) held on 15-17<sup>th</sup> March, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee held on 15-17<sup>th</sup> March, 2021**

41.11.14 The EAC noted the following:

- i. Form I has been filled with generic information and no project specific quantities have been provided and as such no inference could be drawn for taking decision on grant of ToR.
- ii. Action plan for dolochar utilization from DRI unit has not been furnished.
- iii. Diversion plan for the road passing through the plant has not been furnished

**Recommendation of the Committee held on 15-17<sup>th</sup> March, 2021**

41.11.15 In view of the foregoing and after detailed deliberations, the committee recommended to the return the proposal in its present form to address the shortcomings as enumerated above.

41.11.16 PP has again made an application online vide proposal no. IA/TG/IND/212056/2021, dated 12/05/2021. The proposal was considered by the EAC (Industry 1) in its 37<sup>th</sup> meeting held on 31<sup>st</sup> May- 1<sup>st</sup> June, 2021. The observations and recommendations of EAC are given as below:

**Observations of the Committee held on 31<sup>st</sup> May- 1<sup>st</sup> June, 2021**

41.11.17 The EAC noted the following:

- i. A 14 TPH steam boiler has been proposed to use dolochar produced in the plant. Committee is of the opinion that there is scope of generating minimum 6-7 MW power by using dolochar generated in the complex.
- ii. Three units of Pellet plant are proposed having a capacity of 225 TPD. This is not an environment friendly proposal and is likely to result in more consumption of raw material, coal, energy and other resources. A comparative chart of two scenarios ie 3x225 TPD and 1x675 TPD Pellet Plant has not been made available for decision making.
- iii. 490 KLD ground water shall be abstracted from Ground. PP has not explored Surface Water sources for tapping water in nearby areas.

- iv. Dust emission has been proposed 50 mg/Nm<sup>3</sup> and SO<sub>2</sub> and NO<sub>x</sub> also as 50 mg/Nm<sup>3</sup>.
- v. Detail shall be submitted regarding road to be developed and widening to the approach project site from main road.
- vi. PP shall provide the distance and direction along with mention the downwind and upwind for the sampling locations.
- vii. PP shall provide the wind-rose diagram on the basis of last five years meteorological data.

**Recommendations of the Committee held on 31<sup>st</sup> May- 1<sup>st</sup> June, 2021**

- 41.11.18 In view of the foregoing and after deliberations, the Committee recommended to return the proposal in its present form for addressing the observations of EAC as enumerated at para 41.11.17.
- 41.11.19 PP has again made an application online vide proposal no. IA/TG/IND/220374/2021, dated 16/07/2021. The proposal was considered by the EAC (Industry 1) in its 41<sup>st</sup> meeting of the Re-constituted EAC (Industry-I) held on 29-30<sup>th</sup> July, 2021. The observations and recommendations of EAC is given as below

**Observations of the Committee**

- 41.11.20 The EAC noted the following:
- i. PP will be running CFBC boiler at 80:20 dolo and Coal. This results in combined coal CV of 2700 Kcal/kg. Increase in coal input to 60:40 will improve CV and also increase power input as practiced by most CFBC plants using dolo char.
  - ii. 60 feet wide road from plant to highway will be constructed by project proponent.
  - iii. Sampling locations shall be based on IMD wind rose as per CPCB guidelines.

**Recommendations of the Committee**

- 41.11.21 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. Action plan to limit the particulate matter emission from the stacks below 30 mg/Nm<sup>3</sup> shall be furnished.
  - ii. Action plan for fugitive emission control in the plant premises shall be provided.
  - iii. Action plan for green belt development covering 33% of the area shall be submitted all along the periphery of the plant site.
  - iv. Action plan for rain water harvesting shall be submitted.
  - v. Stock piles shall be on impervious floor, with garland drains and catch pits to trap run off material.
  - vi. Action plan for gradual shifting from 430 KLD groundwater usage to surface water shall be submitted.
  - vii. Action plan for construction and maintenance 60 ft wide road from plant to highway shall be submitted.
  - viii. Air cooled condenser shall be provided in the power plant.
  - ix. Traffic study shall be carried out and scheme to strengthen village roads shall be furnished.
  - x. Action plan for 100% solid waste utilization shall be submitted.
  - xi. Scheme for treatment of effluent from Rolling Mill shall be submitted.

