

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

Summary record of the fourteenth (14th) meeting of re-constituted expert appraisal committee held during 23-24th December, 2019 for environmental appraisal of Industry-1 sector projects constituted under the provisions of Environmental Impact Assessment (EIA) notification, 2006.

The fourteenth meeting of the Re-Constituted Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-1 Sector Projects was held during 23-24th December, 2019 in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim. The minutes of 13th meeting held during 27-29th November, 2019 were confirmed by the EAC as already uploaded on PARIVESH.

23rd December, 2019

VENUE: Conference Hall (TEESTA), Vayu Block, Indira Paryavaran Bhawan, JorBagh, New Delhi-110003

TIME: 10:00 AM

14.1 Expansion of existing Pellet Plant from 2.2 to 2.5 MTPA through process optimization & increasing number of working days located within the existing 1.75 MTPA Integrated Steel Plant by **M/s. Monnet Ispat & Energy Limited** at Village & Post Naharpali, Tehsil Kharsia, **District Raigarh, Chhattisgarh-** [Online Proposal No. IA/CG/IND/124835/2019; File No. J-11011/196/2007-IA.II(I)] – **Environment Clearance under para 7(ii) of EIA Notification, 2006 – regarding.**

14.1.1 M/s. Monnet Ispat & Energy Limited has made an online application vide proposal no. IA/CG/IND/124835/2019 dated 20/11/2019 along with Form 2, updated Form I & Technical Feasibility Report and sought for Environmental Clearance (EC) under para 7(ii) of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” of EIA Notification, 2006 and the project is appraised at the Central level.

Details submitted by the project proponent

14.1.2 M/s. Monnet Ispat & Energy Limited (Joint Venture Company by AION & JSW Steel Ltd.) has proposed to enhance the existing Pellet Plant production capacity from 2.2 MTPA to 2.5 MTPA (0.3 MTPA) through process optimization and increasing the number of working days located within the existing 1.75 MTPA steel plant at Village & P.O Naharpali, Tehsil Kharsia, District Raigarh, Chhattisgarh.

14.1.3 The details of the existing Environmental Clearances obtained by the project proponent are summarized as below:

Date	File Number	Units																																	
26.12.2007 as amended on 12.03.2008	J-11011 /196 /2007-IA- II (I) from MoEF&CC, New Delhi	Integrated Steel Plant (1.75 MTPA)																																	
		<table border="1"> <thead> <tr> <th>S. No.</th> <th>Unit</th> <th>Capacity</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Sponge Iron unit</td> <td>0.7 MTPA</td> </tr> <tr> <td>2.</td> <td>Blast Furnace</td> <td>1 MTPA</td> </tr> <tr> <td>3.</td> <td>Ferro Alloy Plant (Submerged Arc Furnace)</td> <td>0.075 MTPA</td> </tr> <tr> <td>4.</td> <td>(Steel Plant) Electric Furnace</td> <td>1.74 MTPA</td> </tr> <tr> <td>5.</td> <td>Rolling mill & Plate mill</td> <td>1.20 MTPA</td> </tr> <tr> <td>6.</td> <td>Power plant</td> <td>240 MW</td> </tr> <tr> <td>7.</td> <td>Palletisation Plant</td> <td>1.2 MTPA</td> </tr> <tr> <td>8.</td> <td>Sinter Plant (2 x 0.75 TPA)</td> <td>1.5 MTPA</td> </tr> <tr> <td>9.</td> <td>Coal Beneficiation Plant</td> <td>1 MTPA</td> </tr> <tr> <td>10.</td> <td>DG Sets</td> <td>1x3.8 MVA & 3 x 1500 KVA</td> </tr> </tbody> </table>	S. No.	Unit	Capacity	1.	Sponge Iron unit	0.7 MTPA	2.	Blast Furnace	1 MTPA	3.	Ferro Alloy Plant (Submerged Arc Furnace)	0.075 MTPA	4.	(Steel Plant) Electric Furnace	1.74 MTPA	5.	Rolling mill & Plate mill	1.20 MTPA	6.	Power plant	240 MW	7.	Palletisation Plant	1.2 MTPA	8.	Sinter Plant (2 x 0.75 TPA)	1.5 MTPA	9.	Coal Beneficiation Plant	1 MTPA	10.	DG Sets	1x3.8 MVA & 3 x 1500 KVA
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31.03.2011	J-11011 /196 /2007-IA- II (I) from MoEF&CC, New Delhi	EC granted for 400 TPD oxygen plant																																	
16.02.2012	J-11011 /196 /2007-IA- II (I) from MoEF&CC, New Delhi	Regarding change of boiler configuration in EC																																	
		<table border="1"> <thead> <tr> <th>Unit</th> <th>Configuration Detail</th> <th>Capacity</th> </tr> </thead> <tbody> <tr> <td>Power plant</td> <td>1000 TPH (2x 120 TPH + 4x35 TPH + 1x140 TPH + 1x125 TPH AFBC boilers + 1 x 336 TPH CFBC boiler + 2x 10 TPH WHRB)</td> <td>240 MW</td> </tr> </tbody> </table>	Unit	Configuration Detail	Capacity	Power plant	1000 TPH (2x 120 TPH + 4x35 TPH + 1x140 TPH + 1x125 TPH AFBC boilers + 1 x 336 TPH CFBC boiler + 2x 10 TPH WHRB)	240 MW																											
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13.04.2017	J-11011 /196 /2007-IA- II (I) – MoEF&CC, New Delhi	Expansion in Pellet Plant from 1.2 MTPA to 2.2 MTPA within existing 1.75 MTPA integrated steel plant																																	

