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

Summary record of the Thirty Seventh (37th) meeting of Re-Constituted Expert Appraisal Committee (REAC) held on 31st May, 2021 - 1st June, 2021 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.

The Thirty Seventh 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 **31st May, 2021 - 1st June, 2021** in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the ongoing Corona Virus Disease (Covid-19) pandemic. The list of EAC attendees is as follows:

S. No.	Name	Position	31/05/2021	01/06/2021
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	Present
6.	Dr. G.V. Subramanyam	Member	Present	Present
7.	Shri. Ashok Upadhyaya	Member	Present	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present	Present
9.	*Dr. Sanjay Deshmukh*	*Member*	*Absent*	*Absent*
10.	Prof. S.K. Singh	Member	Present	Absent
11.	*Dr. R. Gopichandran*	*Member*	Absent	Absent
12.	Shri Jagannadha Rao Avasarala	Member	Present	Present
13.	Shri. J.S. Kamyotra	Member	Present	Present
Officials from MoEF&CC				
14.	Shri. Sundar Ramanathan	Member Secretary	Present	Present
15.	Dr. Mahendra Phulwaria	Scientist 'C'	Present	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 36th meeting held during 18-19th May, 2021 were confirmed by the EAC as already uploaded on PARIVESH.

31st May, 2021

37.1 Proposed Installation of Sponge Iron Plant (4x100 TPD Kilns), Induction Furnaces (3x20 T), 1,40,000 TPA capacity Rolling Mill along with 16 MW capacity Captive Power Plant (8 MW WHRB based & 8 MW AFBC based, utilization waste heat & dolochar from the proposed sponge plant) and 1,00,000 TPA Cement Grinding Unit of **M/s. BRGD Sponge & Iron Pvt. Ltd.** located at Village Janardandih, Mouza Erekusum and Khoar, P.S. Naturia, **District Purulia, West Bengal** [Online Proposal No. IA/WB/IND/72262/2018; File No. J-11011/65/2018- IAII(I)] **– Reconsideration for grant of Environment Clearance based on ADS reply –** regarding.

37.1.1 M/s. BRGD Sponge & Iron Private Limited has made an online application vide proposal no. IA/WB/IND/72262/2018 dated 2/12/2019 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) and 3(b) Cement plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central level.

Details submitted by Project proponent

37.1.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
13/01/2018	28th meeting of Re-constituted Expert Appraisal Committee (Industry-I), held on 12-14th March, 2018	Terms of Reference	27/03/2018

37.1.3 The project of M/s. BRGD Sponge & Iron Private Limited located at Village Janardandih, Mouza Erekusum and Khoar, P.S. Naturia, Dist. Purulia, West Bengal is for Proposed Installation of Sponge Iron Plant (4x100 TPD Kilns), Induction Furnaces (3x20 T), 1,40,000 TPA capacity Rolling Mill along with 16 MW capacity Captive Power Plant (8 MW WHRB based & 8 MW AFBC based, utilization waste heat & dolochar from the proposed sponge plant) and 1,00,000 TPA Cement Grinding Unit.

37.1.4 Environmental Site Settings:

S No	Particulars	Details
i.	Total land	14.16 ha [Private: 14.16 ha]
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	14.16 ha land acquired and under the possession of the project proponent.
iii.	Existence of habitation & involvement of R&R, if any	Not Applicable
iv.	Latitude and Longitude of the project site	Latitude: 23°36'24.73"N to 23°36'41.88"N Longitude: 86°47'10.94"E to 86°47'24.40"E
V.	Elevation of the project site	143 m (470 ft)
vi.	Involvement of Forest land if any.	Nil

S No	Particulars	Details
vii.	Water body exists within the project site as well as study area	**Project site:** None **Study area** Damodar River - 9.0 km/NE
viii.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area	Nil

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

Sl. No.	Name	Configuration of Proposed Units	Production (TPA)
1.	Sponge Iron Plant	4x100 TPD DRI Kilns	1,20,000 TPA Sponge Iron
2.	Induction Furnaces with matching LRF & CCM	3x20 T	1,45,800 TPA Billets
3.	Rolling Mill	1,40,000 TPA	1,40,000 TPA TMT Bars, Strips & Structural
4.	Cement Grinding Unit	1,00,000 TPA	1,00,000 TPA Cement (100% PPC or PSC)
5.	Captive Power Plant	16 MW (8 MW WHRB based & 8 MW AFBC based)	16 MW Power

37.1.6 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
A) DRI PLANT (4x100 TPD):					
1.	Pellet / Iron Ore	2,00,000	Market		Rail
2.	Imported Coal	1,36,000	South Africa		Rail
3.	Dolomite	6,900	Market		Road
B) INDUCTION FURNACES (3X20 T) :					
1.	Sponge Iron	1,20,000	In House DRI Plant		-
2.	Scrap	30,000	Market		Road
3.	Pig Iron	30,000	Market		Road
4.	Ferro Alloys	1,550	Market		Road
C) CAPTIVE POWER PLANT (8.0 MW BASED ON AFBC BOILER) :					
1.	Imported Coal	20,000	South Africa		Rail
2.	Dolochar	30,000	In House DRI Plant		-
D) CEMENT GRINDING UNIT (1,00,000 TPA):					
i) 100% Portland Pozzolana Cement (PPC)					

1.	Clinker	62,500	Satna, Meghalaya (Star Cement), Madhya Pradesh (JP Cement, Prism Cement, Orient Cement)		Rail / Road
2.	Gypsum	2,500	Bikaner / Nagaur region, Rajasthan and Tata Chemicals, Paradeep (IFCO & PPL), Haldia		Rail / Road
3.	Fly Ash	35,000	In-house, Power Plant of DVC, Andal		Rail / Road
ii) 100% Portland Slag Cement (PSC)					
1.	Clinker	32,500	Satna, Meghalaya (Star Cement), Madhya Pradesh (JP Cement, Prism Cement, Orient Cement)		Rail / Road
2.	Gypsum	2,500	Bikaner / Nagaur region, Rajasthan and Tata Chemicals, Paradeep (IFCO & PPL), Haldia		Rail / Road
3.	Slag (15% Moisture)	65,000	Durgapur Steel Plant, Neo Metallic, Durgapur, Tata Steel, Jamshedpur, Tata Metallic, Kharagpur and local steel plants		Rail / Road

37.1.7 The water requirement for the project is estimated as 414 m^3 /day which will be obtained from DVRRC. The permission for drawl of groundwater/ surface water is obtained from DVRRC vide Lr. No. MD/DVRR/W-6(144)/2020/1469-74 dated 07.01.2021.

37.1.8 The power requirement for the project is estimated as 29 MW, which will be obtained from DVC (Damodar Valley Corporation) and 16 MW capacity Captive Power plant.

37.1.9 Baseline Environmental Studies:

Period	March – May, 2018. Baseline data was again revalidated by collecting fresh data during December, 2020 – February, 2021.
AAQ parameters at 9 locations	$PM_{2.5}$ = 18 to 42 µg/m^3 PM_{10} = 50 to 90 µg/m^3 SO_2 = 4 to 16 µg/m^3 NO_2 = 9 to 38 µg/m^3 CO = 0.158 to 1.245 mg/m^3

AAQ modelling (Incremental GLC)	PM = 3.517 µg/m^3 SO_2 = 2.36 µg/m^3 NO_x = 2.36 µg/m^3
Ground water quality at 9 locations	pH: 6.69 to 7.62, Total Hardness: 154 to 224 mg/l, Chlorides: 64 to 172 mg/l, Fluoride: 0.18 to 0.43 mg/l. Heavy metals are within the limits.
Surface water quality at 10 locations (Fresh assessment of surface water quality has been carried out on 04/02/2020)	**Damodar River** pH: 7.12 & 6.97; DO: 7.4 & 7.2 mg/l and BOD: 2 mg/l; COD: 8 mg/l **Pond Water** pH: 6.49 to 7.5; DO: 6.4 to 7.2 mg/l and BOD: 3 to 6 mg/l. COD : 12 to 28 mg/l
Noise levels	54.8 - 66.6 L_{eq} in dB(A) for the Day time and 46.0 - 55.2 L_{eq} in dB(A) for the Night time.
Traffic assessment study findings	Existing Load: 3394 PCU per day Total Load after Expansion: 3592 PCU per day As per IRC: 64-1990 code, a Two Lane road in Plain terrain can accommodate vehicular traffic load of 15000 PCU per day. SH-5 Road is two lanes road with approx. 6 m width and can well accommodate existing traffic load along with the additional load due to the project of M/s BRGD Sponge & Iron Private Limited.
Flora and fauna	There is no presence of schedule I fauna in the study area.

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

S. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment / Disposal
1	Dolochar	Sponge Iron Plant	30,000	To be used in AFBC Boiler.
2	Dust and Slag	Induction Furnaces	17,000	To be used for Land filling / Road Construction purpose / paver block making.
3	End Cuts, Scale & Scrap	CCM & Rolling Mill	5,800	To be used in Induction Furnace.
4	Fly Ash	Captive Power Plant	7,600	To be used as raw materials in proposed cement plant / brick manufacturers in the neighbourhood.
5	Bottom Ash	Captive Power Plant	1,900	To be used for land filling / road construction purpose.

37.1.11 Public Consultation:

Details of advertisement given	7th December, 2018

Date of public consultation	10th January, 2019
Venue	"Sampriti Bhawan", Sarbari More, Neturia Block, Dist. - Purulia, West Bengal
Presiding Officer	Shri Naba Kumar Burman, Additional District Magistrate, Purulia
Major issues raised	• Abatement of pollution from process activities. • Improvement of health facilities of the surrounding people. • Safety system of the employees to be engaged in the proposed plant. • Education facilities and Skill development for the villagers. • Generation of employment from the proposed project for local villagers. • Drinking water facilities for the villagers. • Development and maintenance of Road in the surrounding areas.

Point-wise Action plan as per MoEF&CC O.M. dated 30/9/2020

Concerns raised during public hearing	**Physical activity and action plan**	**Particulars**	**YEAR OF IMPLEMENTATION**		
			1st Year	**2nd Year**	**3rd Year**
• Abatement of pollution from process activities.	Adequate control measures like installation of Electrostatic Precipitator (ESP), bag filters, dust suppression system and stacks of adequate height at relevant points. <u>To control Fugitive Emissions</u>: • All transfer points shall be fully closed. • Airborne dust shall be controlled by sprinkling of water. • All roads shall be paved on which movement of raw materials or products will take place. • Covered conveyors shall be provided. • There will be regular maintenance of air pollution control equipment. • Green belt will be developed around the plant to arrest the fugitive emissions.	Physical Target	The physical Target for the entire activities shall be achieved in 3 years.		
		Budget	Included in the EMP Cost.		

Concerns raised during public hearing	Physical activity and action plan	Particulars	YEAR OF IMPLEMENTATION		
			1st Year	2nd Year	3rd Year
	• The plant will be designed as a zero discharge plant. The water will be recirculated through cooling and treatment. The entire wastewater will be recycled for various purposes inside the plant. • Sewage Treatment plant (STP) shall be installed to treat domestic wastewater from toilet blocks.				
• Improvement of health facilities of the surrounding people.	Periodic health check-up programme will be conducted through Primary Health Care Centre in nearby villages. Besides, 1 no. Ambulance will be provided for the local villagers.	Physical Target	Construction of 1 no. Primary Health Care Centre (2-room building with necessary infrastructures in the nearby village for the periodic health check-up of the villagers.	Providing 1 no. Ambulance for the local villagers	-
		Budget: Rs. 20 Lakhs	10 Lakhs	10 Lakhs	-
Safety system of the employees to be worked in the proposed plant.	The Company shall provide his workers with Personal Protective Equipment (PPE) (e.g. Helmet, Goggles, Mask, Ear Plug/ Muff, Hand Gloves etc.). The Company shall maintain First-aid Facility at the site & also an ambulance for proper medical care of his workers.	Physical Target	The physical Target for the entire activities shall be achieved in 3 years.		
		Budget	Included in the EMP Cost.		
Education facilities and Skill development for the villagers. Generation of employment from the proposed project for	Financial Support will be provided to the Local School through extension of building / class room / development of library facilities for educational development purpose.	Physical Target	Development of existing building in 2 local schools by creating extra space.	Development of 5 nos. playground along with the sports items in the local schools.	Supply of 15 nos. of computers to the 5 local schools along with upgradation of existing libraries.
		Budget: Rs. 25 Lakhs	Rs. 10 Lakhs	Rs. 5 Lakhs	Rs. 10 Lakhs

Concerns raised during public hearing	**Physical activity and action plan**	**Particulars**	**YEAR OF IMPLEMENTATION**		
			1st Year	**2nd Year**	**3rd Year**
local villagers.	Skill development to unemployed local youths through National Skill Development Corporation, Govt. of India Scheme. Construction of a building along with the necessary infrastructures for this purpose like different machineries for industries. In the proposed project, top most priority will be given to the local people based on their academic qualification.	Physical Target	Construction of 4 – room building with infrastructure development like installation of 10 sewing machines, 10 computer systems & 15 machines for making hand craft items along with necessary raw materials for training purpose.		
		Budget: Rs. 30 Lakhs	Rs. 30 Lakhs have been earmarked under CER for training to unemployed local youth for skill development through NSDC, Govt. of India Scheme		
Drinking water facilities for the villagers.	Drinking Water Infrastructure (Tubewell: 20 nos. @ Rs. 1.0 Lakh) will be developed in the nearby villages.	Physical Target	10 tube well in the 1st year*	5 tube well in the 2nd year	5 tube well in 3rd year
		Budget: Rs. 20 Lakhs	Rs. 10 Lakhs	Rs. 5 Lakhs	Rs. 5 Lakhs
Development and maintenance of Road in the surrounding areas.	Construction and repairing of metal road (10 km) (@Rs. 8,00,000/- per Km) in the nearby villages.	Physical Target	4 kms	3 kms	3 kms
		Budget: Rs. 80 Lakhs	Rs. 32 Lakhs	Rs. 24 Lakhs	Rs. 24 Lakhs
Total Budget - Public Hearing related: Rs. 175 Lakhs					

Need Based Activities

Need based Activities	**Particulars**	**YEAR OF IMPLEMENTATION**		
		1st Year	**2nd Year**	**3rd Year**
To provide COVID related items	Physical Target:	100 no's Oximeters, 10,000 nos. mask, 1000 bottles Sanitizer	-	-
	Budget: Rs. 4 Lakhs	Rs. 4 lakhs	-	-
Construction of W/C/Toilet (2) each - 10 numbers in schools & villages (@ Rs. 3.00 Lakhs per set of 2 Toilets).	Physical Target:	5 nos. Toilets	3 nos. Toilets	2 nos. Toilets
	Budget: Rs. 30 Lakhs	Rs. 15 lakhs	Rs. 9 lakhs	Rs. 6 lakhs
Workshop centre with latest tailoring machines for training women (like tailoring, stitching, Pickle & Sauces making, Soft Toys & Gem Jeweller and for making affordable price of Sanitary Pads).	Physical Target:	The physical Target for the entire activities shall be achieved in 3 years.		
	Budget: Rs. 14 Lakhs	Rs. 8 lakhs	Rs. 3 lakhs	Rs. 3 lakhs
Street Lighting (Solar/LED) provision at suitable public	Physical Target:	15 nos Solar/LED light	10 nos Solar/LED	5 nos Solar/LED

Need based Activities	Particulars	YEAR OF IMPLEMENTATION		
		1st Year	2nd Year	3rd Year
places – 30 nos. (@ Rs. 0.50 Lakhs per Unit).			light	light
	Budget: Rs. 15 Lakhs	Rs. 7.5 lakhs	Rs. 5 lakhs	Rs. 2.5 lakhs
Rain Water Harvesting through ground water recharging (2 nos. Recharging system for Rs. 5 lacks @2.5 lakhs each system) and surface storage (1 no. Pond for Rs. 5 lakhs) in the surrounding villages	Physical Target:	1 no. pond	1 no. Recharging system	1 no. Recharging system
	Budget: Rs. 10 Lakhs	Rs. 5 lakhs	Rs. 2.5 lakhs	Rs. 2.5 lakhs
Construction of rest room with necessary infrastructures at nearby Gar Panchkot Mandir	Physical Target:	1 no. rest room	-	-
	Budget: Rs. 4 Lakhs	Rs. 4 lakhs	-	-
Development of parks, plantation of trees in the nearby areas.	Physical Target:	1 no. park along with tree plantation	1 no. park along with tree plantation	-
	Budget: Rs. 8 Lakhs	Rs. 4 lakhs	Rs. 4 lakhs	-
Providing Dustbins (100 nos @Rs. 4000/- per unit) in nearby villages	Physical Target:	50 nos. Dustbins	50 nos. Dustbins	
	Budget: Rs. 4 Lakhs	Rs. 2 lakhs	Rs. 2 lakhs	-
Development of Drainage System in nearby villages through local Panchayat.	Physical Target:	Development of drainage system in 1 village	Development of drainage system in 1 village	Development of drainage system in 1 village
	Budget: Rs. 11 Lakhs	Rs. 4 Lakhs	Rs. 4 Lakhs	Rs. 3 Lakhs
Total Budget - Need based activities: Rs. 100 Lakhs				
Overall Budget (Public Hearing related + Need based Activities): Rs. 275 Lakhs				

****** Out of 10 tube wells, which were planned to be installed in the 1st year, the company has already installed 5 tube wells in the nearby villages.*

37.1.12 The capital cost of the project is Rs. 150 Crores and the capital cost for environmental protection measures is proposed as Rs. 7.5 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 0.75 Crores. The employment generation from the proposed project is 400 (direct). The details of cost for environmental protection measures is as follows:

S. No.	Description of Item	Existing (Rs. in Lakhs)	
		Capital Cost	Recurring Cost
i.	Air Pollution Control/Noise	430	43.0
ii.	Water Pollution Control	130	13.0
iii.	Green Belt Development	30	3.0
iv.	Addressed to Public Consultation concerns	175	-
	Total	**765**	**59**

37.1.13 Greenbelt will be developed in 4.67 ha which is 33% of the total project area, consisting of at least 3 tiers around plant boundary as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 11,675 saplings will be planted and nurtured in 4.67 hectares in 3 years.

37.1.14 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.

37.1.15 Name of the EIA consultant: M/s Envirotech East Pvt. Ltd. [S. No. 3, List of ACOs in process of complying with their Certificate No. NABET/EIA/1821/RA0118].

37.1.16 M/s. BRGD Sponge & Iron Private limited has earlier made online application vide proposal no IA/WB/IND/72262/2018 dated 02/12/2019. The proposal was considered in 14th meeting of the Re-constituted EAC (Industry 1) held during 23-24th December, 2019. The observations and recommendations of EAC is given as below:

Observations of the Committee held during 23-24th December, 2019

37.1.17 The Committee noted the following deficiencies in the EIA report submitted to the Ministry:

i. Complete Public Hearing proceedings inter-alia including attendance sheet and written representations have not been submitted.
ii. Cost earmarked towards CER calculation is not as per the slabs mentioned in the Ministry's O.M. dated 1/5/2018.
iii. Social impact assessment study has not been furnished although EDS was raised by the Ministry.
iv. Permission for 414 m^3 /day ground water drawl from bore well is yet to be obtained.
v. COD parameter in the surface water sample has not been monitored. Hence, fresh assessment of surface water quality for all the parameters needs to be done.
vi. Ground Level Concentration (GLC) has been reported very high. Committee opined that no industry can be allowed with such high GLCs. However, the consultant informed that GLC has been erroneously reported and will be corrected.
vii. Hazard Identification and Risk Assessment (HIRA) report submitted is not satisfactory. Rules and Regulations pertaining to the HIRA have been wrongly mentioned in the report.
viii. Plant lay out is without legends and scale.
ix. Traffic assessment study has not been carried out.
x. There is no interpretation of the baseline data for physical environment, ecology, bio diversity and socio-economic data.