41.12 Establishment of Iron ore beneficiation of 1.5 MTPA capacity, Pellet Plant of 1.2 MTPA capacity, 3 x 600 TPD DRI Kilns to produce 5,94,000 TPA of Sponge Iron, 8 x 20 T of Induction Furnaces with matching LRF & CCM to produce 4,22,400 TPA of Billets / Ingots / Hot Billets, 1x1000 TPD of Rolling Mill to produce 3,30,000 TPA of TMT Bars / Structural Steel, 2 x 18 MVA of Ferro Alloy Unit to produce FeSi- 30,000 TPA / FeMn 95,040 TPA / SiMn-64,800 TPA/ FeCr-64,800 TPA/ Pig Iron- 95,040 TPA), WHRB based Power Plant - 45 MW & CFBC based Power Plant – 20 MW by **M/s. Vrajesh Steels Private Limited** located at Kohadiya Village, Berla Tehsil, **Bemetara District, Chhattisgarh** [Online Proposal No. IA/CG/IND/220835/2021; file no: IA-J-11011/287/2021-IA-II(I)] – **Prescribing of Terms of Reference**– regarding

41.12.1 M/s. Vrajesh Steels Private Limited has made an application online vide proposal no. IA/CG/IND/220835/2021, dated 19/07/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 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**

41.12.2 The project of M/s. Vrajesh Steels Private Limited located at Kohadiya Village, Berla Tehsil, Bemetara District, Chhattisgarh is for Establishment of Iron ore beneficiation of 1.5 MTPA capacity, Pellet Plant of 1.2 MTPA capacity, 3 x 600 TPD DRI Kilns to produce 5,94,000 TPA of Sponge Iron, 8 x 20 T of Induction Furnaces with matching LRF & CCM to produce 4,22,400 TPA of Billets / Ingots / Hot Billets, 1x1000 TPD of Rolling Mill to produce 3,30,000 TPA of TMT Bars / Structural Steel, 2 x 18 MVA of Ferro Alloy Unit to produce FeSi- 30,000 TPA / FeMn 95,040 TPA / SiMn-64,800 TPA/ FeCr-64,800 TPA/ Pig Iron- 95,040 TPA), WHRB based Power Plant - 45 MW & CFBC based Power Plant – 20 MW.

41.12.3 Environmental site settings:

S No	Particulars	Details	Remarks
i.	Total Land	38.17 hectares. (94.32 Acres).	<b>38.17 Ha.</b> (94.32 Acres) of land is envisaged for the proposed project and the management have already acquired about <b>33 acres</b> of land.
ii.	Existence of habitation & involvement of R & R, if any	No habitation exists in project site; Hence no R & R is involved.	---
iii.	Latitude and Longitude of the project site	Latitude from 21°20'58.11"N to 21°21'17.49"N Longitude from 81°31'4.08"E to 81°31'35.99"E	---