14.1.4 The implementation status of the existing Environmental Clearances is furnished as below:

S. No.	Plant	Capacity as per MoEF&CC existing ECs	Units implemented and under operation as per CTO
1	Pellet Plant	2.2 MTPA	2.2 MTPA
2	Sponge Iron Unit (DRI)	0.70 MTPA	0.50 MTPA (2x350 TPD + 2x100 TPD + 2x350 TPD)
3	Blast Furnace	1.0 MTPA	0.70 MTPA

S. No.	Plant	Capacity as per MoEF&CC existing ECs	Units implemented and under operation as per CTO
4	Steel Plant (Electric Furnace)	1.74 MTPA	1.74 MTPA
5	Rolling Mill & Plate Mill	1.20 MTPA	1.20 MTPA (0.45 MTPA Rolling Mill + 0.75 MTPA Plate Mill)
6	Power Plant	240 MW	170 MW (90 MW - 2x120 TPH AFBC Boilers + 4x 35 TPH WHRB and 80 MW- 1x336 TPH CFBC boilers)
7	Sinter Plant	1.5 MTPA	0.75 MTPA
8	Coal Beneficiation Plant	1.0 MTPA	1.0 MTPA
9	Oxygen Plant	400 TPD (0.132 MTPA)	400 TPD (0.132 MTPA)
10	DG Set	1x3.8 MVA & 3 x1500 KVA	2 x 1500 KVA (1x3.8 MVA & 3 x1500 KVA)
11	Ferro Alloy Plant (SAF)	0.075 MTPA	Not implemented.

14.1.5 The certified compliance report for the existing unit was issued by the Regional Office of MoEF&CC at Nagpur on 30/08/2019 wherein non-compliances have been reported with respect to advertisement in newspapers regarding grant of EC and CGWA approval for ground water drawl. In this regard, closure report is yet to be obtained from Regional Office.

14.1.6 Now, the Company proposes to enhance the production capacity of existing Pellet Plant from 2.2 MTPA to 2.5 MTPA by process optimization & increasing number of working days from 330 to 345 days in a year. Expansion will be done only in the pellet plant. The capacity of all other units will remain same as existing.