In this regard, the EIA consultant namely M/s. Envirotech East Private Limited has admitted the shortfalls observed in the EIA report and requested the EAC to provide one more opportunity to present the case.

During the deliberations, EAC observed that M/s. Envirotech East Private Limited is frequently submitting the incorrect reports. Earlier also, M/s. EEPL concealed the factual information in the proposal of M/s. AIC Iron Industries Limited pertaining to amendment in EC which was essential for due-diligence by the EAC. Due to this, the EAC in its 11th meeting held on 24-25th September, 2019 recommended the Ministry to refer the matter to

QCI/NABET with a request to cancel the accreditation status of the consultant for metallurgical industries. Accordingly, the matter was referred to QCI/NABET and they have already issued a show cause notice to the consultant on 18/10/2019.

Recommendations of the Committee held during 23-24th December, 2019

37.1.18 In view of the foregoing and after detailed deliberations, the committee deferred the consideration of the proposal cited above and sought following additional information for further consideration of the proposal:

i. Complete Public Hearing proceedings inter-alia including attendance sheet and written representations shall be submitted.
ii. Cost earmarked towards CER calculation shall be re-worked out as per the slabs mentioned in the Ministry's O.M. dated 1/5/2018.
iii. Social impact assessment study shall be carried out and report shall be submitted.
iv. Permission for 414 m^3 /day water drawl from bore well from the Competent Authority shall be obtained.
v. Fresh assessment of surface water quality for all the parameters needs to be done and report shall be furnished.
vi. Hazard Identification and Risk Assessment (HIRA) report specific to the project activity shall be prepared and submitted.
vii. Revised plant lay out with legends and appropriate scale shall be submitted.
viii. Traffic assessment study shall be carried out and report submitted.
ix. Interpretation of the baseline data for physical environment, ecology, bio diversity and socio-economic data shall be furnished.
x. Existing conditions of the road to be used for transportation of raw materials and finished products inter-alia including its dimensions along with photographs shall be submitted.
xi. Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be furnished.
xii. Line source modelling shall be carried out based on the quantity of raw materials and products to be transported through different modes such as road and rail respectively and report shall be furnished.

37.1.19 PP submitted the ADS reply on 31/07/2020. Based on the ADS reply, the proposal was reconsidered by the EAC in its 22nd meeting held on 26-28th August, 2020. However, PP expressed their inability to participate in the meeting. In view of this, PP has requested to present their project in the next EAC meeting.

37.1.20 It was apprised to the EAC to carry out the due-diligence based on the documents circulated by the PP even in absence of PP as per the Ministry's O.M.

37.1.21 EAC noted that as the provisions of the EIA Notification, 2006 which states that *"Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative"*. In this regard, after deliberations, the EAC is of the considered view that participation of applicant in person or through an authorized representative is essential to facilitate the following:

- Conducting the meetings in a transparent manner.

- Getting consent of the PP while prescribing the conditions for which the proposal is considered by the EAC.
- Getting necessary clarifications pertaining to the technical queries/concerns of EAC which may be emerged during the appraisal.
- The project proponent has requested to be allowed to present their project in the next EAC meeting. Therefore, appraising their documents in their absence would amount to rejecting their request which might go against the spirit of EIA Notification 2006 which desires that the EAC appraisal should be in transparent manner.

37.1.22 In view of the foregoing and deliberations, the Committee deferred the consideration of the proposal and recommended to consider the same in the next EAC meeting as requested by the project proponent.

37.1.23 The proposal was again reconsidered by the EAC (Industry 1) in its 23rd meeting held on 28-30th September, 2020. Meanwhile, PP vide email dated 25/09/2020 requested the Ministry to update their reply to the ADS (already uploaded), raised during 14th meeting of Reconstituted Expert Appraisal Committee (Industry-1) held on 23rd December 2019, which could ultimately facilitate a smooth appraisal by the EAC.

Observations of the Committee held during 28-30th September, 2020

37.1.24 The Committee noted the following:

i. PP would like to update their ADS reply.
ii. EIA consultant namely M/s. Envirotech East Private Limited has deliberately copied the several sections from EIA Report of Bravo Steel in the instant ADS reply. There is gross violation of Plagiarism Pledge of NABET Scheme

Recommendations of the Committee held during 28-30th September, 2020

37.1.25 In view of the foregoing and after deliberations, the Committee recommended the following:

i. Proposal shall be returned in present form to facilitate the uploading of the updated ADS reply by the project proponent.
ii. The MoEFCC may issue a Show Cause notice to M/s. Envirotech East Private Limited, Kolkata for blacklisting them from participating in any EIA process in respect of Metallurgical Industries as they have deliberately copied several sections from EIA Report of another industrial Unit -Bravo Steel- in the instant ADS reply. This is not only plagiarism but also an attempt to misguide the Environment Clearance process.

37.1.26 The project proponent has submitted the updated ADS reply on 14/05/2021. Details of additional information sought and reply submitted by PP are given as below:

S No	Additional Detail Sought	Reply of PP
1.	Complete Public Hearing proceedings inter-alia including attendance sheet and written representations shall be submitted.	Complete Public Hearing proceedings inter-alia including attendance sheet and written representations has been submitted with reply.

S No	Additional Detail Sought	Reply of PP
2.	Cost earmarked towards CER calculation shall be re-worked out as per the slabs mentioned in the Ministry's O.M. dated 1/5/2018.	PP has submitted an action plan to address the issues raised during the public hearing. An amount of INR 2.75 crores have been earmarked to address the issues raised during public hearing.
3.	Social impact assessment study shall be carried out and report shall be submitted.	The Social impact assessment study has been carried out and submitted.
4.	Permission for 414 m^3/day water drawl from bore well from the Competent Authority shall be obtained.	The company has already obtained permission from DVRRC for 414m^3/day (0.091 MGD) water vide letter no MD/DVRR/W-6(144)/2020/1467-74 dated 07/01/2021.
5.	Fresh assessment of surface water quality for all the parameters needs to be done and report shall be furnished.	A fresh surface water sampling has been done on 4th February, 2020 and water quality data has been submitted.
6.	Hazard Identification and Risk Assessment (HIRA) report specific to the project activity shall be prepared and submitted.	Hazard Identification and Risk Assessment (HIRA) report specific to the project activity has submitted.
7.	Revised plant lay out with legends and appropriate scale shall be submitted	Revised Plant Layout is submitted.
8.	Traffic assessment study shall be carried out and report submitted.	Traffic study has been conducted at two locations and was recorded once for a day in the month of February, 2020 for continuous 24 hours. The SH-5 (two Lanes) have load of 3592 PCU (existing + additional load due to proposed project) The Birinchinath Dham Road (two lanes) have load of 1076 PCU (existing + additional load due to proposed project).
9.	Interpretation of the baseline data for physical environment, ecology, bio-diversity and socio-economic data shall be furnished.	Interpretation of the baseline data *(collected during 01/12/2020 to 28/02/2021)* for physical environment, ecology, bio-diversity and socio-economic data has been submitted.
10.	Existing conditions of the road to be used for transportation of raw materials and finished products inter-alia including its dimensions along with	Existing conditions of the road detail including its dimensions along with photographs has submitted.

<table>
<tr><th>S No</th><th>Additional Detail Sought</th><th>Reply of PP</th></tr>
<tr><td></td><td>photographs shall be submitted.</td><td></td></tr>
<tr><td>11.</td><td>Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be furnished.</td><td>
<table>
<tr><th>Mode</th><th>Raw material Quantity</th><th>Product Quantity</th><th>Total Quantity</th><th>%age</th></tr>
<tr><td>Road</td><td>1,04,890 TPA</td><td>2,40,000 TPA</td><td>3,44,890 TPA</td><td>45%</td></tr>
<tr><td>Rail</td><td>4,19,560 TPA</td><td>-</td><td>4,19,560 TPA</td><td>55%</td></tr>
<tr><td>Total</td><td>5,24,450 TPA</td><td>2,40,000 TPA</td><td>7,64,450 TPA</td><td>100%</td></tr>
</table>
</td></tr>
<tr><td>12.</td><td>Line source modelling shall be carried out based on the quantity of raw materials and products to be transported through different modes such as road and rail respectively and report shall be furnished.</td><td>Modelling has been carried out on the basis of Baseline data collected during March to May, 2018 and December, 2020 to February, 2021.</td></tr>
</table>

37.1.27 Based on the reply submitted by PP mentioned above, the proposal was considered by the EAC (Industry 1) in its 37th meeting held on 31st May, 2021 to 1st June, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

37.1.28 The Committee observed the following:

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

ii. The Committee also deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.

iii. The additional reply submitted by the project proponent is found to be satisfactory and addressing the concerns raised by the Committee.

Recommendations of the Committee

37.1.29 In view of the foregoing and after deliberations the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 in supersession of the existing ECs 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 pertaining to sponge iron plants, induction furnace and rolling mills based on project specific requirements:

A. Specific conditions

i. Particulate matter emission from all the stacks shall not exceed 30 mg/Nm^3.
ii. Road leading to the plant shall be paved and, thereafter, maintained regularly by the project proponent.
iii. Air cooled condensers shall be used in Captive Power Plant.
iv. Water supply from Damodar Valley Corporation (DVC) shall be used and abstraction of ground water after three years of plant commissioning shall be discontinued.
v. Rain Water harvesting shall be implemented as per the action plan submitted.
vi. All roads inside the plant shall be concreted, vacuum cleaners shall be provided to clean roads regularly.
vii. Water spray systems shall be included to control fugitive dust from raw material Stockpiles.
viii. All stockpiles shall be on impervious floors and water spray system shall be implemented.
ix. Adequate area shall be provided for parking of minimum 20 Trucks at a time.

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 recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.

vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
viii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

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

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

VI. Waste management

i. Used refractories shall be recycled as far as possible.
ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused in melting Furnaces.
iii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

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

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

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

IX. Corporate Environment Responsibility

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

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

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

X. Miscellaneous

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

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

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

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

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

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

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities,

commencing the land development work and start of production operation by the project.

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

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

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

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

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

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

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

37.2 Expansion of the existing 0.052 MTPA Sponge Iron to 0.16 MTPA Sponge Iron, 2x9 MVA Arc Furnace for manufacturing of Ferro Alloys of 30,000 TPA (Fe-Mn, Si-Mn, Fe-Si & Pig Iron combined), Iron Ore Sinter Plant of 80,000 TPA, 2x20 TPH Iron ore washery of 2,40,000 TPA and 20 MW Power Plant [WHRB – 10 MW & AFBC – 10 MW] by **M/s. Maithan Steel & Power Limited** located at PO Bonra, PS Neturia, **Purulia District, West Bengal** [Online Proposal No. IA/WB/IND/70780/2017; MoEF&CC File No. IA-J-11011/554/2017-IA.II(I)] **– Reconsideration for grant of Environment Clearance based on ADS reply – regarding**

37.2.1 M/s. Maithan Steel & Power Limited has made an online application vide proposal no. IA/OR/IND/103521/2019 dated 09/01/2020 along with copy of EIA/EMP report and Form–2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006. 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 and appraised at Central Level.

37.2.2 The proposal was listed in 15th meeting of Re-constituted EAC (Industry 1) held 16-17th January, 2020. Project Proponent informed the Ministry vide letter dated 13/01/2020 that due to unavoidable circumstances, they are unable to attend the meeting. They requested the Ministry to consider the proposal in the next EAC meeting. Therefore, consideration of the proposal was deferred.

37.2.3 The proposal was again considered by 16th meeting of Re-constituted EAC (Industry 1) held 24-25th February, 2020. The observations and recommendations of EAC is given as below:

Observations of the Committee held during 24–25th February, 2020

37.2.4 The Committee noted the following shortfalls in the EIA report:

i. Execution of agreement with Damodar Valley Corporation for drawl of water from Damodar River has not been submitted.
ii. Closure report from Regional Office of WBPCB on the observed non-compliance has not been furnished.
iii. Action plan for solid and hazardous waste utilization has not been furnished.
iv. BOD parameter in the ground water sample has not been monitored. Hence, fresh assessment of ground water quality for all the parameters is required.
v. Action plan for rain water harvesting is not furnished.
vi. Transportation details of materials have not been furnished.

Recommendation of the Committee held during 24–25th February, 2020

37.2.5 In view of the foregoing and after detailed deliberations, the committee deferred the consideration of the proposal cited above and sought following additional information for further consideration of the proposal:

i. Execution of agreement with Damodar Valley Corporation for drawl of water from Damodar River shall be submitted.
ii. Closure report from Regional Office of WBPCB on the observed non-compliances in the existing CTO conditions.
iii. Action plan for solid and hazardous waste utilization.
BOD parameter in the ground water sample has not been monitored correctly. Hence, fresh assessment of ground water quality for all the parameters shall be carried out and report submitted.
iv. Provision for one 350 TPD DRI kiln in place of 3 No's of 100 TPD DRI kiln shall be submitted.
v. Rain water harvesting plan to harvest more than 100% of annual water consumption shall be furnished.
vi. Description of the existing condition of the road to be used for transportation of raw materials and finished products inter-alia including its dimensions along with photographs shall be furnished.
vii. Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be described.
viii. Reasons for higher level of presence of Particulate matter in the Ambient Air and the source for the same shall be furnished.

37.2.6 The project proponent submitted the ADS reply to the Ministry on 14/03/2021. The proposal was placed before the EAC (Industry 1) in its 37th meeting held on 31st May to 01st June, 2021 for consideration.

37.2.7 The project proponent vide email dated 29/05/2021 expressed their inability to participate in the meeting and requested to defer their case till further request from them.

37.2.8 It was apprised to the EAC to consider the proposal in the absence of proponent and their EIA consultant based on the records made available by them as per the Ministry's O.M. dated 18/11/2020 pertaining to streamlining the process of grant of Environment Clearance.

However, the EAC opined that proposal shall be considered in presence of proponent only as they have requested for deferment of the proposal.

Recommendations of the Committee

37.2.9 In view of the foregoing and after detailed deliberations, the Committee recommended to place the proposal in the next EAC meeting for consideration.

37.3 Capacity Expansion of Visakhapatnam Steel Plant from 6.3 MTPA to 7.3 MTPA by revamping and Augmentation of existing facilities by **M/s Rashtriya Ispat Nigam Limited** located at Gajuwaka, **District Vishakhapatnam, Andhra Pradesh** [Online Proposal No. IA/AP/IND/212173/2021; File No. J-11011/196/2005-IA.II(I)] – **Amendment in Environment Clearance**–regarding.

37.3.1 M/s. Rashtriya Ispat Nigam Limited has made an online application vide proposal no. IA/AP/IND/212173/2021 dated 17/05/2021 along with Form 4 and sought for amendment in Environment Clearance accorded by the Ministry vide letter no. J-11011/196/2005/IA.II(I) dated 03/06/2019 and 06/07/2020.

37.3.2 The project proponent did not attend the meeting and no request has been received from the proponent seeking deferment of the proposal. It was apprised to the EAC to consider the proposal in the absence of proponent and their EIA consultant based on the records made available by them as per the Ministry's O.M. dated 18/11/2020 pertaining to streamlining the process of grant of Environment Clearance. Accordingly, the proposal was considered by the EAC in the absence of the project proponent.

Details submitted by the project proponent

37.3.3 M/s. Rashtriya Ispat Nigam Limited was accorded Environment Clearance by the Ministry on 03/06/2019. Subsequently, EC amendment was accorded on 06/07/2020. As per specific condition no. i of the said EC, "An amount of 14.0 crore towards Remediation plan and Natural and Community resources augmentation plan to be spend within a span of three years i.e. up to 2nd June 2022. Further, as per specific condition no.iv of the EC dated 03/06/2019, the fund allocation of Corporate Environment Responsibility (CER) of Rs.17 crores.

37.3.4 The present proposal of PP is for seeking extension of time for implementation of Remediation plan and Natural and Community resources augmentation plan and CER due to the COVID-19 pandemic situation. The details of extension of time sought is furnished as below:

37.3.5 Reason for the amendment:

S No	Reference of EC dated 3 June 2019	Description as per EC dated 3 June 2019	Description as per Proposal	Remarks
1.	Point 23(iv)	Fund allocation for CER of Rs. 17 Crores.	Extension of time period for completion of CER plan up to 31/05/2023.	CER plan completed till Mar'21 is Rs 13.6 Crores
2.	Point 23(i)	An amount of 14.0 crore towards Remediation plan and Natural and Community resources augmentation plan to be spend within a span of three years i.e. up to 2nd June 2022	Extension of time period for completion of all environment attribute up to 31/05/2023.	RP, NRAP & CRAP completed till Mar'21 is Rs 2.8 Crores

37.3.6 The proposal was considered by the EAC (Industry 1) in its 37th meeting held on 31st May to 1st June, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

37.3.7 The Committee noted that due to Covid 19 pandemic, the implementation schedule for CER, Remediation plan and Natural and Community resources augmentation plan has got disturbed. The PP has requested extension of time till 31/05/2023 to implement the same.

Recommendations of the Committee

37.3.8 In view of the foregoing and after deliberations, the committee recommended for amendment in the EC as mentioned at paragraph no.37.3.5 above. All other terms and conditions stated in the EC dated 03/06/2019 shall remain unchanged.

37.4 Proposed cement grinding unit (1.5 MTPA) and DG Sets (2x6 MW) by **M/s. J.K. Lakshmi Cement Limited** located at village Ghantikhal/Radhesyampur, Tehsil Athgarh, **District Cuttack, Odisha** [Online Proposal No. IA/OR/IND/212417/2021; File No. J-1011/132/2013-IA II (I)] – **Validity extension of Environment Clearance** – regarding.

37.4.1 M/s. J.K. Lakshmi Cement Limited has made online application vide proposal no. IA/OR/IND/212417/2021 dated 17/05/2021 along with Form 6 and sought extension of validity of Environment Clearance accorded by the Ministry vide letter no. J-11011/132/2013-IA.II(I) dated 19/05/2014.

Details submitted by the project proponent

37.4.2 The proposed cement grinding unit (1.5 MTPA) and DG Sets (2x6 MW) project of M/s. J.K. Lakshmi Cement Limited falls under schedule 3(b), Category 'B' of EIA Notification. However, due to the applicability of general condition i.e., existence of Kapilash Wildlife Sanctuary within 10 km radius of the project site the project was appraised at the central level as Category A and EC was accorded by MoEF&CC vide letter no. J-11011/132/2013-IA II (I) dated 19/05/2014.

37.4.3 Meanwhile, Consent to Establish from State Pollution Control Board was received vide their letter number 9952/IND/II/NOC-5509 dated 29th May, 2013 for Cement grinding unit. After the receipt of all required Consents /NOCs, JKLC have started the civil work.

37.4.4 Project proponent submitted that they have obtained recommendations from Standing Committee of National Board for Wildlife (SCNBWL) vide letter no. 6-47/2014-WL(31ST meeting) dated 03/12/2014 from MoEF&CC. Final ESZ notification for Kapilash Wildlife Sanctuary was issued by the MoEF&CC vide S.O. 1659(E) dated 17/06/2015. As per the said notification, the extent of ESZ varies from 500 meters to 13.5 kilometers from the boundary of Kapilash Wildlife Sanctuary. The project site is located at a distance of 5.2km outside the ESZ boundary of Kapilash Wildlife Sanctuary.

37.4.5 The implementation status of the EC dated 19/05/2014 is as follows:

Sr. No.	Facilities	As per EC dated 19/05/2014	Implementation status as on date 17/05/2021
1	Cement Grinding Unit	1.50 MTPA	0.75 MTPA Cement grinding unit
2	DG Sets	2 x 6 MW	Yet to be installed.