S No	Particulars	Details	Remarks																
iv.	Elevation of the project site	285 m to 291 m AMSL	---																
v.	Involvement of Forest land, if any	Nil	---																
vi.	Water body exists within the project site as well as study area	<p><b>Project site:</b> Nil</p> <p><b>Study area:</b></p> <table border="1"> <thead> <tr> <th>Water Body</th> <th>Distance</th> </tr> </thead> <tbody> <tr> <td>Canal</td> <td>Adjacent-West</td> </tr> <tr> <td>Kharun River</td> <td>3.5 Kms</td> </tr> <tr> <td>Lor Nala</td> <td>4.5 Kms</td> </tr> <tr> <td>Kohadiya Village Pond</td> <td>0.12 Kms</td> </tr> <tr> <td>Gudheli Village Pond</td> <td>2.5 Kms</td> </tr> <tr> <td>Kapsada Village pond</td> <td>5.7 Kms</td> </tr> <tr> <td>Mermunda Village pond</td> <td>6.5 Kms</td> </tr> </tbody> </table> <p>Few seasonal nalas, ponds exist within the study area</p>	Water Body	Distance	Canal	Adjacent-West	Kharun River	3.5 Kms	Lor Nala	4.5 Kms	Kohadiya Village Pond	0.12 Kms	Gudheli Village Pond	2.5 Kms	Kapsada Village pond	5.7 Kms	Mermunda Village pond	6.5 Kms	---
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Gudheli Village Pond	2.5 Kms																		
Kapsada Village pond	5.7 Kms																		
Mermunda Village pond	6.5 Kms																		
vii.	Existence of ESZ/ESA/National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve/ Elephant Reserve etc. if any within the study area	Nil	---																
viii.	Forest within the study area	None within 10 Km Radius.	--																

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

S No	Units (Products)	Plant Configuration	Production Capacity
1.	Iron ore Beneficiation (Beneficiated ore)	1 x 1.5 MTPA	1.50 MTPA (throughput)
2.	Pellet Plant (Pellet)	1 x 1.2 MTPA	1.2 MTPA
3.	DRI Kilns (Sponge Iron)	3 x 600 TPD	5,94,000 TPA
4.	Induction Furnace (Billets / Ingots / Hot Billets)	8 x 20 T	4,22,400 TPA
5.	Rolling Mill (TMT bars / Structural Steel) (85 % Hot charging with Hot Billets and remaining 15% through RHF)	1 x 1000 TPD	3,30,000 TPA



S No	Units (Products)	Plant Configuration	Production Capacity
	with LDO as fuel)		
6.	Ferro Alloys Unit (FeSi / FeMn / SiMn / FeCr / Pig Iron)	2 x 18 MVA	FeSi-30,000 TPA / FeMn-95,040 TPA / SiMn-64,800 TPA / FeCr-64,800 TPA/ Pig Iron- 95,040 TPA
7.	Power Plant (65 MW)	WHRB Power Plant	3 x 15 MW 45 MW
		CFBC Power Plant	1 x 20 MW 20 MW

41.12.5 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)	Sources	Distance from site (in Km)	Mode of Transport	
1.	<b>For Iron Ore Beneficiation Plant (15,00,000 TPA)</b>					
a)	Iron ore fines	15,00,000	Chhattisgarh / Orissa	~ 600 Kms.	By rail & road (through covered trucks)	
2.	<b>For Pellet Plant (Pellets) –12,00,000 TPA</b>					
a)	Iron Ore Concentrate	12,00,000	Own generation / Chhattisgarh / Orissa	---	Through covered conveyers	
b)	Bentonite	9,600	Gujarat	~ 600 Kms.	By rail & road (through covered trucks)	
c)	Lime powder	48,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)	
d)	Anthracite Coal	52,800	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)	
	(OR) LDL /LSHS	16,000 KL	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)	
3.	<b>For DRI Kilns (Sponge Iron) – 5,94,000 TPA</b>					
a)	Pellets (100 %)	8,91,000	Own generation / Chhattisgarh / Orissa	---	Through covered conveyers	
	or					
b)	Iron ore (100%)	9,50,400	Barbil, Orissa NMDC, Chhattisgarh	~ 500 Kms.	By rail & road (through covered trucks)	
c)	Coal	Indian	7,72,200	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
		Imported	4,94,200	Indonesia /	~ 600 Kms.	Through sea