Plant	Existing Capacity	Additional Capacity Proposed	Total Capacity After Proposed Expansion Under Section 7(ii)	Percentage increase in production
Pelletisation Plant	2.2 MTPA	0.3 MTPA	2.5 MTPA	13%

14.1.7 The expansion is proposed only in the pellet plant and major technological units in pellet plant process comprises of Iron Ore Crushing, Dry grinding, Mixing, Balling, Induration and Hearth layer segregation. After segregation pellets are obtained as a product. No additional land is required for proposed expansion as it will be carried out within the existing premises i.e. 227.84 ha (563 acres), out of this pellet plant is set up in 5 ha (12 acres).

14.1.8 The raw material requirement for the proposed pellet plant expansion is furnished as below:

Raw Materials	Estimated Quantity			Mode of Transportation	Distance from Project Site (Km)	Source of Raw Materials
	Existing	Proposed	Final			
Iron ore (TPD)	7142	974	8116	By rail/road	Within 1000 km	Open Market
Limestone (TPD)	115	16	131	By rail/road	Within 500 km	Open Market
Coke (TPD)	102	14	116	By rail/road	Within 1000 km	Open Market
Bentonite (TPD)	38	5	43	By rail/road	Within 500 km	Open Market

14.1.9 The water and power requirement for the proposed pellet plant expansion is furnished as below:

Particulars	Existing Requirement	Additional Requirement	Total Requirement	Source
Fresh Water	574 KLD	78 KLD	652 KLD	Mahanadi River
Power	14.72 MW	1.92 MW	16.64 MW	Captive Power Plant

14.1.10 The proposal is only 13% expansion in pellet plant. Remaining plant facilities and capacities will remain as exist at present. Existing ESP in pellet plant is sufficient to withstand the air pollution load. ESP dust generated as solid waste will be reused in the process. Due to this expansion in pellet plant, only PM will increase which will be less than 0.5 µg/m³. All the transfer points are equipped with dust suppression systems efficient bag filters and process stack is attached with highly efficient ESP. The waste water generated from the process will be recycled and reused in dust suppression and plantation purpose. No solid waste is generated from the pellet plant. The spillage material or bag filter/ ESP dust is recycled into the process.

14.1.11 The total cost for the pellet plant expansion is INR 57 crores. The capital cost and recurring cost for environmental management for the proposed expansion is INR 3 crores and INR 30 lakhs per annum respectively.

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

14.1.13 Name of the consultant: M/s. J. M. Environet Pvt. Ltd. [Sr. No. 93, List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019].

Observations of the Committee

14.1.14 The committee noted that existing Integrated Steel Plant was accorded Environmental Clearance by the Ministry as per the provisions of EIA Notification dated 27/01/1994 and so far public consultation has not been carried out as per the procedure prescribed in the EIA Notification, 2006. In view of this, the Committee opined that instant proposal does not qualify under para 7(ii) of EIA Notification, 2006 as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 24/08/2009.

14.1.15 In this regard, PP has requested to consider their proposal for grant of Terms of Reference (ToR) based on the Form I and Pre-feasibility report already submitted by them.

- 14.1.16 The Committee observed that a report on cumulative environmental impact assessment of all the existing units is required in order to take holistic view on the instant proposal under consideration.

Recommendations of the Committee

- 14.1.17 In view of foregoing and after detailed deliberations, the Committee recommended the 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. Consolidated list of all the existing units shall be furnished in the EIA report and cumulative impact assessment shall be done, considering site specific parameters.
 - ii. Water requirement shall be met from Godavari river and no ground water drawl is permitted.
 - iii. Particulate emissions from the stacks shall be less than 30 mg/Nm³ with bag house as APCD. Emission from ESP shall be less than 50 mg/Nm³.
 - iv. Action plan for green belt development covering 33% of total plant area shall be submitted.
 - v. Public Hearing is to be conducted by the concerned State Pollution Control Board.
 - vi. The issues raised during the public hearing and commitment of the project proponent to address the same shall be compiled and submitted as a time bound action plan. The action plan shall, inter alia, contain the year-wise activities with corresponding financial allocations.
 - vii. The project proponent should carry out social impact assessment study of the project.
 - viii. Action plan for Corporate Environment Responsibility shall be furnished based on the concerns expressed during the public hearing and findings of social impact assessment study as per the Ministry's Office Memorandum dated 1/05/2018.
- 14.2 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. Natoria, **Dist. Purulia, West Bengal** - [Online Proposal No. IA/WB/IND/72262/2018; File No. J-11011/65/2018-IA.II(I)] – **Environment Clearance – regarding**
- 14.2.1 M/s BRGD Sponge & Iron Private Limited has made 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 Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