37.4.6 No changes are proposed in the granted EC. The proposal is for obtaining extension in validity of EC only.

37.4.7 JKLC unable to installed rated capacity of plant because of various unavoidable reasons which are as follows:

i. JKLC delayed to obtain Clearances (Wild life Clearances from State Forest Department).
ii. Local issues
iii. Global Pandemic of Covid-19 badly impacted to the Plant. Now, JKLC have resolved major issues, and hence we are requesting to grant Validity Extension of EC for installing balance capacity (0.75 Million TPA) and DG Sets (2 x 6 MW) at Cuttack Cement Plant

37.4.8 Schedule of completion of balance facilities envisaged under the EC:

Particulars	Implementation Date/Time Period
Start of Construction	Soon after grant of validity extension of EC
Construction Period	
Installation of balance 0.75 MTPA Cement grinding unit and DG Sets2 x 6 MW	24 Months
Commercial Production Period	
Commercial Production	12 Months After Receipt of CTO from SPCB, District – Cuttack and State – Odisha.

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

37.4.10 The proposal was considered by the EAC (Industry 1) in its 37th meeting held on 31st May to 1st June, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

37.4.11 The Committee noted that the project proponent was unable to implement the project within the EC validity period due to delay in wildlife clearance, local issues and COVID-19 pandemic. New schedule submitted by the PP indicates completion of the plant in another 36 months.

Recommendations of the Committee

37.4.12 In view of above and after deliberations, the Committee recommended to extend the validity of the Environment Clearance for a period of three years beyond 18/05/2021, i.e., from 19/05/2021 to 18/05/2024 subject to environmental safeguards prescribed in the EC dated 19/05/2014.

37.5 Greenfield Copper Refinery Plant (1.0 MTPA) project of **M/s. Adani Enterprises Limited** located at Adani Ports and Special Economic Zone land in Village(s) Siracha and Navinal, Taluka Mundra, **District Kutch, Gujarat [**Online Proposal No. IA/GJ/IND/86812/2016; File No. J-11011/113/2016-IA.II(I)] **– Amendment in Environment Clearance–regarding**

37.5.1 M/s. Adani Enterprises Limited has made an online application vide proposal no. IA/GJ/IND/86812/2016 dated 17/05/2021 along with Form 4, addendum EIA/EMP report and sought for amendment in Environment Clearance accorded by the Ministry vide letter no. J – 11011/113/2016/IA.II(I) dated 08/05/2020.

Details submitted by the project proponent

37.5.2 M/s. Adani Enterprises Limited (AEL) has obtained EC vide letter no. J-11011/113/2016/IA.II(I) dated 08/05/2020 from MoEF&CC, New Delhi for setting up of Greenfield Copper Refinery Plant (1.0 MTPA) in Adani Ports and Special Economic Zone land located at Village(s) Siracha and Navinal, Taluka Mundra, District Kutch, Gujarat. The project activity is yet to be started at the site.

37.5.3 The instant proposal of M/s. AEL is regarding optimization of the land requirement of proposed project which involves inclusion of additional new land plots & exclusion of forest land. This optimization of land & proposed new layout has following benefits:

i. Dhaneshwari River was passing through the earlier layout of 1.0 MTPA. The land on the west of the river Dhaneshwari has been excluded in the new proposed layout of 1.0 MTPA and it passes along the project boundary; and
ii. Optimization of layout by including additional unutilized land has made it possible to exclude forest land for the project. Layout has become more compact providing improvement in internal traffic movement.

37.5.4 Land optimization

Type of Land	As per EC Granted (1.0 MTPA)	Proposed Amendment for EC (1.0 MTPA)	Remarks
Industrial	154.19 ha	206.11 ha	M/s. Adani Port and SEZ

Type of Land	As per EC Granted (1.0 MTPA)	Proposed Amendment for EC (1.0 MTPA)	Remarks
Land			Limited has already obtained stage I Forest Clearance vide letter no. 8-04/2016-FC dated 16/11/2018 for diversion of 1576.81 ha forest land for setting up of SEZ and industrial park. Out of 1576.81 ha forest land, 102.39 ha was earmarked for copper smelter project which have been excluded now. Further, there is a reduction in project area by 50.47 ha (256.58 – 206.11).
Forest Land	102.39 ha	0	
Total Land	256.58 ha (APSEZ Area 154.19 ha + Forest Land 102.39 ha)	206.11	

Type of Land	As per EC Granted (1.0 MTPA)	Proposed Amendment for EC (1.0 MTPA)	Remarks
As per EC granted	256.58	147.22 (71.43%)	*147.22 ha of old land (As per EC granted) has retained in the new amendment layout which is approximately 71.4% of the current layout. Further, another 58.89 ha new land has been added to lay out. Thus, total revised land requirement is 206.11 ha. In this regard, M/s. AEL has entered in to MoU with M/s. Adani Ports and SEZ Limited on 11/05/2021 stating that M/s. Adani Ports and SEZ Limited will make available 206.11 ha to M/s. AEL on long term lease basis.*
New Land added	0	58.89 (28.57%)	

37.5.5 The location, co-ordinates and survey for the revised land of 206.11 ha is furnished as below.

Location and Survey numbers	APSEZ area in Siracha and Navinal villages. Siracha village 295/Paiki 6/Paiki 3, 295/Paiki 6/Paiki 4, 125/2,

	126, 135, 137, 138/1, 140, 141/P, 142/P, 143/P, 144/1 Part, 144/2 Part, 145 Part, 136, 138/2, 139/1, 139/2 Un-surveyed land, old ACL and diverted Mundra forest land part. Navinal Village: 223/Part, 224 part and 225(APSEZ)
Co-ordinates	

Corner Point	Latitude	Longitude
A	22°49'10.07"N	69°34'10.04"E
B	22°49'33.01"N	69°34'09.05"E
C	22°49'50.53"N	69°34'46.27"E
D	22°49'49.11"N	69°35'01.20"E
E	22°48'56.80"N	69°35'14.26"E
F	22°48'57.09"N	69°35'01.31"E
G	22°48'50.14"N	69°34'44.08"E
H	22°48'15.07"N	69°34'33.40"E
I	22°48'45.19"N	69°34'10.53"E

37.5.6 The revised land use break-up for the copper project furnished as below. PP reported that revised project site is located outside the CRZ area, there is no reclaimed land, mudflats, mangroves and sand dunes in the project site. The distance of mangroves from the project site boundary is about 170 meters on the Southern side of the project site.

Sr. No.	Description	As per granted EC (1.0 MTPA)		Proposed Amendment for EC (1.0 MTPA)	
		Area in ha	%	Area in ha	%
A	**Plant Area**	**67.58**	**26.34%**	**61.86**	**30.01%**
1	Smelter	20.23	7.88%	20.03	9.72%
2	Refinery, CCR & PMRP	14.97	5.83%	13.75	6.67%
3	Sulphuric acid plant	5.67	2.21%	7.52	3.65%
4	Phosphoric acid Plant & AIF3	20.23	7.88%	14.77	7.17%
5	Effluent Treatment Plant (ETP)	6.48	2.53%	5.79	2.81%
B	**Utility Area**	**15.38**	**5.99%**	**13.83**	**6.71%**
1	O_2 plant – Ancillary 1	2.43	0.95%	4.02	1.95%
2	Incoming SUB - Ancillary 2	3.24	1.26%	2.66	1.29%
3	Water Reservoir – Ancillary 3	3.24	1.26%	1.62	0.79%
4	Officers, fire station,	2.43	0.95%	1.95	0.95%

Sr. No.	Description	As per granted EC (1.0 MTPA)		Proposed Amendment for EC (1.0 MTPA)	
		Area in ha	%	Area in ha	%
	change room				
5	Material Stores & Fabrication Yard	2.43	0.95%	2.15	1.04%
6	LPG & Fuel Storage	1.61	0.63%	1.43	0.69%
C	**Waste Storage Area**	**55.04**	**21.45%**	**17.58**	**8.53%**
1	Slag yard	13.35	5.20%	5.69	2.76%
2	Gypsum	28.34	11.05%	3.58	1.74%
3	Secured land fill (SLF)	12.14	4.73%	7.69	3.73%
4	Scrap yard	1.21	0.47%	0.62	0.30%
D	**Other Area**	**118.58**	**46.22%**	**112.84**	**54.75%**
1	Roads and Support Infrastructure	33.99	13.25%	40.7	19.75%
2	Greenbelt	84.59	32.97%	72.14	35.00%
	Total Area(A+B+C+D)	**256.58**	100.00%	**206.11**	**100.00%**

37.5.7 As per the letter dated 03/03/2021furnished by the Irrigation department of Govt. of Gujarat, the HFL of Dhaneshwari river during monsoon period near sircha village is 3.054 m with reference to the MSL of the period. The elevation of the project site 7-10 m above Mean Sea Level. The distance of observed HFL and project boundary is more than 50 m.

37.5.8 Due to the change in layout of the project site, there will be shift of location earmarked for the stacks. PP has carried our revised AAQ and the results are furnished as below:

Parameter	As Per Earlier EC 1.0 MTPA				After Proposed Amendment 1.0 MTPA				NAAQS 2009
	Predicted Incremental Conc. 2016				Predicted Incremental Conc. 2016				
	Max GLC	Baseline (Navinal)	Resultant	2.5 km, NE	Max GLC	Baseline (Navinal)	Resultant	2.5 km, NE	
PM	1.96	60.6	62.56		1.53	60.6	62.13		100
SO_2	13.90	32.1	46.00		10.60	32.1	42.70		80
NO_x	0.47	23.1	23.57		0.32	23.1	23.42		80

Note: ***All values are in µg/m³***
The maximum predicted GLC's are added to 2016 baseline data.
The resultant GLC's are found to less after revised emission standards.

37.5.9 In addition to the land optimization, PP also proposed for modification in the environment norms as given below:

i. SO_2 from sulfuric acid plant stack will be less than 0.7 kg SO_2/T of H_2SO_4 and from FGD stack will be less than 400 mg/Nm^3.
ii. Fluoride from phosphoric acid plant stack will be less than 10 mg/Nm^3.
iii. Plant is designed based on "ZERO Liquid Discharge".
iv. Change in location of Secured Land Fill and Phospogypsum storage area will confirm to the CPCB guidelines.

Sulphuric Acid Plant (SAP)	**Flue Gas Desulphurization (FGD)**
SO_2 emission ~ 0.7 kg/ Ton of Sulphuric Acid produced; from the residual off-gases coming out of sulphuric acid plant stack will be achieved by: a) Catalytic converter bed configuration of 3+2 with Double Conversion Double Absorption (DCDA) process, for the sulphuric acid plant; with SO_2 conversion efficiency of 99.92%. b) Use of super cesium sulphuric acid catalyst in the final bed of the catalytic converter, which has better conversion efficiency at a temperature lower than 400 ^{0}C. c) Tail gas scrubber to scrub the residual gases coming out of the final absorption tower.	SO_2 emission of ~ 400 mg/Nm^3 from the residual off-gases coming from Flue Gas Desulphurization system connected to treat smelter secondary off gases, following system will be achieved by: a) Scrubber with amine technology will be installed for treating secondary off gases from smelting furnace, PS converter and slag cleaning furnace. b) Lime scrubber will be installed for treating secondary off gases from electric furnace, anode Furnace and scrap melting furnace.

37.5.10 Due to the aforesaid changes, PP has sought for following amendments as well as corrigendum in the EC dated 08/05/2020.

A. Amendment in the EC dated 08/05/2020

EC Para No.	**Details as per EC Granted dated 08/05/2020**	**Proposed Amendment in EC**
5	The total land required for the project is **256.58 ha**, out of which 154.19 ha is non-forest land already notified as SEZ and is in the possession of APSEZ, 102.39 ha forest land applied for diversion by APSEZ for which Stage 1 clearance has been granted in Nov 2018. Project proponent has provided MoU with APSEZ; that the proposed land will be provided by APSEZ for this project after receiving necessary clearances. The proposed project is outside the CRZ. The Dhaneswari (DanesriNadi) River passes through the project area, which will maintained. A greenbelt along with a safety zone (towards river bank with gabion, gully plugs to avoid erosion of the bank, if any) of 15 meter wide will be developed along the sides of the Dhaneswari (DanesriNadi) River.	The total land required for the project is **206.11 ha**, which is existing within notified SEZ Mundra of APSEZ. Project proponent has provided MoU with APSEZ for leasing the land. The proposed project is outside the CRZ. The Dhaneswari (Danesri Nadi) River passes **alongside of the** project area, which will **be** maintained. A greenbelt along with a safety zone (towards river bank with gabion, gully plugs to avoid erosion of the bank, if any) of 50-meter-wide will be developed along the sides of the Dhaneswari (Danesri Nadi) River.
6	The topography of the area is flat and slightly undulating and ranges between 22°48'13.26"N to 22°50'01.88"NLatitude and 69°33'34.74"Eto 69°35'08.42"ELongitude in Survey of India topo sheet No. F42J9 & 10, at an elevation of	The topography of the area is flat and slightly undulating and ranges between **22°48'15.07" N to 22°49'50.53"N Latitude** and **69°34'09.05"E to 69°35'14.26"E Longitude** in Survey of India toposheet No. F42J9 & 10, at an elevation of 7-10 m AMSL. The ground

EC Para No.	Details as per EC Granted dated 08/05/2020	Proposed Amendment in EC
	7-10 m AMSL. The ground water table ranges between 2-10 m below the land surface during the post-monsoon season and 2-20 m below the land surface during the pre-monsoon season. The stage of groundwater development in Mundra Taluka is reported to be 63.28% and designated as safe areas as per Technical Report Series, Ground Water Brochure of Kutch District by CGWB – 2013. No groundwater is proposed for either construction or operation phase of the project.	water table ranges between 2-10 m below the land surface during the post-monsoon season and 2-20 m below the land surface during the pre-monsoon season. The stage of groundwater development in Mundra Taluka is reported to be 63.28% and designated as safe areas as per Technical Report Series, Ground Water Brochure of Kutch District by CGWB – 2013. No groundwater is proposed for either construction or operation phase of the project.
23	It has been reported that approx. 53,000 tons per annum of waste will be generated due to the project, out of which approx. 7,300 tonnes per annum will be recycled through authorised recyclers and within the process. Rest will be stored in the secured landfill (SLF). It has been envisaged that an area of **89.8ha** will be developed as green belt around the project facilities to attenuate the noise levels and trap the dust generated due to the project development activities.	It has been reported that approx. 53,000 tons per annum of waste will be generated due to the project, out of which approx. 7,300 tonnes per annum will be recycled through authorised recyclers and within the process. Rest will be stored in the secured landfill (SLF). It has been envisaged that an area of **72.14ha** will be developed as green belt around the project facilities to attenuate the noise levels and trap the dust generated due to the project development activities.
25	The capital cost of the project is Rs. **10,000** Crores and the capital cost for environmental protection measures is proposed as Rs. **1050.11** Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs**. 52.75** Crores.	The capital cost of the project is Rs. **11,000** Crores and the capital cost for environmental protection measures is proposed as Rs. **1150.11** Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs**. 58.3** Crores.
28	In line with Office Memorandum dated 1st May 2018 of MoEF&CC regarding Corporate Environment Responsibility, an amount of approx. **Rs. 58.02 Cr** has been earmarked for Corporate Environment Responsibility (CER) and allocated for relevant development programmes to address education, community health, Sustainable livelihood, Community environment and Community rural infrastructure issues in the area based on public hearing issues and social impact assessment.	In line with Office Memorandum dated 1st May 2018 of MoEF&CC regarding Corporate Environment Responsibility, an amount of approx. **Rs. 60.5 Cr** has been earmarked for Corporate Environment Responsibility (CER) and allocated for relevant development programmes to address education, community health, Sustainable livelihood, Community environment and Community rural infrastructure issues in the area based on public hearing issues and social impact assessment.
29	Greenbelt will be developed in **89.80 ha** which is about **35%**of the total acquired area. Peripheral 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	Greenbelt will be developed in **72.14 ha** which is about **35%** of the total acquired area. Peripheral 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.
30	The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.	Original Appeal No. 35/2020 (WZ) in NGT, Western Zone, Pune filed on 29.07.2020 by Appellant Kheti Vikas Seva Trust.

B. Corrigendum to the EC dated 08/05/2020

AEL has already intimated MoEF&CC vide letter no. AEL/Copper/EC/MoEF&CC/ 2020/June-1 dated 05/06/2020 regarding corrigendum for EC Conditions as given below:

Sl. No.	EC Reference	Conditions of EC	Corrigendum Proposed for EC
II	**Air quality monitoring and preservation**		
(x)	Page 13; Section II, Point - x	Adopt measures to recover fluoride gas from electrolytic cells and recycle the same in the process.	*Not applicable for Copper Plant and **hence need to be deleted**.*
III	**Water quality monitoring and preservation**		
(vii)	Page 13; Section III, Point - viii	The project proponent shall make efforts to minimise water consumption in the **steel** plant complex by segregation of used water, practicing cascade use and by recycling treated water.	*The project proponent shall make efforts to minimise water consumption in the **copper** plant complex by segregation of used water, practicing cascade use and by recycling treated water.*
V	**Energy Conservation measures**		
(i)	Page 14; Section V, Point - i	The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases.	*The project proponent shall provide waste heat recovery system at the flue gases.*
IX	**Corporate Environment Responsibility**		
(iii)	Page 15; Section IX, Point - iii	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organisation.	*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 organisation.*
(iv)	Page 15; Section IX, Point - iv	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the **Aluminium** Industry shall be implemented.	*All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the **Copper** Industry shall be implemented.*

37.5.11 The PP has not proposed for change in project configuration as well as production capacity of the existing EC.

37.5.12 The sulphur and fluorine emission after the proposed amendment is given below:

S No	Particulars	Unit	As per EC Granted	Proposed Amendment in EC
1.	Sulfur emission	TPA	5,386	**3,641**
2.	Fluorine emission	TPA	50	**33**

37.5.13 Summary of court case related to the project under consideration:

Original Appeal No. 35/2020 (WZ) in NGT, Western Zone, Pune filed on 29.07.2020 by Appellant Kheti Vikas Seva Trust. The EC has challenged in NGT on the following grounds. The matter is presently under sub-judice.

- EIA report is faulty and deficient for the reasons that alternative sites have not been properly studied.
- No cumulative impact assessment study has been carried out despite the presence of

two thermal power plants within a distance of 2 km and presence of the project within the Mundra Special Economic Zone as per the Technical Guidance Manual for the Metallurgical Industry.

- Misleading and deficient impact assessment on the fishing community, deliberate concealment of the presence of agriculture and pastoral community.
- Deficient impact assessment on the marine environment and ecology, deficient impact assessment of the impact on the Dhaneshwari river.
- Deliberate concealment and misleading information about the presence of rivers in the project area, misleading and incorrect information about the presence of mangroves within the project site, concealment of information about flora/fauna surrounding the project site, deficient impact assessment on the proposed biodiversity heritage site and deficient Impact assessment of air quality.

37.5.14 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.

37.5.15 Name of the EIA Consultant: Vimta Labs, Hyderabad. [S.No.136 in the List of ACOs with their Certificate / Extension Letter no. Rev. 10, May 13, 2021].

37.5.16 The proposal was considered by the EAC (Industry 1) in its 37th meeting held on 31st May to 1st June, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

37.5.17 The Committee noted the following:

i. EC was granted on 8.5.2020. Project construction has not started as yet.

ii. EC has been challenged in NGT Pune by Kheti Vikas Seva Trust. Presently, the matter is sub-judice. However, as informed by the PP, no stay has been granted by the Hon'ble NGT or by any other court.

iii. The EAC found that the addendum 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.

iv. PP has proposed for modification in the emission limits as given below:

   a. SO_2 from sulfuric acid plant stack will be reduced from the earlier proposed level of 1.0 Kg SO_2 / T of H_2SO_4 to less than 0.7 kg SO_2/T of H_2SO_4 and from FGD stack will be less than 400 mg/Nm^3 in place of earlier proposed 600 400 mg/Nm^3.

   b. Fluoride from phosphoric acid plant stack will be less than 10 mg/Nm^3 in place of 20 mg/Nm^3.