S No	Raw Material	Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport	
			South Africa / Australia	(from Vizag Port)	route, rail route & by road (through covered trucks)	
d)	Dolomite	29,700	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)	
4.	<b>For Steel Melting Shop (Billets/ Ingots/Hot Billets) – 4,22,400 TPA</b>					
a)	Sponge Iron	4,27,000	Own generation / Chhattisgarh	---	Through covered conveyers	
b)	MS Scrap / Pig Iron	63,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)	
c)	Ferro alloys	21,000	Own generation / Chhattisgarh	---	By road (through covered trucks)	
5.	<b>For Rolling Mill through Hot charging (Rolled Products) – 3,30,000 TPA</b>					
a)	Hot Billets / Billets / Ingots	3,49,000	Own generation	---	----	
b)	LDO / LSHS	1600 KI/annum	Nearby IOCL Depot	~ 100 Kms.	By road (through Tankers)	
6.	<b>For CFBC Boiler [Power Generation 20MW]</b>					
a)	Indian Coal (100 %)	1,21,500	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)	
	<b>OR</b>					
b)	Imported Coal (100 %)	77,760	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)	
	<b>OR</b>					
c)	Dolochar + Indian Coal	Dolochar	1,18,800	In plant generation	---	through covered conveyors
		Indian Coal	62,100	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	<b>OR</b>					
d)	Dolochar + Imported Coal	Dolochar	1,18,800	In plant generation	---	through covered conveyors
		Indian Coal	39,745	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
7.	<b>For Ferro Alloys (2 x 18 MVA)</b>					
6 (i)	<i>For Ferro Silicon – 30,000 TPA</i>					
a)	Quartz	45,600	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)	
b)	LAM coke	7,050	Andhra	~ 500 Kms.	By road (through	

S No	Raw Material	Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport
			Pradesh		covered trucks)
c)	Mill scales	1,050	Inhouse Generation	---	By road (through covered trucks)
d)	MS Scrap	16,800			
e)	Electrode paste	600	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Bagfilter dust	1,140	Own generation	---	---
6 (ii)	<i>For Ferro Manganese – 95,040 TPA</i>				
a)	Manganese Ore	2,16,200	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	LAM coke	34,690	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Dolomite	16,150	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS Scrap / Mill scales	14,250	Inhouse Generation	---	By road (through covered trucks)
e)	Electrode Paste	1,230	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Bagfilter dust	4,750	Own generation	---	---
6 (iii)	<i>For Silico Manganese – 64,800 TPA</i>				
a)	Manganese Ore	1,05,620	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	LAM Coke	24,300	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	FeMn. Slag	55,080	In house generation	---	----
d)	Dolomite	14,580	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
e)	Electrode paste	1,300	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Quartz	15,550	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
g)	Bagfilter dust	970	Own generation	---	---
6 (iv)	<i>For Ferro Chrome – 64,800 TPA</i>				
a)	Chrome Ore	1,29,600	Sukinda, Odisha	~ 500 Kms. ~ 600 Kms.	By road (through covered trucks) From Port By

S No	Raw Material	Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport
			Import, South Africa	(from Vizag Port)	Road (through covered Trucks)
b)	LAM Coke	21,380	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Quartz	11,340	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS Scrap / Mill Scale	9,720	Inhouse Generation	---	By road (through covered trucks)
e)	Magnetite / Bauxite	10,950	Chhattisgarh / Maharashtra	~ 500 Kms.	By road (through covered trucks)
f)	Electrode Paste	1,950	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
g)	Bagfilter dust	4,150	Own generation	---	---
6 (iv)	<i>For Pig Iron – 95,040 TPA</i>				
a)	Iron ore / Sinter	1,40,180	Barbil, Odisha NMDC, Chhattisgarh	~ 500 Kms.	By road (through covered trucks)
b)	LAM Coke	46,090	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Dolomite	11,880	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	Quartz	5,700	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
e)	Bagfilter dust	2,850	Own generation	---	---

41.12.6 Water consumption for the proposed project will be 5,200 KLD, Water required for proposed project will be sourced from Kharun River (which is at a distance of 3.5 Kms. from the project site). Water drawl permission Water Resource Department, Chhattisgarh will be obtained.