Details submitted by the project proponent

- 14.2.2 The 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 and 1,00,000 TPA Cement Grinding Unit by M/s BRGD Sponge & Iron Pvt. Ltd., is located at Village Janardandih, Mouza Erekusum and Khoar, P.S. Natoria, District Purulia in West Bengal. Application was made on MoEF&CC portal on 13/01/2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The proposal was considered in the 28th meeting of reconstituted Expert Appraisal Committee (Industry-I), held on 12-14th March, 2018 to determine the Terms of Reference (TOR) for undertaking detailed EIA study for obtaining Environmental Clearance in accordance with the provisions of the EIA Notification 2006. Terms of Reference (ToR) was received vide letter No. J-11011/65/2018-IA-II(I) dated 27/03/2018. Public Hearing was conducted on 10/01/2019.
- 14.2.3 The project of M/s. BRGD Sponge & Iron Private Limited is located in Village Janardandih, Mouza Erekusum and Khoar, P.S. Natoria, Dist. Purulia in West Bengal. The proposal involves 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 and 1,00,000 TPA Cement Grinding Unit.
- 14.2.4 The proposed capacity for different units and products are as below:

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

- 14.2.5 The proposed project will be installed on total 35 acres (14.16 ha) of land which is already under the possession of the Company. River Damodar is passing about 9.0 km in north-east direction w.r.t the project site. Modification / diversion in the existing natural drainage pattern at any stage have not been proposed.
- 14.2.6 The topography of the area is flat and reported to lies between Latitude - 23°36'24.73"N to 23°36'41.88"N and Longitude - 86°47'10.94"E to 86°47'24.40"E and at an elevation of 143 m (470 ft) AMSL.
- 14.2.7 No national park / wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve, etc. are reported to be located in the core and buffer zone of the project. Panchet Reserve Forest is situated at around 1.0 Km distance in north-west direction w.r.t proposed project site. The area also does not report to form corridor for Schedule-I fauna. There are no Schedule- I fauna exists in the study area.
- 14.2.8 The raw material requirement along with its source is furnished as below:

SL. NO.	RAW MATERIALS	ANNUAL REQUIREMENT (IN TPA)	SOURCE
DRI PLANT (4x100 TPD):			
1.	Pellet / Iron Ore	2,00,000	Market
2.	Imported Coal	1,36,000	South Africa
3.	Dolomite	6,900	Market
INDUCTION FURNACES (3X20 T):			
1.	Sponge Iron	1,20,000	In House DRI Plant
2.	Scrap	30,000	Market
3.	Pig Iron	30,000	Market
4.	Ferro Alloys	1550	Market
CAPTIVE POWER PLANT (8.0 MW BASED ON AFBC BOILER):			
1.	Imported Coal	20,000	South Africa
2.	Dolochar	30,000	In House DRI Plant
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)
2.	Gypsum	2,500	Bikaner/ Nagaur region, Rajasthan and Tata Chemicals, Paradeep (IFCO & PPL), Haldia
3.	Fly Ash	35,000	In-house, Power Plant of DVC, Andal
II) 100% PORTLAND SLAG CEMENT (PSC)			
1.	Clinker	32,500	Satna, Meghalaya (Star Cement), Madhya Pradesh (JP Cement, Prism Cement, Orient Cement)
2.	Gypsum	2,500	Bikaner/ Nagaur region, Rajasthan and Tata Chemicals, Paradeep (IFCO & PPL), Haldia
3.	Slag (15% Moisture)	65,000	Durgapur Steel Plant, Neo Metallic, Durgapur, Tata Steel, Jamshedpur, Tata Metallic, Kharagpur and local steel plants