Recommendations of the Committee

37.5.18 In view of the foregoing and after delineations, the Committee recommended for amendment /corrigendum in the EC dated 8/05/2020 as mentioned at paragraph 37.5.10 and subject to stipulation of following additional specific conditions:

i. Project proponent shall abide by the by all orders and judicial pronouncements, made from time to time, passed by Hon'ble National Green Tribunal, Western Zone in Original Appeal No. 35/2020 (WZ).
ii. Particulate matter emission from all the stacks shall not exceed 30 mg/Nm^3.
iii. The Mangrove and Mudflat conservation plan submitted to Deputy Conservator of Forests, Gujarat Forest Department shall be implemented in a time bound manner and periodic compliance status in this regard shall be submitted to the Regional Office of the MoEF&CC along with the six monthly compliance report.
iv. Sulfur and Fluorine emission pollution shall not exceed 3641 TPA for sulphur and 33 TPA for Fluorine as committed by the project proponent.
v. SO_2 from sulfuric acid plant stack will be less than 0.7 kg SO_2/T of H_2SO_4 and from Flue Gas Desulphurization (FGD) stack will be less than 400 mg/Nm^3 as committed by the project proponent.
vi. Fluoride from phosphoric acid plant stack will be less than 10 mg/Nm^3 as committed by the project proponent.

37.6 Greenfield Project of 2.8 MTPA Integrated Steel Plant with 340 MW Captive Power Plant by **M/s. Rashmi Forgings India Private Limited** located at Mouza Chakganesh, Mallipur & Baradiha, Tehsil Kharagpur (L), **District, Paschim Medinipur, West Bengal** [Online Proposal No. IA/WB/IND/211972/2021; File No. IA-J-11011/200/2021-IA-II(I)] – **Prescribing of Terms of Reference – regarding.**

37.6.1 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.

37.6.2 In view of the above, the Committee recommended for accepting the withdrawal of the instant proposal.

37.7 Greenfield Steel Plant for manufacturing of Pellet Plants: 3 x 225 TPD, Sponge Iron Plants: 3 x 150 TPD, Induction Furnace: 1 x 30 TH capacity with Captive Power Plant: 12 MW (Waste Heat Recovery from DRI Kiln) and AFBC Boiler: 1 x 2MW by **M/s. Vinayak Metal & Power Private Limited** located at Akkenapally Village, Narketpally Mandal, **Nalgonda District, Telangana** [Online Proposal No. IA/TG/IND/212056/2021; file no: IA-J-11011/78/2021-IA-II(I)] **– Prescribing of Terms of Reference– regarding.**

37.7.1 M/s. Vinayak Metal and Power Private Limited has made an application online vide proposal no. IA/TG/IND/212056/2021, dated 12/05/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report 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 & nonferrous) under Category "A" of the schedule of the EIA Notification, 2006.

Details submitted by Project proponent

37.7.2 The project of M/s. Vinayak Metal and Power Private Limited located at Akkenapally Village, Narketpally Mandal, Nalgonda District, Telangana is for Greenfield Steel Plant for manufacturing of Pellet Plants: 3 x 225 TPD, Sponge Iron Plants: 3 x 150 TPD, Induction

Furnace: 1 x 30 TH capacity with Captive Power Plant: 12 MW (Waste Heat Recovery from DRI Kiln) and AFBC Boiler: 1 x 2MW.

37.7.3 Environmental site settings:

S No	Particulars	Details	Remarks
i.	Total land	19.68 ha (Private: 19.68 ha), Land is already in possession of the management.	Land use: Un-irrigated single croup rainfed 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 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.	**Project Site:** No water body involved. **Study area:** **Water body** — **Distance/Direction** Asif Nehar canal — 1.2 km/ North Musi River — 7.4 km/ NW	-
vii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve etc. if any within the study area	Nil	-

37.7.4 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.	Induction Furnace	MS Billets	Induction Furnace: 1 x 30 TH	99000 TPA
Power Plant				
4.	WHRB	Electricity	1 x 12 MW	12 MW
	AFBC	Electricity	1 x 2 MW	2 MW

*** Waste heat recovery Boiler (WHRB), TH – Tons for heat, TPD- Tons per day.**

37.7.5 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 / Iron Oxides	2,45,025	From local Mine leases	<500	By Road (Covered Trucks)
2.	Iron ore Pellets	2,22,750	In plant generation	-	By Covered Conveyor
3.	Bentonite	17,820	Rajasthan / Gujarat	1000	By rail & road (through covered trucks)
4.	Sponge Iron	1,48,500	In plant generation	-	By Conveyor
5.	Coal	1,74,982	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)

37.7.6 The water requirement for the project is estimated as 490 KLD, out of which 426 KLD of fresh water requirement will be obtained from the Ground water and the remaining requirement of 64 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 cooling towers will be recycled with closed loop cooling water system. Sanitary wastewater / sewage generated will be treated in STP. Zero Liquid effluent discharge system will be maintained in the proposed project.

37.7.7 The power requirement for the proposed project will be about18.0MW, out of which 14MW will be obtained from the Captive Power plant (i.e 3 x 4 MW =12 MW of WHRB and 1 x 2 MW=2 MW of AFBC) and remaining 4 MW power will be sourced from TSTRANCSCO. 3x750 KVA DG sets will be installed to meet the emergency power requirement.

37.7.8 The capital cost of the project is Rs. 136.5 Crores and the capital cost for environmental protection measures is proposed as Rs.16.33 Crores. The employment generation from the proposed project is 250through direct employment and 150 nos. through indirect employment.

37.7.9 Proposed Terms of Reference (**Baseline data collection period: March – May 2021**):

Attributes	Sampling		Remarks
	No. of stations	Frequency	
A. Air			
a. Meteorological parameters	1	On hourly basis for one season	• Wind speed, • Wind direction,

Attributes	Sampling		Remarks
	No. of stations	Frequency	
			• Temperature, • Relative Humidity, • Pressure, • Solar radiation, • Cloud cover, • Rainfall, etc
b. AAQ parameters	8	24 hourly Twice a week for One Season	• Particulate Matter (PM_{10}, $PM_{2.5}$), • Sulphur Dioxide (SO_2), • Oxides of Nitrogen (NO_x) • Carbon Monoxide (CO) etc.
B. Noise	8	On hourly basis for 24 Hrs. at each station	Parameters Monitored: • Day equivalent • Night equivalent
C. Water			
a. Surface water	5	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 : 2012 (RA:2020)
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 a. Aquatic b. Terrestrial	Study area	One season	
F. Socio-economic parameters	Study area	One season	Socioeconomic impacts

37.7.10 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.

37.7.11 Name of the EIA consultant: M/s. Team Labs and Consultants, Hyderabad [S.No. 140, List of ACOs with their Certificate no. NABET/EIA/1821/SA 0114; valid up to 24/09/2021; Rev. 10, May 13, 2021].

37.7.12 M/s. Vinayak Metal and Power Private Limited has earlier made an application online vide proposal no. IA/TG/IND/199603/2021 dated 06/03/2021. The proposal was considered by

the EAC (Industry 1) in its 32nd meeting of the Reconstituted EAC (Industry-I) held on 15-17th March, 2021. The observations and recommendations of EAC are given as below.

Observations of the Committee held on 15-17th March, 2021

37.7.13 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.

Recommendations of the Committee held on 15-17th March, 2021

37.7.14 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.

37.7.15 The PP has again made an application online vide proposal no. IA/TG/IND/212056/2021, dated 12/05/2021. Based on this, the proposal was considered by the EAC (Industry 1) in its 37th meeting held on 31st May- 01st June, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

37.7.16 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^3 and SO_2 and NOx also as 50 mg/Nm^3.
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

37.7.17 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 37.7.16.

37.8 Expansion of Existing Facilities with addition of 2 x 300 TPD DRI Kiln and CPP (WHRB from 22 to 30 MW and CFBC 40 MW) within the Existing Integrated Steel Plant Premises **by M/s. SMC Power Generation Limited** at Industrial Growth Center, Kukurjanga, P.O.:

Badmal, **Dist: Jharsuguda, Odisha** [Online Proposal No. IA/OR/IND/212128/2021; file no: IA-J-11011/189/2007-IA-II(I)] **– Prescribing of Terms of Reference in pursuance to the Notification No. S.O. 1247 (E) dated 18/03/2021 – regarding.**

37.8.1 M/s. SMC Power Generation Limited has made an application online vide proposal no. IA/OR/IND/212128/2021 dated 12/05/2021 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 & nonferrous) under Category "A." of the schedule of the EIA Notification, 2006.

Details submitted by Project proponent

37.8.2 Environment clearance (EC) to the project cited above was originally accorded by the Ministry vide letter no. J-11011/189/2007- IA.II (I) dated 07/08/2007 in the name of M/s SPS Steel & Power Ltd. under the provisions of the EIA Notification, 2006. Subsequently, the company name has been changed from M/s. SPS Steel & Power Ltd to M/s. Concast Steel & Power Limited during 2011 consequent upon taking over entire shares of M/s. SPS Steel & Power Ltd and certificate of incorporation issued by the Registrar of Companies regarding change of company name from M/s. SPS Steel & Power Ltd and M/s. Concast Steel & Power Limited. However, M/s. Concast Steel & Power Limited was unable to continue the implementation of facilities due to financial crisis. Subsequently, the company went through Corporate Insolvency and Resolution Process (CIRP) and bought by M/s. SMC Power Generation Limited. In addition to the facilities envisaged under the EC dated 7/08/2007, M/s. SMC Power Generation Limited has merged the 2x100 TPD DRI kiln owned and operated by M/s. Pawansuit Sponge private limited based on the Order dated 19/2/2010 of Hon'ble High Court of Odisha in case no 78 of 2009. It is noted from the records that CTE for the 2x100 TPD kiln was accorded by Odisha Pollution Control Board (OPCB) on 27/03/2004.

37.8.3 The project proponent vide proposal no. IA/OR/IND/171284/2020 dated 14/10/2020 sought for transfer of EC dated 7/08/2007 in the name of M/s. SMC Power Generation Limited. Accordingly, the EC transfer was accorded by the Ministry on 24/12/2020 only for the commissioned facilities within the EC validity period and for the remaining facilities, project proponent was asked to apply for fresh Environment Clearance under the provisions of EIA, 2006. The details of the units commissioned by the proponent are furnished as below:

Sl. No.	Facilities	Facilities as per EC granted	Facilities amalgamated from M/s. Pawansuit Sponge private limited	Facilities implemented and Operational	Facilities Constructed within the validity period of E C, i.e. 6/8/2012 but not implemented with CTO
1	DRI Kiln (Sponge Iron)	6 X 100 TPD 2 X 300 TPD	2 X 100 TPD	6 X 100 TPD 2 X 100 TPD	2 X 300 TPD

Sl. No.	Facilities	Facilities as per EC granted	Facilities amalgamated from M/s. Pawansuit Sponge private limited	Facilities implemented and Operational	Facilities Constructed within the validity period of E C, i.e. 6/8/2012 but not implemented with CTO
2	SMS for 2,82,000 TPA Billets & 40 T EAF for 2,50,000 TPA Steel Plant	4 X 20 T IF and 40 T EAF (4,26,000 TPA Billets)	-	4 X 20 T IF (2,80,000 TPA Billets)	-
3	Blast Furnace	1 X 450 CUM	-	1 X 450 CUM	-
4	Sinter Plant	6,00,000 TPA	-	6,00,000 TPA	-
5	Rolling Mill	1,00,000 TPA	-	1,00,000 TPA	-
6	Ferro Chrome / Ferro MG	4 X 16 MVA	-	2 X 16 MVA	-
7	Captive Power Plant	30 MW WHRB	-	20 MW implemented and Operational for 6 X 100 TPD DRI & 2 X 100 TPD DRI (of PSPL)	Facilities for 10 MW Constructed but Not Commissioned for 2 X 300 TPD DRI
		40 MW CFBC	-	-	Constructed but Not Commissioned for the whole 40 MW
8	Coal Washery	1,00,000 TPA	-	-	-

37.8.4 The facilities yet to be commissioned by the proponent are as below:

Sl. No.	Facilities	Status of Construction during EC Validity Period	Status of Commissioning of the Facility within the EC Validity Period
1	DRI Kilns 2 X 300 TPD	More than 50 % by 06/08/2012	Not Commissioned
2	30 MW Captive Power Plant (WHRB)	Completed by 06.08.2012	Commissioned for 6 X 100 TPD DRI & 2 X 100 TPD DRI (of PSPL) But Not Commissioned for 2 X 300 TPD DRI
3	40 MW Captive Power Plant (CFBC)	Completed by 06.08.2012	Not Commissioned

37.8.5 Instant proposal of PP is for seeking TOR to complete the commissioning of the constructed facilities as per MoEF&CC notification S.O. 1247 (E) dated 18/03/2021 which states that *"where construction and commissioning of proposed activities have not been completed within the validity period of the Environmental Clearance (EC) and a fresh application for EC has been submitted due to expiry of the said period of the EC, the concerned Expert Appraisal Committee or State Level Expert Committee, as the case may be, may exempt the requirement of public hearing subject to the condition that the project has been implemented not less than fifty percentage in its physical form or construction".*

37.8.6 The project of M/s. SMC Power Generation Limited located at Industrial Growth Center, Kukurjanga, P.O.: Badmal, Dist: Jharsuguda, Odisha is for Expansion of Existing Facilities with addition of 2 X 300 TPD DRI Kiln and CPP (WHRB from 22 to 30 MW and CFBC 40 MW) within the existing integrated steel plant premises.

37.8.7 Environmental site settings:

S No	Particulars	Details	Remarks
i	Total land	**79.40 Ha.** Through Odisha Industrial Infrastructure Development Corporation Limited (IDCO).	Land use: Existing Industrial
ii	Existence of habitation & involvement of R&R, if any.	There is no habitation within the project site and the nearest settlement is at Badmal at a distance of 830 mt away in SE direction	No R&R is envisaged.
iii	Latitude and Longitude of the project site	Latitude: 21˚49'00.96"N to 21˚49'37.07"N Longitude : 83˚ 59'20.96'' E to 84˚00'07.33''	
iv	Elevation of the project site	Core Area : 199- 220 m AMSL	
v	Involvement of Forest Land if any	No Forest Land involved within the project area	Total Land of 79.40 ha is been converted to Industrial Land.
vi	Water body exists within the project site as well as study area	**Project Site:** A seasonal nallah is flowing through the project site. **Study area** 1. River Behden : 3.0 Km/ SW 2. River Ib : 4.40 Km/west	Authenticated HFL data of the water body The water level has never crossed the width of the nalla, as observed since the inception of the plant.
vii	Existence of ESZ/ ESA/ National park/ wildlife sanctuary/ biosphere Reserve/ tiger reserve/	Nil	

S No	Particulars	Details	Remarks
	elephant reserve. If any within the study area.		

37.8.8 Consent to Operate (CTO) for operate the existing unit (since 2008) was accorded by SPCB, Odisha in favour of M/s. SPS Steel and Power Limited, M/s. Pawansut Sponge (P) Ltd., M/s. Concast Steel & Power Limited and M/s. SMC Power Generation Limited for the said unit from time to time. The validity of current CTO is up to 31/03/2022:

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

S No	Name	Existing Units		Proposed Units		Total (Existing +Proposed)	
		Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
1	DRI Kilns (Sponge Iron Plant)	6 x 100 TPD	2,00,000	2x 300 TPD	2,00,000	6 x 100 TPD and 2 x 300 TPD	4,67,000
2	DRI Kilns (Sponge Iron) of M/s PSPL	2 x 100 TPD	67,000	-	-	67,000	
3	Steel Melting Shop	4 x 20 T/H	2,80,000	-	-	4 x 20 T/H	2,80,000
4	Blast Furnace	1 x 450 M^3	Hot Metal: 2,80,000 Pig Iron: 1,80,000	-	-	1 x 450 M^3	Hot Metal: 2,80,000 Pig Iron: 1,80,000
5	Sinter Plant	60 M^2	6,00,000	-	-	60 M^2	6,00, 000
6	Rolling Mill with CCM	6/11 (3 Strand CCM)	1,00,000	-	-	6/11 (3 Strand CCM)	1,00,000
7	Ferro Alloys Plant	2x16 MVA	50,000	-	-	2 x 16 MVA	50,000
8	Captive Power Plant (WHRB)	22 MW	22 MW	8 MW	8MW	30 MW	30 MW
9	Captive Power Plant (AFBB) (CFBC)	-	-	40 MW	40 MW	40 MW	40 MW

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

S. No	Raw Material	Quantity required per annum			Source	Distance from site (kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Sized Iron Ore for DRI (in TPA)	5,02,382	3,76,786	8,79,168	Joda -Barbil	200	By Rail & Road
2	Coal for DRI (in TPA)	4,11,950	3,08,962	7,20,912	MCL Mines	50	By Rail & Road
3	Dolomite for DRI (in TPA)	33,408	25,056	58,464	Odisha & Chhatisgarh	200	By Road
4	Coal for CFBC (in TPA)	-	2,13,840	2,138,40	MCL Mines	50	By Rail & Road
5	Coal/Dolo Char for CFBC (In TPA)	-	1,42,560	1,42,560	Internal Source	-	By Road

37.8.11 The water requirement (Make up during operation) for the project (existing and propped installed) is estimated as 8798 m^3/day and total water of 8798 m^3/day of fresh water requirement will be obtained from the River Beheden. Permission for drawl of 9126 m^3 / day or 3.73 Cusec water from River Behden has already been allocated by Water Resources Dept. Govt. Of Odisha vide letter no. 13440/WR dated 23/07/2020.

37.8.12 The power requirement for the project is estimated as 90 MW, out of which total power of 70 MW will be generated in house by WHRB and CFBC Boilers and balance 20 MW will be sourced from State Grid.

37.8.13 The capital cost of the project is **Rs 317.87 Crores** including environmental protection measures and the capital cost for environmental protection measures is proposed as **Rs. 86.40 Crores**. The annual recurring cost towards the environmental protection measures is proposed as **Rs.2.54 Crores**. The employment generation from the proposed project is 1500 (existing & proposed expansion).

37.8.14 Proposed Terms of Reference (Baseline data collection period: October, November and December 2020:

Attributes		Sampling		Remarks
A. Air		**No of Stations**	**Frequency**	
a. Meteorological parameters		1	Continuous for 3 months	
b. AAQ parameters		8	Weekly Twice	
B. Noise		8	Weekly Twice	
C. Water				
Surface water / Ground water quality parameters		Surface Water – 6 Ground Water-8	Monthly Once	

Attributes		Sampling		Remarks
D. Land				
a. Soil Quality		4	Once in a season	
c. Land Use		Total area of 10 km buffer Zone	Once in a Season	
E. Biological a. Aquatic b. Terrestrial		Once during the Study Period	During the Baseline Survey Period	
F. Socio-economic parameter		Once during the Study Period	During the Baseline Survey Period	

37.8.15 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.

37.8.16 Name of the EIA consultant: M/s. Ardra Consulting Services Pvt. Ltd. Bhubaneswar. Certificate. No NABET/EIA/1922/IA0055 valid up to 29/12/2022; Rev. 10, May 13, 2021.

37.8.17 The proposal was considered by the EAC (Industry 1) in its 37th meeting held on 31st May to 1st June, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

37.8.18 The EAC noted the following:

i. All the facilities envisaged under the EC dated 7/08/2007 could not be commissioned within validity period of the EC. PP is seeking TOR for undertaking EIA study for the facilities not commissioned as per MoEF&CC notification S.O. 1247 (E) dated 18/03/2021.

ii. As per the records made available by the proponent, PP has completed the construction of 30 MW WHRB and 40 MW CFBC and construction of 2x300 TPD kiln by more than 50 %. This has been substantiated by the photographs.