41.12.7 Power required for the proposed project will be 101.7 MW and same will be sourced from Captive Power Plant (65 MW) and remaining 36.7 MW from State Grid.

41.12.8 The capital cost of the project is **Rs. 922 Crores**. Employment generation from proposed project will be 350 nos. through direct employment and 500 nos. through indirect employment.

41.12.9 Proposed Terms of Reference (**Baseline data collection period: 1<sup>st</sup> October, 2021 to 31<sup>st</sup> December, 2021**):

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
<b>A. Air</b>			
a. Meteorological parameters	1	On hourly basis for one season	<ul style="list-style-type: none"> <li>• Wind Speed</li> <li>• Wind Direction</li> <li>• Temperature</li> <li>• Relative Humidity</li> <li>• Rainfall</li> </ul>
b. AAQ parameters	8	24 hourly Twice a week for 3 months (One Season)	Parameters to be Monitored: <ul style="list-style-type: none"> <li>• PM<sub>10</sub>,</li> <li>• PM<sub>2.5</sub>,</li> <li>• SO<sub>2</sub>,</li> <li>• NO<sub>x</sub>,</li> <li>• CO</li> </ul>
<b>B. Noise</b>	8	On hourly basis for 24 Hrs. at each station	Parameters to be Monitored: <ul style="list-style-type: none"> <li>• Day equivalent</li> <li>• Night equivalent</li> </ul>
<b>C. Water</b>			
a. Ground Water	8	One sample at each of the locations	Parameters will be Monitored: as per IS: 10500
b. Surface Water	5	One sample at each of the locations	Parameters will be Monitored: as per BIS: 2296
<b>D. Land</b>			
a. Soil quality	8	One sample at each of the locations	Parameters will be Monitored: Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn
b. Land use	--	--	LU map will be prepared by concerned FAE for study area
<b>E. Biological</b>			
a. Aquatic	--	Once in Season	---
b. Terrestrial	--	Once in Season	---
<b>F. Socio economic parameters</b>	--	Once in Season	Social Impact Assessment will be carried out by concerned FAE for study area
<b>G. Traffic Density</b>	--	Once in Season	Vehicular traffic study will be carried out at Transportation route.

- 41.12.10 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.
- 41.12.11 Name of the EIA Consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd [S. No. 129, Certificate No. NABET/EIA/1922/RA0149 valid till 22-03-2022; Rev. 12, July 09, 2021].

**Observations of the Committee**

- 41.12.12 The EAC noted that the site proposed for the project is an agricultural land and the project proponent does not have any credible document indicating the site under consideration has been allotted for industrial activity. Further, project proponent has also not carried out an alternate site analysis properly because two sites indicated by the PP were not having sufficient area and, therefore, these two suggested sites were not comparable.

**Recommendations of the Committee**

- 41.12.13 In view of the foregoing and after detailed deliberations, the Committee opined that the site selection for the proposed plant needs further detailing from the point of view of suitability of the site for the proposed 1 MTPA integrated steel plant. In view of this, the Committee recommended that proposal to be returned in its present form to address the shortcomings.

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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 30<sup>th</sup> 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<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, 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).

The following general points shall be noted:

- 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 4<sup>th</sup> 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 (QCI)/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<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> 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<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> 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 charging, 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 its 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**

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**Re: DRAFT MOM OF 41 EAC HELD ON 29-30TH JULY, 2021**

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**From :** cnpandey@iitgn.ac.in Fri, Aug 06, 2021 01:08 PM  
**Subject :** Re: DRAFT MOM OF 41 EAC HELD ON 29-30TH JULY, 2021 📎 1 attachment  
**To :** Sundar Ramanathan <r.sundar@nic.in>

Dear Mr. Sundar,  
The MoM for the 41st EAC meeting is approved and enclosed herewith. Please take further necessary action for uploading this on Parivesh.  
With best wishes,  
C. N. Pandey,  
Chairman, EAC (Industry I), MoEFCC