14.2.9 The targeted production capacity of the Steel Plant is 1,20,000 TPA Sponge Iron, 1,45,800 TPA Billets, 1,40,000 TPA TMT Bars, Strips & Structural, 1,00,000 TPA Cement (100% PPC or PSC) and 16 MW Captive Power Plant (8 MW WHRB + 8 MW AFBC). The major raw materials, which will be handled, consist of Iron Ore, Coal, Dolomite, Sponge Iron, Pig iron, Ferro Alloys, Scrap, etc. The raw materials will be produced in-house and purchased from mines located in West Bengal, Madhya Pradesh

(depending upon availability). Coal will be imported. Raw materials will be received through railways / road.

- 14.2.10 The daily make up water requirement for the entire project is estimated as 414 m³/day. The raw water will be abstracted from groundwater source. Water withdrawal permission has already been obtained from SWID, West Bengal for 160 m³/day.
- 14.2.11 The power requirement of the project is estimated as 29 MW, which will be sourced from proposed 16 MW Captive Power Plant and the remaining power will be obtained from DVC.
- 14.2.12 Baseline Environmental Studies were conducted during summer season i.e. from 1st March, 2018 – 31st May, 2018. Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated: PM₁₀ (45µg/m³ to 93 µg/m³), PM_{2.5} (13µg/m³ to 44µg/m³), SO₂ (4µg/m³ to 16 µg/m³) and NO_x (10 µg/m³ to 30 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 2.360µg/m³ (NNE direction), 2.360 µg/m³ (NNE direction) and 3.517 µg/m³(N direction), with respect to the SO₂, NO_x and PM respectively.
- 14.2.13 Ground water quality has been monitored at 9 locations in the study area and analyzed. pH: 6.9 to 7.8, Total Hardness: 165 to 245 mg/l, Chlorides: 68 to 177 mg/l, Sulphate: 10 to 22 mg/l, Nitrate: 2.4 to 4.7 mg/l. Heavy metals are within the limits.
- 14.2.14 Surface water samples were analyzed from 10 locations – 2 Damodar river water samples and 8 pond water samples. For Damodar River water samples, pH: 7.2 and 7.3; DO: 6.8 mg/l and 7.1 mg/l and BOD: 3 and 5 mg/l. For 8 pond water samples, pH: 6.8 to 7.8; DO: 5.7 to 6.3 mg/l and BOD: 4 and 8 mg/l.
- 14.2.15 Noise levels are in the range of 52.9-62.1dBA for day time and 42.9-54.4dBA for night time.
- 14.2.16 The solid waste generation from the proposed project activity is given as below:

Sl. No.	Type	Quantity in Tons/Year	Utilization
1	Dolochar from Sponge Iron Plant	30,000	To be used in AFBC Boiler.
2	Dust and Slag from Induction Furnaces	17,000	To be used for Land filling / Road Construction purpose / paver block making.
3	End Cuts, Scale & Scrap from CCM & Rolling Mill	5,800	To be used in Induction Furnace.
4	Fly Ash from CPP	7,600	To be used as a raw material in proposed cement plant / brick manufacturers in the neighbourhood.
5	Bottom Ash from CPP	1,900	To be used for land filling / road construction purpose.

14.2.17 The Public hearing for the project was held on 10/01/2019 at Sampriti Bhavan, Sarbari More, Neturia Block, District Purulia in West Bengal under the chairmanship of Shri. Naba Kumar Barman, Additional District Magistrate, Purulia. The issues raised during public hearing are abatement of pollution, improvement in health facilities, drinking water facility, employment opportunity and infrastructure development etc., which have been addressed in the EIA report.