Recommendations of the Committee

37.8.19 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. Public hearing for the 30 MW WHRB and 40 MW CFBC and 2x300 TPD DRI kiln is recommended to be exempted in pursuance to the S.O. 1247 (E) dated 18/03/2021 as the PP has reported completion of construction work for boilers and more than 50% construction work with respect to 2x300 TPD DRI kilns.

ii. Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.

iii. Action plan for fugitive emission control in the plant premises shall be provided.

iv. Action plan for green belt development covering 33% of the plant area shall be submitted including green belt development towards Kukurjangha which is located adjoining the plant boundary.
v. Jigging and Briquetting plant shall be provided. FeCr slag shall be tested by conducting TCLP tests and the slag shall be sent to TSDF if Cr values are high.
vi. Action plan for 100 % solid waste utilization shall be submitted.
vii. A nallah is passing through the site. Scheme for landscaping on both sides of nallah shall be submitted.
viii. Action plan for rain water harvesting shall be submitted.
ix. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
x. Air Cooled condensers shall be used in Captive Power Plant.

01st June, 2021

37.9 Expansion of steel plant from 2,00,000 TPA of Rolled Steel to 2, 80,000 TPA of Rolled Steel by **M/s. Vardhman Special Steels Limited** located at Village Dhandari Kalan/ Jamanlpur, Tehsil & **District Ludhiana, Punjab** [Online Proposal No. IA/PB/IND/212720/2019; MoEF&CC File no. J-11011/74/2013-IA.II(I)] – **Environment Clearance** – regarding.

37.9.1 M/s. Vardhman Special Steels Limited has made an online application vide proposal no. IA/PB/IND/212720/2019 dated 21/05/2021 along with copy of EIA/EMP report and Form–2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & nonferrous) under Category 'B' of the schedule of the EIA Notification, 2006. and appraised at Central Level. However, due to the applicability of general condition i.e, the project site is located in a Focal Point Industrial Area Ludhiana which is a critically polluted area. Hence, the project is appraised at the central level as Category 'A'.

Details submitted by the project proponent

37.9.2 The detail of the ToR is furnished as below:

Date of Application	Consideration	Details	Date of Accord
24/09/2019	12th meeting of EAC held on 22/10/2019	Terms of Reference	03/02/2020

37.9.3 The project of M/s. Vardhman Special Steels Limited located at Village Dhandari Kalan/ Jamanlpur, Tehsil & District Ludhiana, Punjab is for expansion of steel plant from 2,00,000 TPA of Rolled Steel to 2,80,000 TPA of Rolled Steel.

37.9.4 Environmental site settings

SNo	Particulars	Details
i.	Total land	11.23 ha/27.74 acres
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Land is already acquired by VSSL

iii.	Existence of habitation & involvement of R&R, if any.	The proposed project is located in the existing site and hence does not involve Rehabilitation and Resettlement Plan(R&R).
iv.	Latitude and Longitude of the project site.	Latitude $30^0$53'12.60'' N to $30^0$53'11.46'' N Longitude $75^0$54'17.57'' E to $75^0$54'19.77'' E
v.	Elevation of the project site.	250 m
vi.	Involvement of Forest land if any.	Proposed expansion area is within existing plant. Therefore no forest land is involved.
vii.	Water body exists within the project site as well as study area	**Project site:** There is no natural nala or stream passing through the project site. **Study area** (1) Buddha Nala, 3.2 km, NNE (2)Sidhwan Canal (Sidhwan Branch), 4.7 km, SW (3) Sidhwan Canal (Abohar Branch), 10.9 km, S (4) Satluj River, 12.2 km, NNW
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil. However, the project falls in Critically Polluted Area (CPA).

37.9.5 The existing project was accorded environmental clearance vide lr.no. J-11011/74/2013-IA II (I) dated 30th June 2015. Consent to Operate for the existing unit was accorded by Punjab Pollution Control Board for (a) Water having consent no. CTOW/ Renewal/ LDH1/ 2021/15022260, with validity up to 31/03/2022 (b) Application for renewal of Air consent is pending which was submitted to PPCB on 30/01/2021 and is under process.

37.9.6 Implementation status of the existing EC:

S No	Facilities	Units	As per EC dated 30/06/2015	Implementation Status as on 24/04/2021	Production as per CTO
1.	Productivity Improvement Through Technological Up-gradation of the Steel Melting Shop with Electric Arc Furnace from 1, 25,000 TPA to 2, 00,000 TPA	-	2,00,000 TPA	2,00,000 TPA	2,00,000 TPA

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

S No	Facility and units	Existing capacity as per EC granted	Proposed enhancement	Cumulative capacity – post project scenario
1	Rolled steel production	2,00,000 TPA	80,000 TPA	2,80,000 TPA
2	Electrical Arc Furnace capacity (EAF)	33 T (30 t Nominal capacity)	5 T (Nominal Capacity)	40 T (35 T Nominal Capacity)
3	Ladle Refining Furnace capacity (LRF)	30 T	35 T	1x30t + 1x35 t
4	Vacuum Degassing facility (VDF)	30 T (steam-based system)	35 T (Mechanical degassing system)	35 T (after up-gradation)
5	Continuous Casting Machine (CCM)	2 Strand	3 Strand will be installed	3 Strand (after Up-gradation of existing CCM)
6	Reheating Furnace (RF)	33 T/hr (Walking Hearth type)	45 T/hr (Walking Beam Type)	1x45 T/hr (1x33 T/hr will be dismantled)
7	Rolling Mill (RM)	180,686 TPA of rolled products	99,314 TPA of Rolled products	280,000 TPA rolled product
8	Fume Extraction System (FES) With Pulse Jet Cloth Bag Filter (Primary+ Secondary)	4,60,000Am^3/h Common for EAF and LRF	Existing Fumes extraction and dust collection system (4,60,000 Am^3/h) will be used exclusively for EAF system and new fumes extraction and dust collection system (1,55,000 Am^3/h) for LRF	Existing Fumes extraction and dust collection system (4,60,000 Am^3/h) will be used exclusively for EAF system and new fumes extraction and dust collection system (1,55,000 Am^3/h) for LRF

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

S No	Raw Material	Quantity required TPA			Source	Distance from site (Km)	Mode of Transportation
		Existing	Expansion	Total			
1.	Purchased Scrap+ other Scrap	98,000	152,484	2,50,842	UK, USA, Europe, South Africa	1400	Trucks
2.	DRI	112,800	79,917	32,883	Maharashtra, Dubai	1700	Trucks
3.	Pig iron	5846	27,037	32,883	Chhattisgarh, Punjab, West Bengal	1500	Trucks
4.	Lime	20,000	3,280	23,280	Rajasthan	700	Trucks

S No	Raw Material	Quantity required TPA			Source	Distance from site (Km)	Mode of Transportation
		Existing	Expansion	Total			
5.	Carburizers	3,000	1074	4074	Jharkhand, Gujarat, Madhya Pradesh	1500	Trucks
6	Refectories (SMS)						
6.1	Bricks	5000	1696	6693	China, Orissa	1500	Trucks
6.2	Ramming Mass	700	231	469	Uttar Pradesh	900	Trucks
6.3	Gunning Mass	300	230	530	Orissa	1500	Trucks
7	Refractories Rolling Mill	200	33	233	Maharashtra, Madhya Pradesh, West Bengal	1700	Trucks
8	Fuel & HSD						
8.1	Fuel Oil & HSD for SMS	2200	0	0	Uttar Pradesh	900	Trucks
8.2	Fuel Oil & HSD for Bar Mill	7000	0	0	Uttar Pradesh	900	Trucks
9	Graphite Electrodes	660	597	1257	Madhya Pradesh, West Bengal, Maharashtra	1500	Trucks
10	Process Gases						
10.1	Argon (1.786 kg/cum)	179	164	343	Punjab	200	Trucks
10.2	LPG (1.965 kg/cum)	315	829	1144	Punjab	200	Trucks
10.3	PNG (109,76,000 SCM/annum)	0	7464	7464	GAIL	200	Pipeline
11	Ferro-Alloys	6000	2148	8148	Chhattisgarh, Orissa, Maharashtra, West Bengal, Punjab	800	Trucks
12	Lancing Pipe	280	127	407	(Near Mumbai) Maharashtra	1700	Trucks
13	Other misc. items like T.C. Tips, Positherm Tips etc.	200	92	292	Noida (U.P.)	900	Trucks

37.9.9 The existing facility is utilizing 767 m^3/day of fresh water for the entire facility as against the consented EC dated 26.06.2015 quantity of 773 m^3/day of fresh water. After expansion, the water demand will come down marginally to 766 m^3/day. The specific fresh water consumption in the facility will be reduced from current level of 1.34 m^3/T of steel to 0.95 m^3/T of steel during the post project scenario. The application for extraction of groundwater has been applied to PWRDA, Punjab region vide letter dated 04.03.2021 and acknowledged on 08.03.21 as per email from PWRDA dated 12/03/2021 Further update dated 05/05/2021 from PGWRA that your application under preview of this office and requisite permission will be issued in short period of time.

37.9.10 No additional power is needed. The connected demand will be 36 MVA.

37.9.11 Baseline Environmental Studies

Period	October -December 2019
AAQparametersat9 locations	$PM_{2.5}$ = 46.0 to 84.6µg/m^3 PM_{10} = 99.5to179.3µg/m^3 SO_2 =13.1to25.2µg/m^3 NO_2 =16.2 to35.6µg/m^3 CO = 540 to 790 mg/m^3
AAQ modelling	PM = <0.01 µg/m^3 SO_2=11.3µg/m^3 NO_2=10.3µg/m^3
Ground water quality at 7 locations	pH: 7.4 to 7.8, Total Hardness: 272.9 to 455.0mg/l, Chlorides: 49.1 to 85.7mg/l, Fluoride: 0.48 to 0.79mg/l. Heavy metals are within the limits.
Surface water quality at 4 locations	pH: 7.3 to7.8; DO:1.9 to 5.3mg/l and BOD: 2.2 to 52.7 mg/l COD from 14.7 to 281.2mg/l.
Noise levels	47.6 dB(A) to 58.9 dB (A) for the day time and 40.0 dB(A) to 54.1 dB(A) for the Night time.
Traffic assessment study findings	Total PCUs in the NH44 and NH95 are 8635 and 8946 respectively whereas the design capacity of each NH is 20000 PCU per day.
Flora and fauna	No Schedule-I fauna is found in the study area.

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

S No	Item	Source	Quantity (TPA)	Pollution Control & Disposal
1.	**Steel Melt Shop**			
1.1.	EAF Slag	Melting of various raw materials used in EAF like Steel Scrap, Revert Scrap,	30700	Whole quantity (EAF & LRF) to be sold to M/s Lafarge Holcim

		Gas based DRI, Coal based DRI, Pig Iron		(India) group- ACC cement PPC
1.2.	LRF Slag	Ladle Refining Furnace	4656	
1.3.	CCM scale	Cooling of continuous cast billets in CCM	1746	Sold to M/s TK Enterprises , in turn goes to Sinter Plants in Gujarat and Vishakhapatnam
1.4.	Fine dust from waste gases	From EAF & LRF	4365	Dust is packed in HDPE bags and handed over to TSDF, Nimbua, Derabassi, approved agency
2.	**Rolling Mill**			
2.1	Mill scale	From Reheating furnace & Rolling mill	4074	Sold to M/s Singhvi Traders link LLP, in turn goes to Sinter Plants in Gujarat and Vishakhapatnam
3.	C & D Waste	Construction and demolition waste within the plant	5343	Metal scrap used in house as raw material Partly used within the premises Remaining quantity handed over to petty contractors

37.9.13 Public Consultation:

Details of advertisement given	10.10.2020
Date of public	10.11.2020
Venue	MCL Park, Near Gate No. 2 of VSSL", District - Ludhiana,
Presiding Officer	Sh. Amarjit Bains, Additional Deputy Commissioner (Gen), Ludhiana
Major issues raised	i. The industry shall clarify as to whether there will be any job opportunities with the expansion of the project. ii. The industry shall clarify as to whether there will be any additional water requirement with the expansion of the project. iii. The industry shall clarify as to whether there will be any job opportunities with the expansion of the project as he is a daily wage earner and his current work is seasonal. iv. The industry shall take a pledge to continue the plantation work after expansion in the same manner as is being done at present. v. Appreciated the efforts done by the industry towards Society under CSR initiatives and expansion of the project will create employment opportunities for all local people. vi. The industry shall clarify as to whether there will be any job opportunities for the women with the expansion of the project. vii. The industry shall clarify as to whether any maintenance and development of the road in surrounding areas can be initiated by it under CSR.

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

Detail of query/ statement/ information/ clarification sought by the person present at the venue of hearing	Reply of the query / statement / information / clarification given by the project proponent	Cost	Time of compliance
The industry shall clarify as to whether there will be any job opportunities with the expansion of the project.	The project proponent informed that the employment will be generated with the expansion of the project and vacancies shall be filled as per the requirement & as per qualification of the persons.	Included in Project Cost	As per expansion requirement
The industry shall clarify as to whether there will be any additional water requirement with the expansion of the project.	The project proponent informed that no additional water will be required in the expansion project and arrangements have been made to utilize the industrial wastewater @300 KLD of the pickling units after treatment from J.B.R. Technologies.	Included in Project Cost	After getting EC
The industry shall clarify as to whether there will be any job opportunities with the expansion of the project as he is a daily wage earner and his current work is seasonal.	The project proponent informed that the employment will be generated with the expansion of the project and vacancies shall be filled as per the requirement & as per qualification of the persons. He further informed that even trainings shall be imparted to the newly recruited persons under Corporate Social Responsibility Rules as per the roles assigned to them.	Included in Project Cost	As per expansion requirement
The industry shall take a pledge to continue the plantation work after expansion in the same manner as is being done at present.	The project proponent informed that the plantation shall be carried out as per the Social Forestry Program in the villages, Schools and other areas allocated by the Local bodies.	20,00,000	5 years
He appreciated the efforts done by the industry towards Society under CSR initiatives and expansion of the project will create employment opportunities for all local people.	The project proponent informed that their company shall continue to give support to the society under the CSR.	-	5 years

Detail of query/ statement/ information/ clarification sought by the person present at the venue of hearing	**Reply of the query / statement / information / clarification given by the project proponent**	**Cost**	**Time of compliance**
The industry shall clarify as to whether there will be any job opportunities for the women with the expansion of the project.	The project proponent informed that the employment will be generated with the expansion of the project and vacancies shall be filled as per the requirement & as per qualification of the persons which shall include the both. He further informed that even trainings shall be imparted to the newly recruited persons under Corporate Social Responsibility as per the roles assigned to them.	Included in Project Cost	As per expansion requirement
The industry shall clarify as to whether any maintenance and development of the road in surrounding areas can be initiated by it under CSR.	The project proponent informed that the maintenance and construction of the roads under CSR can only be done with due permission of the Local Bodies/ Govt. Departments.	20,00,000	5 years

37.9.14 The capital cost of the project is Rs. 169 Crores and the capital cost for environmental protection measures is proposed as Rs. 27.88 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 5.81Crores. The estimated manpower after completion of the project shall be 1435 personnel comprising administrative, technical, nontechnical, Skilled & un-skilled work force. The details of cost for environmental protection measures is as follows:

Aspect	**CAPEX (Rs. Lakhs)**	**OPEX (Rs. Lakhs)**
Upgrading the existing FES for meeting the PM level of <30 mg/Nm^3 in the EAF gas streams	250	170
Installing of dedicated FES and bag filter system for LRF gas stream	300	120
Installation of additional dust collection systems at raw material handling and material transfer areas	50	5
Various fugitive dust control systems such as dry fog system, water sprinkler, road dust vacuum cleaning systems etc.	180	20
Replacing the existing fuel oil fired boiler with mechanical pin vacuum pump for steel mill vacuum degassing facility	1000	180
Installing new STP and Upgrading the internal pipe network for recycling treated sewage within the plant + Extension of sewerage line	50	5
Installation of 100 m^3/day RO plant for recycling treated	200	53

Aspect	**CAPEX (Rs. Lakhs)**	**OPEX (Rs. Lakhs)**
sewage and ETP water		
Developing additional greenbelt within the facility and also community plantation	40	2
Extending air quality management and plantation programs outside the facility in association with Nagar Palika under CSR programs	150	5
Building additional storage facilities and disposal of industrial solid waste such as slag and scales	30	0
Building additional storage facilities and disposal of industrial hazardous waste such as FES dust to TSDF facility	10	0
Continuous emission monitoring an ambient air quality monitoring system	100	4
Domestic waste management programs as per MSW Rules 2016	10	3
Noise abatement programs	0.45	6
Rain water additional harvesting programs and local watershed development activities under CSR activities	84	2
Installation of piezometric wells and water flow meters as per CGWB guidelines and Jal Sakthi notification	10	0.5
3 No Rain Water Harvesting Pits inside the Plant	24	1.5
1200 KL treated Water underground storage Tank	150	2
Extension of Drainage line + Rain water / Strom Water storage	150	2
Total	**2788.45**	**581**

37.9.15 Greenbelt/ Plantation will be developed in 3.7 ha which is about 33.17% of the total project area including existing Plantation in the project site. A4 m wide green belt, consisting of at least 3 tiers around plant boundary will be developed as green belt and green cover to the extent possible as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2000 trees per hectare. Total no. of 5000 saplings will be planted and nurtured in 2.5 hectares in 3 years. In addition, for completing 40% of tree plantation as per the Ministry's OM dated 31/10/2019 regarding consideration of proposals in CEPI area, plantation will be done in additional 2 acres of acquired land within Focal Point, which will make 40.38% of plantation.

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

37.9.17 Name of EIA consultant: M/s. GreenCIndia Consulting Pvt. Ltd. [S.No.152, Certificate no. NABET/ EIA/1922/ RA 0159 and valid up to 27/10/2022; Rev. 10, May 13, 2021].

37.9.18 Control measures proposed to mitigate the anticipated pollution level

A. Air quality management

i. Reducing the PM emissions from 50 mg/Nm^3 to less than 30 mg/Nm^3

ii. Phasing out FO fired boiler to avoid SO_2, NO_x and PM emissions
iii. Utilizing clean fuel (PNG) for heating purposes in line with Regional Air Quality Management Strategy of Punjab Pollution Control Board
iv. Additional fugitive dust control measures: vacuum cleaning of roads; dust extraction system for RMHS; and dry fog dust suppression system for material storage yard
v. Predicted GLCs of PM_{10} is Below Detectable Limits

Parameter	**Current scenario**	**Post expansion scenario**	**Net Reduction**	**% change from current scenario**
Fuel oil consumption (KL/Annum)	9200	Nil	(9200)	(100%)
Natural gas (MSCM/Annum)	Nil	11.0	-	100% cleaner fuel
PM (kg/day)	455.2	357.5	(97.7)	(21.5%) Reduction
SO_2 (kg/day)	2496.5	846.7	(1649.8)	(66.0%) Reduction
NO_X (kg/day)	276.8	207.3	(69.5)	(25%) Reduction
Water consumption (m^3/day)	767.0	766.0	1	(0.13%) Reduction

B. **Water management**
- Specific water consumption will be significantly reduced by elimination of steam based Vaccum Degassing.
- Installation of STP and RO unit for recycling of wastewater and sewage
- Reuse of indirect contact water blow down for direct contact water System
- Commitment to use 300 KLD treated effluent from J.B.R. Technologies (CETP), Ludhiana
- ZLD will be implemented

C. **Solid waste management**
- Hazardous Waste Management disposal practices will be continued as per Hazardous and Other Waste (Management and Transboundary Movement) Rules 2016, as amended todate
- MOU signed with ACC Cement plant to utilize 100% of the slag generated

D. **Greenbelt**
- Fully grown 2070 trees are existing in the greenbelt covering area of 3.01 Acres within the plant boundary
- Additional 5000 long plantation will be done in additional 6.19 Acres land within the plant boundary to comply with 33% Greenbelt requirement
- 2 Acres of land within Focal Point - for geenbelt to meet 40% requirement.
- High Air Pollution Tolerance Index (APTI) species such as Ficus

religiose(peepul), Ficus benghalensis(Banyan), Ficus glomerate(Gular), Azadirachta indica(Neem), Albizia lebbeck(Siris), Moringa oleifera(Mungna), Tamarindus indica(Tamarind) and Holoptelea integrifolia(Indian Elm) selected for plantation

Certified compliance report from Regional Office:

37.9.19 The Status of compliance of earlier EC was obtained from Northern Regional Office, Chandigarh vide letter no.5-452/2013-RO (NZ)/87, dated 06.02.2020 in the name of M/s. Vardhman Special Steels Limited. As per the report, the unit is complying with the stipulated EC conditions.

37.9.20 M/s. Vardhman Special Steel Limited has earlier made an online application vide proposal no. IA/PB/IND/190704/2013 dated 31/12/2020. The proposal was considered by the EAC (Industry 1) in its 28th meeting of the Re-constituted EAC (Industry-I) held on 18–20th January, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee held during 18–20th January, 2021

37.9.21 The Committee noted the following:

i. An expansion project from 2 LTPA steel to 2.8 LTPA in Focal Point Industrial Area Ludhiana, a critically polluted area with CEPI index of 73.48.
ii. Action Plant suggested by Punjab State PCB for CEPI area of Focal point is not included in EMP chapter of EIA.
iii. Total land area is 11.23 ha. Only 3.01 Acre land (11%) is available in the plant for Green Belt Development. Additional 3.27 ha land away from plant site in split locations has been acquired by PP to make up for 40% green belt in split locations is envisaged to be planted in the land not owned by PP under some agreement with schools, community centers etc. This not acceptable as the green belt is to be planted in the land owned by PP.
iv. Ground and Surface water (767KLD) is used for running of the plant. Permission for GW (467 KLD) abstraction is to be renewed. Agreement to draw treated water (300kld) from a CETP in Ludhiana has been signed.
v. Geo and Soil Conservation specialists have not been included in the team for EIA report preparation.
vi. All signatures of team members in EIA are scanned.
vii. TOR point# 9 has not been complied with.
viii. RWH and recharge details have not been furnished.
ix. PM emission from chimneys has been indicated as 40 mg/nm^3 in EIA report.
x. 98 percentile value of PM_{10} at all 8 locations is higher than 100µg/m^3. Plant site is the most polluted with 179.3µg/m^3. $PM_{2.5}$ at plant site is 82.9µg/m^3.
xi. Soil sampling has not been done as per CPCB guidelines.
xii. Solid waste utilization plan are for the plant has not been detailed.
xiii. Plant is land locked and does not have space for green belt and at present polluted much beyond the acceptable limit.
xiv. EIA does not suggest any concrete plan to make the existing plant and proposed expansion environment friendly.

Recommendations of the Committee held during 18–20th January, 2021

37.9.22 In view of the foregoing and after detailed deliberations, the Committee recommended to return the proposal in present form.

37.9.23 M/s Vardhman Special Steels Limited has made again an online application vide proposal no. IA/PB/IND/208613/2013 dated 12/04/2021. The proposal was considered by the EAC (Industry 1) in its 35th meeting held on 30th April, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee held during 30th April, 2021

37.9.24 The Committee noted that the Consultant as well as the proponent has not revised the EIA/EMP report by incorporating the aforesaid observations of EAC.

Recommendations of the Committee held during 30th April, 2021

37.9.25 In view of the foregoing, the committee recommended to return the proposal in its present form as the project proponent has not submitted the revised EIA report by incorporating the observations made by the EAC in its meeting held on Jan 2021

37.9.26 M/s. Vardhman Special Steels Limited has made an online application vide proposal no. IA/PB/IND/212720/2019 dated 21/05/2021. Accordingly, the proposal was considered by the EAC (Industry 1) in its 37th meeting held on 31st May to 1st June, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

37.9.27 The Committee noted the following:

i. The EAC found that the revised 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.

ii. The EAC also noted that PP is switching over the fuel from Furnace oil to PNG in order to reduce the emission levels.

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

Recommendations of the Committee

37.9.28 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. Overall emissions of PM, SO_2 and NOx shall not exceed the values committed under para 37.9.18 above post expansion:

ii. Use of Furnace Oil as a fuel will be prohibited for the existing and expansion project.

Project proponent shall use PNG for heating purposes in line with Regional Air Quality Management Strategy of Punjab Pollution Control Board.

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

iv. Specific water consumption after expansion shall maintained at 0.95 m^3/t as committed by the PP.

v. 300KLD treated water from CETP of M/S JBR technologies shall be used in expansion project.

vi. All roads shall be made Pucca and a vacuum cleaner shall be used to clean the roads.

vii. Community RWH shall be taken up to recharge 230000 KLA water which is more than the annual consumption of the plant.

viii. Green belt inside the plant at present is only 3.01 Acres. Additional 6.19-acre land inside the plant shall be covered under green belt to make it 35 %. Two-acre land adjacent to the plant in the Focal Point has been given by authorities which shall be planted and maintained by PP. Total green belt after this shall be 40 % of the total project area.

ix. 100 % slag generated in the facility shall be utilized.

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

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 Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

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

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

v. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
vi. The project proponent shall provide primary and secondary fume extraction system at all heat treatment furnaces.
vii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
viii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall 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. 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.
iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
iv. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

VI. Waste management

i. Used refractories shall be recycled as far as possible.
ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces
iii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

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

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
ii. The project proponent shall carry out heat stress analysis for the workmen who work

in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

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

IX. Corporate Environment Responsibility

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

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

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

X. Miscellaneous

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

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

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

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

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

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

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned

authorities, commencing the land development work and start of production operation by the project.

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

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

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

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

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

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

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

37.10 Establishment of DRI Kilns to manufacture Sponge Iron –7,92,000 TPA, Induction Furnaces with CCM ,LRF, AOD, VD to manufacture MS Billets -9,24,000 TPA, Rolling Mill with Reheating Furnace & Coal Gassifier to produce Rolled Products -7,00,000 TPA, Submerged Electric Furnaces to manufacture Ferro Manganese-85,800 TPA/ Silico Manganese –72,600 TPA, WHRB based Power Plant -44 MW, AFBC based Power Plant- 136 MW, Wire Drawing Mill to manufacture HB Wire-2,00,000 TPA& Fly Ash brick manufacturing unit -7,00,000 TPA by **M/s. Sarda Energy and Minerals Limited** located at Nevnara Village, Berla Tehsil, **Bemetara District, Chhattisgarh** [Online Proposal No. IA/CG/IND/209667/2021; MoEF&CC File No. IA-J-11011/183/2021- IA.II(I)] **– Prescribing for Terms of Reference**– regarding.

37.10.1 M/s. Sarda Energy and Minerals Limited has made an application online vide proposal no. IA/CG/IND/209667/2021 dated 20/05/2021 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 and Non-ferrous) under Category "A." of the schedule of the EIA Notification, 2006.

Details submitted by Project proponent

37.10.2 The project of M/s. Sarda Energy and Minerals Limited located at Nevnara Village, Berla Tehsil, **Bemetara District, Chhattisgarh** is for Establishment of DRI Kilns to manufacture Sponge Iron –7,92,000 TPA, Induction Furnaces with CCM ,LRF, AOD, VD to manufacture MS Billets -9,24,000 TPA, Rolling Mill with Reheating Furnace &Coal Gasifier to produce Rolled Products -7,00,000 TPA, Submerged Electric Furnaces to manufacture Ferro

Manganese-85,800 TPA/ Silico Manganese –72,600 TPA, WHRB based Power Plant -44 MW, AFBC based Power Plant- 136 MW, Wire Drawing Mill to manufacture HB Wire-2,00,000 TPA& Fly Ash brick manufacturing unit -7,00,000 TPA.

37.10.3 Environmental site settings:

<table>
<tr><th>S No</th><th>Particulars</th><th>Details</th></tr>
<tr><td>i.</td><td>Total Land</td><td>79.239 hectares. (195.8 Acres).
In which 29.04 ha land belongs to M/s. Raipur Mega Food Park Pvt. Ltd. which is a Group Company of Sarda Energy & Minerals Limited & 50.199 ha land which is under joint ownership in which group company of Promoter Company of Sarda Energy & Minerals Limited hold the ownership. Agreements have been entered and land will be transferred to SEML within 4 months time.</td></tr>
<tr><td>ii.</td><td>Existence of habitation & involvement of R & R, if any</td><td>No habitation exists in project site; hence no R & R is involved.</td></tr>
<tr><td>iii.</td><td>Latitude and Longitude of the project site</td><td><table>
<tr><th>SNo</th><th>LATITUDE</th><th>LONGITUDE</th></tr>
<tr><td>1</td><td>21⁰ 26’ 03.30” N</td><td>81⁰ 34’ 08.10” E</td></tr>
<tr><td>2</td><td>21⁰ 26’ 07.30” N</td><td>81⁰ 33’ 58.20” E</td></tr>
<tr><td>3</td><td>21⁰ 26’ 05.70” N</td><td>81⁰ 33’ 46.20” E</td></tr>
<tr><td>4</td><td>21⁰ 26’ 01.28” N</td><td>81⁰ 33’ 34.10” E</td></tr>
<tr><td>5</td><td>21⁰ 25’ 51.10” N</td><td>81⁰ 33’ 27.10” E</td></tr>
<tr><td>6</td><td>21⁰ 25’ 44.20” N</td><td>81⁰ 33’ 18.60” E</td></tr>
<tr><td>7</td><td>21⁰ 25’ 33.60” N</td><td>81⁰ 33’ 15.80” E</td></tr>
<tr><td>8</td><td>21⁰ 25’ 23.40” N</td><td>81⁰ 33’ 23.50” E</td></tr>
<tr><td>9</td><td>21⁰ 25’ 23.43” N</td><td>81⁰ 33’ 42.03” E</td></tr>
<tr><td>10</td><td>21⁰ 25’ 54.10” N</td><td>81⁰ 33’ 43.50” E</td></tr>
<tr><td>11</td><td>21⁰ 25’ 52.45” N</td><td>81⁰ 33’ 59.00” E</td></tr>
</table></td></tr>
<tr><td>iv.</td><td>Elevation of the project site</td><td>265 m to 271 m AMSL</td></tr>
<tr><td>v.</td><td>Involvement of Forest land, if any</td><td>No Forest land is involved in the project site</td></tr>
<tr><td>vi.</td><td>Water body exists within the project site as well as study area</td><td>Project site: Nil

Study area:<table>
<tr><th>Water Body</th><th>Distance</th></tr>
<tr><td>Lor Nadhi</td><td>Adjacent/ East</td></tr>
<tr><td>Ghuri Nallah</td><td>Adjacent/ North</td></tr>
<tr><td>Kharoon River</td><td>6.1 Km/ East</td></tr>
</table></td></tr>
<tr><td>vii.</td><td>Existence of ESZ/ ESA/ National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve/ Elephant Reserve etc. if any within the study area</td><td>Nil</td></tr>
<tr><td>viii.</td><td>Forest within the study area</td><td>Nil</td></tr>
</table>

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

S. No.	Unit and product Details	Unit Configuration	Production capacity	Unit Configuration	Production capacity	Total
		PHASE -1		PHASE-2		
1	DRI Kiln (Sponge Iron)	2 x 600 TPD	3,96,000 TPA	2 x 600 TPD	3,96,000 TPA	7,92,000 TPA
2	Induction Furnace with CCM, LRF, AOD, VD (Steel Billet)	6 x 20 MT (7.5 nos. of crucibles) + 40 MT LRF + Argon Oxygen Decarburization (AOD) 40T + Vacuum Degasser (VD) - 40 T	4,62,000 TPA	6 x 20 MT (7.5 nos. of crucibles) + 40 MT LRF + Argon Oxygen Decarburization (AOD) 40T + Vacuum Degasser (VD) - 40 T	4,62,000 TPA	9,24,000 TPA
3	Rolling Mill with Reheating Furnace and Gasifier (Rolled products)	Mill – 3,50,000 TPA, RHF - 40 TPH	3,50,000 TPA	Mill – 3,50,000 TPA, RHF - 40 TPH	3,50,000 TPA	7,00,000 TPA
4	Coal Gasifier for Rolling Mill (Producer gas)	Hot Gasifier - 5 Modules of 3.2 meter. Total 14000 nm3/h	111 MNm^3/Annum	Hot Gasifier - 5 Modules of 3.2 meter. Total 14000 nm3/h	111 MNm^3/Annum	222 MNm^3/Annum
5	Submerged Electric Furnaces - Ferro Alloys Plant	2 x 12 MVA	FeMn-42,900 TPA/ SiMn-36,300 TPA	2 x 12 MVA	FeMn-42,900 TPA/ SiMn-36,300 TPA	FeMn-85,800 TPA/ SiMn-72,600 TPA
6	Power generation through WHRB	2 x 11 MW WHRB	22 MW	2 x 11 MW WHRB	22 MW	44 MW
	Power generation through AFBC Boiler	2 x 19 MW + 1 x 30 MW	68 MW	1 x 30 MW + 1 x 38 MW	68 MW	136 MW
7	Wire Drawing Mill	1 x 1,00,000 TPA	1,00,000 TPA	1 x 1,00,000 TPA	1,00,000 TPA	2,00,000 TPA
8	Fly ash Bricks manufacturing unit	1 x 3,50,000 TPA	3,50,000 TPA	1 x 3,50,000 TPA	3,50,000 TPA	7,00,000 TPA

37.10.5 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.	**For DRI Kilns (Sponge Iron) – 7,92,000 TPA**				
a)	Iron ore	13,16,304	NMDC Bacheli/	~ 500	By rail & road

S No	Raw Material	Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport
			OMC		(through covered trucks)
b)	Indian Coal	9,63,864	SECL, GarePlama IV	~ 280	By rail & road (through covered trucks)
c)	Dolomite	39,600	Chandrapur	~ 550	By road (through covered trucks)
2.	**For Steel Melting Shop (Steel Billets) – 9,24,000 TPA**				
a)	Sponge Iron	8,48,232	Own generation & external purchase	~ 100	Through covered conveyers
b)	MS Scrap	1,94,964	Own generation /Chhattisgarh	~ 200	By road (through covered trucks)
c)	Recovered iron from IF slag	18,480	Own generation	---	By road (through covered trucks)
3.	**For Rolling Mill – 7,00,000 TPA**				
a)	Steel Billets	7,14,000	Own generation	---	----
b)	Coal (Gasifier)	1,08,500	SECL, GarePlama IV	~ 280	By rail & road (through covered trucks)
4.	**For AFBC Boiler [Power Generation:136 MW]**				
a)	Indian Coal	7,86,240	SECL, GarePlama IV	~ 280	By rail & road (through covered trucks)
b)	Dolochar	134,640	In plant generation	---	through covered conveyors
5.	**For Ferro Alloys (4 x 12 MVA)**				
(i)	*For Ferro Manganese – 85,800 TPA*				
a)	Manganese ore	2,05,920	Vizag Port	~ 600	By Rail & Road (through covered trucks)
b)	Coke/coal	55,770	SECL, GarePlama IV	~ 280	By road (through covered trucks)
c)	Flux	17,160	Raipur	~ 100	By road (through covered trucks)
(or)					
(ii)	*For Silico Manganese – 72,600 TPA*				
a)	Manganese Ore	1 63 335	Vizag Port	~ 600	By Rail & Road (through covered trucks)
b)	Coke	9440	Vizag Port	~ 600	By Rail & Road (through covered trucks)
c)	Coal	44,600	SECL, GarePlama IV	~ 280	
d)	FeMn Slag	21,780	Own generation	---	----
e)	Quartz	7,260	Mandla	~ 250	By road (through covered trucks)
f)	Dolomite	3,630	Chandrapur	~ 550	By road (through covered trucks)
6.	**Wire Drawing Mill – 2,00,000 TPA**				
a)	Coil	2,03,000	Own generation	---	----
7.	**Bricks Plant-7,00,000 TPA**				
a)	Fly Ash(PP)	356031	Own generation	---	----
b)	Fly Ash (DRI)	138600	Own generation	---	----
c)	Slag (IF)	110880	Own generation	---	----
d)	Ash + cinder (Gasifier)	43400	Own generation	---	----
e)	Accretion (DRI)	9504	Own generation	---	----

S No	Raw Material	Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport
f)	Wet Scrapper (DRI)	19800	Own generation	---	----
g)	Cement	21785	From cement plants	~ 200 Kms.	By road (through covered trucks)

37.10.6 Water consumption for the proposed project will be 7646 KLD, which will be met from Kharoon River (at a distance of 6.1 Km from project site). Permission for drawl of water from Water Resources Department, Government of Chhattisgarh will be obtained.

37.10.7 The total power requirement for the proposed project will be about 180 MW, this will be met from captive power plant of 180 MW.

37.10.8 The capital cost of the project is Rs. 2370 Crores. Proposed employment generation from proposed project will be 4540 nos. through direct employment and 500 nos. through indirect employment.

37.10.9 Proposed Terms of Reference (Baseline data collection period: 1st March 2021 to 31st May 2021):

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
A. Air			
a. Meteorological parameters	1	On hourly basis for one season	• Wind Speed • Wind Direction • Temperature • Relative Humidity • Rainfall
b. AAQ parameters	8	24 hourly Twice a week for One Season	Parameters Monitored: $PM_{2.5}$, PM_{10}, SO_2, NOx and CO, Respirable Suspended particulate matter (RSPM) analysis for trace elements, for presence of Poly-Aromatic Hydrocarbons (PAH), i.e. Benzene soluble fraction, Chemical characterization
B. Noise	8	On hourly basis for 24 Hrs. at each station	Parameters Monitored: • Day equivalent • Night equivalent
C. Water			
a. Ground Water	8	One sample at each of the locations	Parameters Monitored: as per IS: 10500
b. Surface Water	8	One sample at each of the locations	Parameters Monitored: as per BIS: 2296

Attributes	Sampling		Remarks
	No. of Stations	**Frequency**	
D. Land			
a. Soil quality	8	One sample at each of the locations	Parameters 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
E. Biological			
a. Aquatic	--	Once in Season	---
b. Terrestrial	--	Once in Season	---
F. Socio economic parameters	--	Once in Season	Social Impact Assessment will be carried out by concerned FAE for study area

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

37.10.11 Name of the EIA Consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No.130 in the List of ACOs and NABET certificate vide no. NABET/EIA/1922/RA0149 valid till 22-03-2022; Rev. 10, May 13, 2021].

37.10.12 The proposal was considered by the EAC (Industry 1) in its 37th meeting held on 31st May, 1st June, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

37.10.13 The Committee noted the following:

i. Total land available for the plant is 79.239 ha.
ii. Plant configuration is 4x600 TPD DRI; 12x20 T IF; 0.7 MTPA RM; 10x 14000 Nm3 /hr PGP; 4x12 MVA SAF; WHRB x 11MW, and 130 MW AFBC, 200000 TPA WRM and 700000 TPA brick Plant.
iii. The boundary of the plant is adjacent to River LORU.
iv. Site is connected to Berla -Urla road by village road at a distance of 370 m.
v. Truck parking area is not adequate for 25 % load parking.