14.2.18 The company proposes to invest Rs. 150 Lakhs on Corporate Environment Responsibility (CER). This fund shall be utilized over a period of 3 years. The Company has identified certain areas, to be considered for implementing the CER activities in the context of the local scenario of the area:

Sl. No.	PROPOSED CER ACTIVITIES	INVESTMENT (IN LAKHS)			Total (in Lakhs)
		Year 1	Year 2	Year 3	
A)	PUBLIC HEARING RELATED ACTIVITIES				
1	Construction and repairing of Metal Road (5 km) in villages (@Rs. 8,00,000/- per Km).	16	12	12	40
2	Drinking Water Infrastructure (Tube well in nearby villages – 8 nos. @ Rs. 1.5 Lakhs).	6	3	3	12
3	Development of building/class room/library facilities to the Local Schools.	10	5	5	20
4	Construction of Primary Health Care Centres - Two numbers in the nearby villages for Periodic health check-up of the villagers.	6	6	-	12
5	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.	8	4	4	16
B)	NEED BASED ACTIVITIES				
6	Construction of W/C/Toilet (2) each - 6 numbers in schools & villages (@ Rs. 3.00 Lakhs per set of 2 Toilets).	12	6	-	18
7	Workshop Centre with latest tailoring machines for training women (like tailoring, stitching, Pickle & Sauces making, Soft Toys & Gem Jeweler and for	4	3	3	10

	making affordable price of Sanitary Pads.).				
8	Street Lighting (Solar/Led) provision at suitable public places – 16 nos. (@ Rs. 0.50 Lakhs per Solar Light).	4	3	1	8
9	Development of parks, plantation of trees in the nearby areas.	4	2	2	8
10	Creation of garbage storage & disposal facility in nearby villages.	3	3	-	6
TOTAL					150

14.2.19 The capital cost of the project is Rs 150.0 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 75 Lakhs. 400 persons will get employment during operational phase. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Item	Cost (in Crores)	Cost (in Lakhs)
Cost of Air Pollution Control Systems	3.9	39.0
Cost of Water conservation & Pollution Control	1.3	13.0
Cost of Solid Waste Management System	0.6	6.0
Green belt development	0.3	3.0
Noise Reduction Systems	0.4	4.0
Occupational Health Management	0.5	5.0
Risk Mitigation & Safety Plan	0.4	4.0
Environmental Management Department	0.1	1.0
GRAND TOTAL	7.5	75.0

14.2.20 Greenbelt will be developed in 4.67 Ha (11.55 acres) which is about 33% of the total plant area. Local and native species will be planted with a density of 1500 trees per hectare. Total no. of 7000 saplings will be planted and nurtured in 4.67 Hectares.

14.2.21 There is no court case or violation under EIA Notification to the project or related activity.

14.2.22 Name of the Consultant: M/s. Envirotech East Pvt. Ltd. (Sl. No. 55 in the List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019).

Observations of the Committee

14.2.23 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 m³/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 has 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.

14.2.24 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.

14.2.25 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.

14.2.26 Further, the Committee warned the consultant that if such deficiencies are observed again, the consultant would be blacklisted.

Recommendations of the Committee

14.2.27 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 m³/day water drawl from bore well from the Competent Authority shall be obtained.

- xi. Fresh assessment of surface water quality for all the parameters needs to be done and report shall be furnished.
 - v. Hazard Identification and Risk Assessment (HIRA) report specific to the project activity shall be prepared and submitted.
 - vi. Revised plant lay out with legends and appropriate scale shall be submitted.
 - vii. Traffic assessment study shall be carried out and report submitted.
 - xii. Interpretation of the baseline data for physical environment, ecology, bio diversity and socio-economic data shall be furnished.
 - viii. 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.
 - ix. Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be furnished.
 - x. 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.
- 14.3 Proposed expansion of Asbestos Cement Sheet plant (1,20,000 TPA to 3,20,000 TPA) (Phase 1- 40, 000 TPA & Phase 2 – 1,60,000 TPA) project of **M/s. Visaka Industries Ltd.**, Located at Village Kannawan, Gram panchayat Bacchranwan, Tehsil Maharajgan, **District Raebareli, Uttar Pradesh**- [Online Proposal No. IA/UP/IND/80541/2015; File No. J-11011/157/2005-IAII(I)] – **Environment Clearance – regarding.**
- 14.3.1 **M/s Visaka Industries Ltd** has made online application vide proposal no. IA/UP/IND/80541/2015 dated 8th April 2019 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 4(c) Asbestos Milling and Asbestos based Products under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