Recommendations of the Committee

37.10.14 After detailed 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 <u>Annexure I read with additional ToRs at Annexure-2:</u>**

i. The proposed plant boundary is adjacent to River LORU. HFL and Flood mapping details are to be furnished in EIA report. The project shall not be located in any form within the river flood plain corresponding to one in 25 years flood, as certified by competent authority of the concerned State. Competent authority should be level of

District magistrate/ Executive Engineer from state water resource department and must be based on study/ analysis and long term data/ observations.

ii. Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by rail/road with anticipated rakes/vehicles details, line source modelling and infrastructure strengthening details etc., These details shall be included in the EIA report.

iii. No ground water shall be drawn for the proposed project activity.

iv. Mass balance as well as energy balance of the steel plant shall be submitted.

v. PP shall manufacture only FeMn and SiMn. For FeCr production EC shall be obtained from MoEF&CC.

vi. Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.

vii. Action plan for fugitive emission control in the plant premises shall be provided.

viii. Action plan for green belt development covering 33% of the plant area shall be submitted including green belt development towards river Loru (within the project area) which is located adjoining the plant boundary.

ix. Scheme for landscaping on both banks of the River LORU in the direction towards the village Kota. The landscape should be aimed at noise reduction by creating earthen bunds on both sides planted with grasses, herbs, shrubs and suitable trees.

x. Action plan for 100 % solid waste utilization shall be submitted.

xi. Action plan for rain water harvesting shall be submitted.

xii. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

xiii. Air Cooled condensers shall be used in Captive Power Plant.

37.11 Expansion of Integrated Steel Plant from 4.5 MTPA Liquid Steel to 25.2 MTPA Liquid Steel (24.79 MTPA crude steel) and 12.5 MTPA Cement by **M/s. Jindal Steel & Power Limited** located at village Kerjang, Tehsil Chhendipada, **District Angul, Odisha** [Online Proposal No. IA/OR/IND/212826/2021; MoEF&CC File No. IA-J- 11011/365/2006-IA.II(I)] – **Amendment in Terms of Reference** – regarding.

37.11.1 M/s. Jindal Steel & Power Limited has made an online application vide proposal no. IA/OR/IND/212826/2021 dated 21/05/2021 along with Form 3 and sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. J-11011/365/2006-IA-II(I) dated 08/02/2021. The proposed project activity is listed at 3(a) Metallurgical industries (ferrous & nonferrous), 3(b) Cement plants, 4(b) Coke oven plants 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

37.11.2 The ToR for the Expansion of Integrated Steel Plant from 4.5 MTPA Liquid Steel to 25.2 MTPA Liquid Steel (24.79 MTPA crude steel) and 12.5 MTPA Cement by M/s. Jindal Steel & Power Limited located at village Kerjang, Tehsil Chhendipada, District Angul, Odisha was accorded by MoEF&CC vide letter no. J-11011/365/2006-IA-II(I) dated 08/02/2021.

37.11.3 During consideration of the proposal at the time of grant of ToR, the EAC observed that the existing project was obtained Environment Clearance during 22/02/2007 for setting up of 6

MTPA Integrated Steel plant (ISP). However, as per the implementation status furnished by the PP, only 4.5 MTPA ISP has been commissioned. In view of this, the instant expansion proposal may be titled as expansion from 4.5 to 25.2 MTPA in place of expansion from 6.0 to 25.2 MTPA. Further, no construction activity shall be undertaken with respect to the unimplemented facilities envisaged under the EC dated 22/02/2007 as the EC validity period has already been expired.

37.11.4 In this regard, M/s. JSPL submitted a representation to the Ministry on 29/01/2021 stating that in their EC amendment letter dated 08/02/2017, MoEF&CC clarified that validity of EC refers to start of production by the project/activity, it does not say start of full production as per the sanctioned environment clearance capacity. In view of this, the environment clearance gets completed if the project starts the production within the validity period. In view of this, PP claimed that they have started the ISP production within the validity period and the query regarding validity period of EC does not arise. By considering these points, PP has requested ToR may be accorded for the capacity of 6 to 25.2 MTPA ISP capacity. In view of this, Ministry has informed the project proponent to apply for ToR amendment. Accordingly, the instant application has been submitted by the proponent seeking amendment in the ToR dated 08/02/2021 and also sought for amendment in the Oxygen plant, power plant and pellet plant capacity.

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

S No.	**Plant**	**As per approved TOR**		**As per proposed modification**		**Final after proposed modification in TOR**	
		Configuration	**Capacity**	**Proposed Configuration**	**Proposed Capacity**	**Final Configuration**	**Final Capacity**
1.	Coal Gasification plant	7x37500 Nm^3/hr	$2100x10^6$ $Nm^3/year$	-	-	7x37500 Nm^3/hr	$2100x10^6$ $Nm^3/year$
2.	DRI Plant	2x2 MTPA 2x2.7 MTPA	9.4 MTPA	-	-	2x2 MTPA 2x2.7 MTPA	9.4 MTPA
3.	Coke Oven	4x72 ovens 2x63 ovens 6x54 ovens	7.6 MTPA	-	-	4x72 ovens 2x63 ovens 6x54 ovens	7.6 MTPA
4.	Sinter Plant	2x490.5 m^2	10.75 MTPA	-	-	2x490.5 m^2	10.75 MTPA
5.	Blast Furnace	1x4554 m^3 1x5400 m^3 2x6000 m^3	18.75 MTPA	-	-	1x4554 m^3 1x5400 m^3 2x6000 m^3	18.75 MTPA
6.	EAF	3x250 T	7.5 MTPA	-	-	3x250 T	7.5 MTPA
7.	BOF	2x250 T 3x380 T	17.7 MTPA	-	-	2x250 T 3x380 T	17.7 MTPA
8.	Plate mill	1x2.0 MTPA	2.0 MTPA	-	-	1x2.0 MTPA	2.0 MTPA
9.	Bar Mill	1x1.4 MTPA	1.4 MTPA	-	-	1x1.4 MTPA	1.4 MTPA
10.	Wire Rod mill	1x1.2 MTPA	1.2 MTPA	-	-	1x1.2 MTPA	1.2 MTPA
11.	Hot Rolling mill	1x3.6 MTPA 3x6 MTPA	21.6 MTPA	1x3.1 MTPA 3x6 MTPA	21.6 MTPA	1x3.1 MTPA 3x6 MTPA	21.6 MTPA

S No.	Plant	As per approved TOR		As per proposed modification		Final after proposed modification in TOR	
		Configuration	Capacity	Proposed Configuration	Proposed Capacity	Final Configuration	Final Capacity
12.	CRM Complex	3x2.5 MTPA	7.5 MTPA	-	-	3x2.5 MTPA	7.5 MTPA
13.	Calcination plant	15x600 TPD 2x500 TPD	10,000 TPD	-	-	15x600 TPD 2x500 TPD	10,000 TPD
14.	Oxygen plant	2x1200 TPD 3x200 TPD 2x2000 TPD 3x3600 TPD	17,800 TPD	2x1200 TPD 6x200 TPD 1x2000 TPD 1x1710 TPD 3x3600 TPD	18,110 TPD	2x1200 TPD 6x200 TPD 1x2000 TPD 1x1710 TPD 3x3600 TPD	18,110 TPD
15.	Power Plant	6x135 MW (coal based) 1x300 MW, 1x250 MW (Gas based)	1360 MW	6x135 MW (Coal based) 1x350 MW, 1x250 MW (Gas based)	1410 MW	6x135 MW (Coal based) 1x350 MW, 1x250 MW (Gas based)	1410 MW
16.	Ferro-alloy plant	1x18 MVA 1x15 MVA 4x45 MVA 1x15 MVA 1x6 MVA	0.376 MTPA	-	-	1x18 MVA 1x15 MVA 4x45 MVA 1x15 MVA 1x6 MVA	0.376 MTPA
17.	Pellet plant	4x 7 MTPA	28 MTPA	3x7 MTPA 1x5 MTPA	26 MTPA	3x7 MTPA 1x5 MTPA	26 MTPA
18.	Cement plant	3x3.5 MTPA 1x2 MTPA	12.5 MTPA	-	-	3x3.5 MTPA 1x2 MTPA	12.5 MTPA
19.	Iron ore slurry	2x18 MTPA	36 MTPA	-	-	2x18 MTPA	36 MTPA

37.11.6 Details of other changes in the proposed TOR modification are:

Reference of approved TOR	As per TOR dated 08/02/2021	Proposed amendment
Subject of TOR	Expansion of Integrated steel plant from 4.5 MTPA liquid steel to 25.2 MTPA liquid steel (24.79 MTPA crude steel) and 12.5 MTPA Cement	Expansion of Integrated steel plant from 6 MTPA liquid steel to 25.2 MTPA liquid steel (24.79 MTPA crude steel) and 12.5 MTPA Cement
Point. No. 2	The project of M/s. Jindal Steel & Power Ltd. located in Kerjang village, Chhendipada, Angul, Odisha is for expansion of Integrated steel plant from 4.5 MTPA liquid steel to 25.2 MTPA liquid steel (24.79 MTPA crude steel) and 12.5 MTPA Cement	The project of M/s. Jindal Steel & Power Ltd. located in Kerjang village, Chhendipada, Angul, Odisha is for expansion of Integrated steel plant from 6.0 MTPA liquid steel to 25.2 MTPA liquid steel (24.79 MTPA crude steel) and 12.5 MTPA Cement
Point. No.18 (i)	However, as per the implementation status furnished by the PP, only 4.5 MTPA ISP has been commissioned. In view of this, the instant expansion proposal may be titled as expansion from 4.5 MTPA to 25.2 MTPA in place of expansion from 6.0 MTPA to 25.2 MTPA. Further no construction activity	JSPL has implemented 6.0 MTPA ISP. Thus the instant expansion proposal is from 6 MTPA to 25.2 MTPA. No construction activity shall be undertaken for facilities beyond the existing EC.

Reference of approved TOR	As per TOR dated 08/02/2021	Proposed amendment
	shall be undertaken with respect to the unimplemented facilities envisaged under the EC dated 22.02.2007 as the EC validity period has already been expired.	
Point. No.19 (ii)	No construction activity shall be undertaken with respect to the unimplemented facilities envisaged under the EC dated 22.02.2007	To be deleted

37.11.7 The project proponent mentioned that the facility of steel plant with capacity of 6.0 MTPA has been implemented before applying for terms of reference for expansion project, but the Consent to Operate was obtained only for 4.5 MTPA of Steel plant.

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

37.11.9 Name of the EIA consultant: M/s. JM EnviroNet Pvt Ltd [S. No.42, List of ACOs with their Certificate no. NABET/EIA/2023/RA 0186 and valid up to 07/02/2023; Rev. 10, May 13, 2021].

Observations of the Committee

37.11.10 It was apprised to the EAC the instant amendment proposal is arising out of the EC amendment letter dated 08/02/2017 accorded to the proponent and its applicable only for the project under consideration. In this regard, the Committee noted the following:

i. Project proponent has reportedly installed the facilities for 6 MTPA Integrated Steel Plant capacity. However, the CTO has been obtained from Odisha Pollution Control Board for only 4.5 MTPA capacity. However, the PP needs to submit necessary documents in support of their claim.

ii. Project proponent also sought for sought for amendment in the Oxygen plant, power plant and pellet plant capacity.

Recommendations of the Committee

37.11.11 In view of the foregoing and after deliberations, the Committee recommended for amendment in ToR dated 08/02/2021 as mentioned at paragraph 37.11.6 above subject to the stipulation of following additional ToRs:

i. Document indicating that installed capacity of the integrated steel plant as 6 MTPA supported by the certificate from equipment supplier shall be submitted.
ii. Consolidated point wise compliance status to all the conditions prescribed in the EC dated 22/2/2007 and its subsequent amendments from the concerned Regional Office of the MoEF&CC shall be submitted.

37.12 Expansion of Alumina Refinery (1 MTPA to 4 MTPA) and Captive Power Plant (75 MW to 285 MW) by **M/s. Vedanta Limited**, located at Lanjigarh **District Kalahandi Odisha** [Online Proposal No. IA/OR/IND/209784/2021, File No. J- 11011/406/2011- IA.II (I)] – **Amendment in Environment Clearance regarding phase III Alumina Refinery** – regarding.

37.12.1 M/s. Vedanta Limited has made an online application vide proposal no. IA/OR/IND/209784/2021 dated 22/04/2021 along with Form 4 and sought forAmendment / Clarification in Environmental Clearanceaccorded by the Ministry vide letter no. J – 11011/406/2011/IA. II(I) dated 20/11/2015. The proposal was considered by the EAC in its meeting held on 18-19th May, 2021 wherein the Committee sought additional information on the red mud pond design. Reply to the additional information was submitted on 29/05/2021.

Details submitted by the project proponent

37.12.2 M/s. Vedanta Limited submitted their application to MoEF&CC on 19/08/2014 for grant of EC for expansion of (**1MTPA to 6 MTPA** – Phase I: 1 to 2 MTPA; Phase II: 2 to 4 MTPA and Phase III: 4 to 6 MTPA) Alumina Refinery and Captive Power Plant (from 75MW to 285MW) at Dist. Kalahandi, Odisha. As per the proposal submitted to MoEF&CC, the total project area is 1552.7 ha. Out of this total area, 833.17 + 53.5 ha is under advanced stage of acquisition and the balance 666.03 ha was yet to be acquired. Since the total land required for the project activity was not under the possession of proponent, the EC was accorded for the expansion of Alumina Refinery (**1 MTPA to 4 MTPA**) and Captive Power Plant (75 MW to 285 MW) on 20/11/2015. **As per para no. 26 of the EC dated 20/11/2015, the project need not go through a fresh appraisal process again for the Phase -III expansion from 4 to 6 MTPA and stipulated a following specific condition:**

"v. For Phase-III (6 MTPA), the proponent shall obtain an amendment of EC after completion of land acquisition of the balance area of 666.03ha".

37.12.3 The phase wise land break up for the alumina refinery as per EC dated 20/11/2015 is furnished as below.

S.No.	Facility	Existing area (ha)	Addl.land for Phase I (ha)	Addl.land for Phase II	Addl.land for Phase III	Total
1.	Main Plant with greenbelt	420	0	0	0	**420**
2.	Red Mud Storage Pond with green belt	211.47	0	53.5 ha (process of acquisition initiated)	518.03 (yet to be acquired)	**783**
3.	Ash Pond with Pipeline with greenbelt	95.4	0	0	80 (yet to be acquired)	**175.4**
4.	Township & Misc	52.5	0	0	28 (yet to be acquired)	**80.5**

S.No.	Facility	Existing area (ha)	Addl.land for Phase I (ha)	Addl.land for Phase II	Addl.land for Phase III	Total
	including greenbelt					
5.	Railway including Greenbelt	53.8	0	0	40 (yet to be acquired)	**93.8**
	TOTAL	**833.17 ha**	**0**	**53.5**	**666.03 ha**	**1552.7 ha**

37.12.4 The instant amendment proposal is for seeking amendment in the EC dated 20/11/2015 as given below:

i. As per the assessment done by Industrial Promotion & Investment Corporation of Odisha (IPICOL), the nodal agency of Government of Odisha through Engineers India Limited (EIL)have assessed that the total additional land required for expansion to 6 MTPA is of only 666 acres i.e. 269.52 hectare as against 666 ha prescribed in the EC dated 20/11/2015. The major additional land requirement for red mud storage got reduced **to 263.5 ha against 571.53 ha** as per EC 2015 due to adoption of new technology and conversion from Wet disposal to Dry disposal of red mud.

ii. Technical justification for Reduction of Land requirement for Red mud storage is due to following points to be adopted for disposal of red mud.
   a) Switching from Wet disposal to Dry disposal through red mud Filtration unit by reducing the moisture percentage to 20-25%.
   b) Adoption of Wick drain technology in the earlier Wet red mud storage area for extraction of moisture content and utilize the area for Dry stacking.
   c) Adoption of stage-wise dry stacking methodology with proper design analysis.
   d) Development of a new red mud disposal area contiguous to the existing red mud disposal area so as to increase the base the of the dry stacking as well as height of the stack.
   e) Separate storage to handle the run-off water of red mud stacking area during monsoon.

   It is to be noted that with dry mud stacking; the disposal area is not a pond but a dry disposal area for Bauxite Residue.

iii. Design aspects of red mud storage area with Dry disposal with increasing Height
   M/s Vedanta appointed M/s Golder Associates who has experience in dry stacking of tailings. It is a 60-year-old company in the field of consulting, design and construction services in earth, environment and energy and has huge experience in tailing dams.

   Based on M/s. Golder Associates design report, the following points need to be ensured for the safe disposal of dry red mud.

   a) Stacking height will vary from **RL 463m to RL 550m**
   b) At the center of the dry stack, the **height will be 87m**. The overall slop is very safe at 4. 5H:1V.
   c) Height of each stack limited to 7m height.

d) Berm width of 15m to be kept after each stack
e) Side slope over the wick drain area to be kept 3H: 1V and in other area 2H: 1V
f) 500mm thickness of soil blanketing to be done outer surface of the slope followed by coir mats with seeding for green vegetation.
g) After reaching the final height of proposed stack, slope to be regraded & convert to single slope which will be kept in 4.5H: 1V.

After completion of design by M/s Golder, for reassurance of the safety of the proposed design M/s Vedanta Limited (VL) had taken the services from IIT, Bhubaneswar for independent analysis. Dr. B Hanumantha Rao, Asst.Prof. IIT, Bhubaneswar had done the analysis through simulation for the proposed dry red mud stack. The action plan delineated by the IIT, Bhubaneshwar are as below:

Emergency Response Plan for risk management: This report primarily comprises of emergency preparedness and response plan under an eventuality of breach in dyke of existing or proposed new solid waste red mud storage facility. The action plan is prepared considering two scenarios: breach in dyke of the red mud storage facility and rupture of red mud slurry carrying pipeline. The report highlighted Emergency Command Structure in G-shift working hours and silent hours, which comprises of combat group, Rescue team and Communication coordination group. The duties and responsibility of each group also clearly mentioned in the report.

Checklist of monitoring tailings storage facility: The monitoring check list comprised of reporting the present condition of tailings storage on Daily, Weekly, Monthly, and Quarterly basis, which follows a hierarchy.

Instrumentation for monitoring of tailings storage facility: The monitoring aspects include sliding of the slope, fluctuation in seepage and settlement of embankment. The action plan delineates monitoring of these aspects by installing vibrating wire piezometer in wick drain area, piezometer in dykes for the pore pressure measurement & calculation of FOS (factor of safety), survey monuments in the embankment and inclinometer on the slope of the starter embankment. Through these instruments, safety of the dyke will be monitored on regular basis to avoid any critical situations. It is also recommended to monitor the pore pressure so that pore pressure should not increase beyond 40KPa and 55KPa in stage-1L & 2B-2.

Water Management: The action plan addresses two aspects of water management: surface runoff water within the stacking area and fresh water coming from hillside catchment area. Surface runoff from the stacking area will be diverted into process water lake which is utilized internally by VL. To manage the fresh water, it is first collected in the storm water pond to be constructed on the upstream side of stacking area and shall be released into natural stream or nalla. The action plan by VL on the recommendation of IIT Bhubaneswar for utilization of fresh water is by implementation of 100% pumping system.

Closure plan: The action plan on Closure plan includes regrade the slope by benching,

redesign of toe drain, covering the red mud with 500 mm thick natural soil, covering the natural soil with coir mats and plantation on coir mats to minimize the precipitation infiltration, to enhance the greenery, and to reduce the erosion.

Post closure monitoring plan: Action plan on post closure includes erosion prevention by gully formations, habitat assessment, retention of greenery by monitoring the surveillance of plant species, quality checking of surface water and ground water on regular basis, and land use for beneficial purpose.

Dam break analysis to minimize the impact on Environment and human habitat: M/s Golder Associates vide report no.: 1786571/A.0 has submitted a detailed report on dam break analysis of red mud storage facility. Action plan of VL is to evacuate the habitants of Bundel village and the habitants of the temporary shops developed near to the plant gate with the help of rescue team and shift the habitants to safe location. Action plan of VL also includes to have material resources such as 3600 sandbags, 360 m^3 of boulders, 300 m^3 of stone aggregates and 120 m^3 of stone clips to hinder the flow of debris under contingency plan.

iv. Total land requirement for 6 MTPA Alumina as recommended by EIL (appointed by Government of Odisha through IPICOL in October 2018 is 1102.54 ha. Out of total area, the land under possession and acquisition is 833.17 ha and 269.63 ha respectively. Out of 269.63 ha, 87.81 ha is in final stage of acquisition and land filed for acquisition is 183.7 ha.

v. Following is the Configuration & capacity change granted in EC vis-a-vis with the proposed changes in configuration & capacity of units:

S No	EC condition	Capacity as per EC letter dated 20/11/2015	Amendment	Remarks
1	Specific Condition no v of the Environmental clearance F. No. J-11011/406/2011-IA II(1) dated 20/11/2015	"For Phase-III (6 MTPA), the proponent shall obtain an amendment of EC after completion of land acquisition of the balance area of 666.03 ha detail of which will be furnished to MoEF&CC."	For phase-III (6MTPA), the proponent shall acquire a land of 666 acres.	This condition for amendment from 4 MTPA to 6 MTPA.
2	Specific Condition no (xxiii) of the EC dated 20/11/2015	Of the total area of 1552.65 ha. an area of 512.37 ha (33%) shall be developed into green belt. Of this,	In view of proportionate reduction in Green belt land requirement by IPICOL, the	Present green belt is 29% of land in possession

S No	EC condition	Capacity as per EC letter dated 20/11/2015	Amendment	Remarks
		a total of 215.20 ha of green belt have been developed and the balance area of 297.17 ha shall also be brought under plantation, which includes plantation in a width of 15-20m along the remaining boundary wall of 3km of the 8km.	condition will be read as under: "Of the total area of 1102.54 ha. an area of 363.83 ha (33%) shall be developed into green belt. Of this, a total of 278.21 ha of green belt have been developed and the balance area of 85.62 ha shall also be brought under plantation, which includes plantation in a width of 15-20m along the remaining boundary wall of 3km of the 8km."	

37.12.5 The total land estimated for production of 6.0 MTPA Alumina at the time of grant of EC was 1552.7ha. This was finally revised to 1102.54 ha by IPICOL based on the report of EIL. No additional land is required to set up the main plants covered in three phases. But additional land will be required exclusively for **(a) storing Bauxite Residue up to year 2045 after commencement of 6.0 MTPA Alumina production by year 2025, (b) development of additional green belt and (c) development of Railway line which are requirement after production is started.**

37.12.6 Detailed presentation was made by the project proponent inter-alia reduction in project area, issues related to red mud pond design & stability and lay out etc. Further, the land break up requirement as per the EC dated 20/11/2015 and proposed EC amendment is given as below.

S.No.	Facility	Total land (ha) for 6 MTPA alumina refinery as per EC dated 20/11/2015	Proposed amendment in land (ha) as per PP	Remarks
1.	Main Plant with greenbelt	420	284.5	420 ha in EC included Conveyor & Mines approach road and part

S.No.	Facility	Total land (ha) for 6 MTPA alumina refinery as per EC dated 20/11/2015	Proposed amendment in land (ha) as per PP	Remarks
				of Railway siding
2.	Red Mud Storage Pond with green belt	783	432.4	Reduction in land due to Dry disposal of red mud cake to optimum height
3.	Ash Pond with Pipeline with greenbelt	175.4	91.1	As per MoEF&CC norms, 0.32 ha/MW of land comes to 92.3 ha of land requirement for 285MW power plant. EIL also considered 50% ash utilization. At present, ash utilization is 100% since last three years. With the above scenario and the utilization of ash by Fly ash brick industries, no additional land is required for Ash pond
4.	Township & Misc including greenbelt	80.5	72.7	As per EIL assessment, the exiting township area of 52.5 ha (129.7 acres) is sufficient to cater to the need of additional manpower requirement of 6 MTPA by constructing multiple high-rise apartments. Remaining area is for green belt development.
5.	Railway including Greenbelt	93.8	145.2	EIL also considered the railway sidings of bauxite and coal inside plant.
6.	Air strip	--	29.2	Considered in Main plant area during EC accorded on 20/11/2015
7.	Conveyor & Mines	--	47.8	
	TOTAL	**1552.7 ha**	**1102.9 ha***	

**Note –Total land is 1102.9 ha inter-alia including Forest land of 26.244 ha for which stage II forest clearance has been accorded by MoEF&CC vide letter no. 5-ORC264/2015-BHU dated 12/11/2020. Out of the total land, the land under possession and acquisition is 833.17 ha and 269.63 ha respectively. Out of 269.63 ha, 87.81 ha is in final stage of acquisition and land filed for acquisition is 183.7 ha. To this effect, PP has submitted a letter*

number IDCO LAE-7667/2021-4760 dated 12/03/2021 issued by IDCO. In addition, PP informed that the air strip was established and commissioned after obtaining approval from Airport Authority of India on 15/05/2006 and is not meant for commercial purpose. The said air strip does not require environmental clearance under the provisions of EIA, 1994 and EIA, 2006.

37.12.7 One court case is pending at NGT, Kolkata as on date: Shri Prafulla Samantaray, a self-proclaimed environmental activist, has filed an appeal against the order of MOEF&CC granting EC for expansion of Alumina Refinery from 1 to 4 MTPA and CPP from 75 to 285 MW dated 20.11.2015. The appeal (No. 16 of 2014) has been filed before National Green Tribunal, Kolkata Bench. In the said appeal, one Misc. case (MA No. 333/2016/EZ) has also been filed for condonation of delay in filing appeal. The matter would be posted for hearing of the arguments, however the same has not been heard by the Hon'ble Tribunal. No interim order has been passed by Hon'ble Tribunal in this matter.

37.12.8 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.

37.12.9 Name of the EIA Consultant: GLOBALTECH Enviro Experts Pvt. Ltd. [S.No.94 in the List of ACOs with their Certificate / Extension Letter no. Rev. 10, May 13, 2021].

37.12.10 M/s Vedanta Limited has earlier made an online application vide proposal no. IA/OR/IND/203399/2021 dated 13/03/2021. The proposal was considered by the EAC (Industry 1) in its 33rd meeting held on 30-31st March, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee held during 30–31st March, 2021

The EAC noted the following:

i. The land required for the expansion of Alumina refinery from 4 to 6 MTPA has been reduced from 666 ha to 666 acres. No justification is provided regarding the reduction in land area nor the requisite supporting study report of M/s. Engineers India Limited provided.

ii. It was apprised that reduction in land requirement will be achieved by increasing the height of red mud pond up to 55 meters. However, no scientific study report has been made available with respect to stability of red mud pond.

iii. The revised land of 666 acres is yet to be acquired by the PP. No alternate proposal for red mud management has been submitted in the event of non-acquisition of revised land of 666 acres (or) contagious land for red mud disposal.

iv. The land use break up for the Alumina refinery based on the reduced land requirement has not been furnished.

v. Plant layout depicting the phase wise alumina refinery with green belt and allied facilities such as red mud pond and revised ash pond has not been made available.

vi. In addition to the EC amendment, PP also sought for change in configuration of the alumina refinery - Phase 1 from 2.0 to 2.1 MTPA by debottlenecking, Phase 2 from 4 to 4.9 MTPA by adding 2.8 MTPA stream and Phase 3 from 4.9 to 6 MTPA by adding 1.1 MTPA stream.

vii. PP has commissioned only 2.0 MTPA Alumina refinery till date as against the sanctioned capacity of 4 MTPA.

Recommendation of the Committee held during 30–31st March, 2021

In view of the foregoing and after deliberations, EAC opined that additional clarification on the observations made above is required. The proposal therefore is returned in its present form to address the shortcomings. Further, the Committee asked the PP to obtain EC amendment for alumina refinery expansion from 4 to 6 MTPA with reduced land requirement from 1552.3 ha to 1102.9 ha and thereafter separate application should be submitted for change in configuration of alumina refinery.

37.12.11 M/s. Vedanta Limited has again made an online application vide proposal no. IA/OR/IND/209784/2021 dated 22/04/2021 by incorporating the observations of EAC made during 30-31st March, 2021. The proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021, wherein EAC sought additional information regarding red mud pond design. PP submitted the ADS reply on 29/05/2021 and placed before EAC for consideration in its meeting held on 31/05/2021 to 1/6/2021.

Observations of the Committee

37.12.12 The Committee noted that the project proponent is seeking following amendments in the EC dated 20/11/2015 as per the stand taken by the Ministry during the accord of the said EC with reduced land requirement.

a. Subject matter of the EC dated 20/11/2015

Expansion of Alumina Refinery (1 MTPA to 6 MTPA) and Captive Power Plant (75 MW to 285 MW) by **M/s. Vedanta Limited**, located at Lanjigarh **District Kalahandi Odisha**

b. Total area of the project shall be 1102.54 ha in place of 1552.7 ha. The land area break up for 1102.54 ha is as below.

S.No.	Facility	Total land (ha) for 6 MTPA alumina refinery
1.	Main Plant with greenbelt	284.5
2.	Red Mud Storage Pond with green belt	432.4
3.	Ash Pond with Pipeline with greenbelt	91.1
4.	Township & Misc including greenbelt	72.7
5.	Railway including Greenbelt	145.2
6.	Air strip	29.2
7.	Conveyor & Mines	47.8
	TOTAL	**1102.9 ha***

**Note –Total land is 1102.9 ha inter-alia including Forest land of 26.244 ha for which stage II forest clearance has been accorded by MoEF&CC vide letter no. 5-ORC264/2015-BHU dated 12/11/2020. Out of the total land, the land under possession and acquisition is 833.17 ha and 269.63 ha respectively. Out of 269.63 ha, 87.81 ha is in final stage of acquisition and land filed for acquisition is 183.7 ha. To this effect, PP has submitted a letter number IDCO LAE-7667/2021-4760 dated 12/03/2021 issued by IDCO. In addition, PP informed that the air strip was established and commissioned after obtaining approval from Airport Authority of India on 15/05/2006 and is not meant for commercial purpose. The said air strip does not require environmental clearance under the provisions of EIA, 1994 and EIA, 2006.*

c. Specific condition no.v of the EC dated 20/11/2015
For phase-III (6MTPA), the proponent shall acquire a land of 666 acres.

d. Specific condition no.xxiii of the EC dated 20/11/2015
Of the total area of 1102.54 ha. an area of 363.83 ha (33%) shall be developed into green belt. Of this, a total of 278.21 ha of green belt have been developed and the balance area of 85.62 ha shall also be brought under plantation, which includes plantation in a width of 15-20m along the remaining boundary wall of 3km of the 8km.

e. The Committee sought for the red mud pond design report prepared by Ms. Golder Associates which is yet to be deliberated upon by the committee.

Recommendations of the Committee

37.12.13 In view of the foregoing the Committee felt that the report submitted by the project proponent needs to be studied in details and recommended to internally deliberate upon the said report in the forthcoming EAC meeting.

37.13 Any other item - "Siting guidelines for industries which are in close proximity with the river"

37.13.1 The aforesaid subject matter was placed as a tabled agenda before the EAC with the permission of Chair. It was apprised to the EAC that following are some of the observation of committees, court orders with respect to the subject under consideration:

i. **Observation of Committee comprising Secretary, Water Resource Department, Orissa** and representative of the CPCB, with reference to the allegation of illegal construction activities and encroachment of Mahanadi river states:

"*The incidences of flood in Kerala, Jammu & Kashmir and in Pune last year are due to indiscriminate encroachment of the Flood Plain Area*."

ii. The **observation of NGT dt. 15.12.2020**:

"*There does not appear to be any central legislation to regulate the flood plains,…"*

"*The Wetlands (Conservation and Management) Rules, 2017 prohibit any permanent constructions within 50 meters of the Wetlands from the mean high flood level in the past 10 years…"*

The Tribunal while considering restoration measures for Yamuna and Ganga rivers dealt with the issue of flood plains Vide judgement dated 13.01.2015 in OA No. 6/2012 and OANo. 300/2013, in the context of river Yamuna, it was observed.

"*Thus, it is necessary to call upon the authorities to demarcate the floodplain for the flood of once in 25 years and to prohibit any kind of development activity in the area in question.*

-Vide judgement dated 13.07.2017 in OA No. 200/2014, M.C. Mehta vs. Union of India & Ors. reported in 2017 NGTR (3) PB 1 in the context of river Ganga, it was observed:
Till the demarcation of the floodplains and identification of permissible and non-permissible activities by the State Government of this judgement, we direct that 100 meters from the edge of the river would be treated as no development/construction zone in Segment-B of Phase-I (Haridwar to Unnao, Kanpur).

37.13.2 Considering the above, the Committee was requested to suggest way forward for considering the proposal in close proximity to the river.

37.13.3 After deliberations, the Committee recommended the following and suggested to forward the same to IA- Policy for taking appropriate view in the matter.

"Industrial/ developmental project shall not be located in any form within the river flood plain corresponding to one in 25 years flood, as certified by competent authority of the concerned State. Competent authority should be of the level of the District magistrate/ Executive Engineer from State Water Resource Department and must be based on study/ analysis and long term data/ observations. This should be used to define the extent of the river as mention in the aforesaid NGT Judgement dated 13.07.2017 and, as stipulated in the same judgement, a further safe zone of 100 meters should be left."

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ANNEXURE –1

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

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

4. **Site Details**

i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)

iii. Co-ordinates (lat-long) of all four corners of the site.

iv. Google map-Earth downloaded of the project site.

v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.

vii. Landuse break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)

viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area

ix. Geological features and Geo-hydrological status of the study area shall be included.

x. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)

xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.

xii. R&R details in respect of land in line with state Government policy.

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

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).

ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha).*

iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.

iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.

v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.

vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6. **Environmental Status**

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

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

iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.

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

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

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

vii. Noise levels monitoring at 8 locations within the study area.

viii. Soil Characteristic as per CPCB guidelines.

ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.

x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio-economic status of the study area.

7. **Impact Assessment and Environment Management Plan**

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport

of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards.

vi. Measures for fugitive emission control

vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

xii. Action plan for post-project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. **Occupational health**

i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre-designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analysed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

iii. Annual report of health status of workers with special reference to Occupational Health and Safety.

iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

9. **Corporate Environment Policy**

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. To address the Public Hearing issues, provisions contained under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 30/09/2020 shall be complied.
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

<u>The following general points shall be noted:</u>

i. All documents shall be properly indexed, page numbered.
ii. Period/date of data collection shall be clearly indicated.
iii. Authenticated English translation of all material in Regional languages shall be provided.
iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.

viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCl)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.

ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarized in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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ANNEXURE-2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
5. PM (PM_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

ADDITIONAL ToRs FOR PELLET PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. PM(PM_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

ADDITIONAL ToRs FOR CEMENT INDUSTRY

1. Limestone and coal linkage documents along with the status of environmental clearance of limestone and coal mines
2. Quantum of production of coal and limestone from coal & limestone mines and the projects they cater to;
3. Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. If the raw materials used have trace elements, an environment management plan shall also be included.
5. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.
6. Energy consumption per ton of clinker and cement grinding
7. Provision of waste heat recovery boiler
8. Arrangement for co-processing of hazardous waste in cement plant.
9. Trace metals in waste material especially slag.

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

i. A note on pulp washing system capable of handling wood pulp shall be included.
ii. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
iii. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.
iv. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.
v. A commitment that no extra chlorine base bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills. Plan for reduction of water consumption.

ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY

1. Justification for engaging a particular type of process (raw hide/skin into semi finishing or finished leather, semi-finished leather to finished leather, dry finishing operations, chrome/vegetable tanning, *etc.).*
2. Details regarding complete leather/ skin/ hide processing including the usage of sulphides, nitrogen compounds, chromium or other tanning agents, post-tanning chemicals, biocides, *etc.*, along with the material balance shall be provided.
3. In case of chrome tanning, details of the chrome recovery plant, management of shavings/solid waste including safe disposal.
4. Details on reuse of soak liquor / saline stream from membrane system, if applicable, to the extent possible in pickling activity after required treatment. Also, mention the salt recovery measures.

ADDITIONAL ToRs FOR COKE OVEN PLANT

1. Justification for selecting recovery/non-recovery (beehive) type batteries with the proposed unit size.
2. Details of proposed layout clearly demarcating various facilities such as coal storages, coke making, by-product recovery area,*etc* within the plant.
3. Details of coke oven plant (recovery/non-recovery type) including coal handling, coke oven battery operations, coke handling and preparation.
4. Scheme for coal changing, charging emission centre, Coke quenching technology, pushing emission control.
5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.

ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

1. Type of the project – new/expansion/modernization
2. Type of fibres used (Asbestos and others) and preference of selection from techno-environmental angle should be furnished
3. As asbestos is used in several products and as the level of precautions differ from milling to usage in cement products, friction products gasketing, textiles and also differ with the process used, it is necessary to give process description and reasons for the choice for selection of process
4. Technology adopted, flow chart, process description and layout marking areas of potential environmental impacts
5. National standards and codes of practice in the use of asbestos particular to the industry should be furnished
6. In case of newly introduced technology, it should include the consequences of any failure of equipment/ technology and the product on environmental status.
7. In case of expansion project asbestos fibre to be measured at slack emission and work zone area, besides base line air quality.
8. In case of green field project asbestos fibre to be measured at ambient air.

ADDITIONAL ToRs FOR METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)

1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Emission from sulphuric acid plant and sulphur muck management.
3. Details on installation of Continuous Emission Monitoring System with recording with proper calibration system
4. Details on toxic metals including fluoride emissions
5. Details on stack height.
6. Details on ash disposal and management
7. Complete process flow diagram describing process of lead/zinc/copper/ aluminium, *etc.*
8. Details on smelting, thermal refining, melting, slag fuming, and Waelz kiln operation
9. Details on Holding and de-gassing of molten metal from primary and secondary aluminium, materials pre-treatment, and from melting and smelting of secondary aluminium
10. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
11. Trace metals in waste material especially slag.
12. Plan for trace metal recovery
13. Trace metals in water

Executive Summary

Executive summary of the report in about 8-10 pages incorporating the following:

i. Project name and location (Village, Dist, State, Industrial Estate (if applicable)
ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)
iv. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes. Materials balance shall be presented.
v. Measures for mitigating the impact on the environment and mode of discharge or disposal.
vi. Capital cost of the project, estimated time of completion
vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of is acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest, eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)
viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
x. Likely impact of the project on air, water, land, flora-fauna and nearby population
xi. Emergency preparedness plan in case of natural or in plant emergencies
xii. Issues raised during public hearing (if applicable) and response given
xiii. CSR plan with proposed expenditure.
xiv. Occupational Health Measures
xv. Post project monitoring plan

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Email **Sundar Ramanathan**

Re: Draft MoM of 37 EAC Industry 1 held on 31/05/2021 to 01/06/2021

From : cnpandey@iitgn.ac.in Tue, Jun 08, 2021 11:30 AM

Subject : Re: Draft MoM of 37 EAC Industry 1 held on 31/05/2021 to 01/06/2021 1 attachment

To : Sundar Ramanathan <r.sundar@nic.in>

Cc : Sujit Kumar Bajpayee <sujit.baju@gov.in>, MAHENDRA PHULWARIA <m.phulwaria@gov.in>

Dear Mr. Sundar,
Please find attached herewith the final MoM of 37th EAC virtual meeting held on 30th May to 1st June, 2021 for putting it on Parivesh.
With warm regards,
C. N. Pandey,
Chairman,
EAC (Industry I). MoEFCC, Government of India.