- 14.3.2 The expansion project of M/s Visaka Industries Limited (VIL) located in Village Kannawan, Pargana Bacchranwan, Taluk Maharajganj, District Raebareli, State Uttar Pradesh was initially received in the Ministry on 14 Dec.’2015 for obtaining Terms of Reference (ToR) as per EIA Notification,2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 6th meeting held on 3-4th May 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 21st June 2016 vide Lr. F. No. J-11011/157/2005-IA.II (I).
- 14.3.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for Environmental Clearance to the Ministry online on 11/3/19, 11/6/19, 26/10/19 & 23/11/19. EDS was generated on 13/3/2019, 18/6/2019& 19/11/2019. Accordingly, EIA report & base line data was revalidated by M/s Ecomen Laboratories Pvt. Ltd (QCI accredited consultant).

- 14.3.4 The project of M/s VIL is for enhancement of production of Asbestos Cement Sheets by 2,00,000 TPA from 1,20,000 TPA to 3,20,000 TPA. The existing project was accorded environmental clearance vide Lr .no. J-11011/157/2005-IA II (I) dated 21/9/2005.
- 14.3.5 The Status of compliance of earlier EC was obtained from Regional Office, Lucknow vide Lr. F.No. IV/ENV/UP/IND-69/182/2005/14, dated 02.05.2019. There is no non-compliance reported by Regional officer.
- 14.3.6 The proposed expansion will be carried out within the existing plant premises. The above increase in production shall be achieved in the existing factory premises. No /forestland is involved.
- 14.3.7 The entire land(private) has been acquired for the project. No water body exists around the project and modification/diversion in the existing natural drainage pattern at any stage is not proposed.
- 14.3.8 Nearest State Highway-36 is less than 1 km, Nearest Railway Station is Bacchranwan- 3.5km, Nearest Airport is Lucknow 55 km, Nearest Town is Raebareli 27 km, Nearest Village is Kannawan 1.0km, Sai river is 9 km away.
- 14.3.9 Other Industries within 10 km are M/s. Reliance Industries Ltd (Cement grinding Plant) and one Food processing plant.
- 14.3.10 The topography of the area is flat and lie between 26⁰25'45.2" N Latitude and 81⁰07'47.5" E Longitude in Survey of India toposheet No. G44J3 at an elevation of 381 m AMSL. The ground water table ranges between 1.7 m to 3.8 m below the land surface during the post-monsoon season and 2 m to 4 m below the land surface during the pre-monsoon season.
- 14.3.11 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc., are located in the core and buffer zone of the project. The area also does not form corridor for Schedule-I fauna.
- 14.3.12 Requirement of Raw Materials at full proposed capacity: Cement (10652 tonnes per month), Asbestos fibre (2259 tonnes per month), Fly ash (7284 tonnes per month), Pulp (217 tonnes per month)
- 14.3.13 The Manufacturing of asbestos cement corrugated and plain sheets is done by wet process known as Hatschek process.
- 14.3.14 Air pollution sources & control measures:

Fibre Bag Opening and Milling

The fibre bags shall be slit open in closed automatic bag opening device. The empty bags shall be lifted by a hooking device attached within the bag opening device and carried to the attached bag shredder unit and the fibre after passing through the lump

breaker shall be collected in the attached blender where some water shall be added to maintain the process in wet condition. When all the bags in one charge empties the fibre on to the blender, the fibre in wet form shall be taken to the Edge Runner Mill via a screw conveyor and elevator which is also joined by the shredded bag pieces from the shredder unit. Here at ERM some more water is further added to the fibre for milling operation. The bag opening device & the edge runner mill shall be kept under negative pressure by tapping it on to a Bag Filter Type Dust Collector with pulse jet, connected to a blower (capacity 6000 m³/hr) driven by a 15 Hp motor.

Cement and Fly ash Feeding

- The cement feeding point shall be tapped on to bag filter type dust collector with pulse jet and with a blower (capacity - 4000 m³/hr) driven by a 5HP MOTOR. The let out shall be through a stack of 18 m height.
- The Fly ash feeding point shall be tapped on to bag filter type dust collector with pulse jet and with a blower (capacity - 4000 m³/hr) driven by a 5HP MOTOR. The let out shall be through a stack of 18 m height.

Fibre handling and storage

The bags are handled at site by means of forklifts. Spillages if any, and container after unloading at site is cleaned using portable vacuum cleaner. Where this is not practicable, wet mopping, collection & recycling method is adopted. Wet mopping shall be carried out with the help of Rubber mat stick. Torn bags received if any, is sealed with suitable adhesive tapes. Such cleaning operation is undertaken by the operatives wearing protective clothing and respiratory masks. The fibre bags are stacked in godowns. Trucks after unloading are subjected to thorough cleaning by vacuum cleaner.

Sheet cutting operation

Sheet cutting operation is carried out with the cutters operating under a steady stream of water jet which shall be kept water recycled. The washing is collected and periodically recycled to the process. This technique of dust suppression has been proven to be very effective.

Product finishing

The filing and finishing operation of asbestos cement goods is carried out in wet stage. The washing is collected and periodically recycled to the process. Green stage trimmings is immediately recycled to the process through waste dissolver.

General good house-keeping

Portable vacuum cleaner is used for the cleaning of go downs and raw material section. Wet mopping /collection/Recycling method wherever applicable is adopted for the spillage cleaning at raw material section. Wet mopping shall be carried out by the Rubber mat sticks without using any clothing material.

- 14.3.15 Noise control measures: The VIL is procuring Compressors and Generators with Noise protection systems like acoustic enclosures as per CPCB norms.

14.3.16 Solid waste generation & management is as below:

1. Empty Fibre Bags – From Bag Opening Device (BOD)
2. Shredded in the Shredder unit attached to the Bag Opening Device and recycled along with the opened fibre
3. Fibre Dust – From Dust Collector at ER Mill & BOD Periodically recycled by adding in E R Mill.
4. Process Sludge – From Week-End Tank Continuously recycled by processing in Ball Mills.
5. Hard Broken Pieces – From Damages/Rejects Continuously recycled after pulverising in Dry waste grinding system
6. Cement Dust – From Dust Collector at Cement Feeding Periodically recycled back in the system through hydration tanks.
7. Fly Ash Dust – From Dust Collector at FA Feeding Periodically recycled back in the system through hydration tanks.

14.3.17 Wastewater management:

Process Wastewater is collected in back water trench and is pumped into process wastewater cone tanks to be reused back into the process.

During maintenance, the cone tanks are emptied into settling pit and the process water is kept under agitation. After completion of the maintenance, the collected process water is pumped back into the cone tank to be used back into the manufacturing process. Thus, the process water is completely recycled back.

14.3.18 The targeted production capacity of the project is 0.32 Million TPA. The raw material for the plant would be procured from Cement-Prism cement, Satna, Birla gold cement, Mahihar, MP (By Road- Closed containers), Asbestos fibre-Imported (Russia) - By Ship up to the port then by Road in Closed containers, Fly ash-nearby power plant (Feroz Gandhi Unchahar Thermal Power Plant) By Rail & Road (in Closed containers), Pulp -Kanpur- UP & Namakkahl- TN By Road (Covered Trucks).

14.3.19 The water requirement at full capacity of the project is estimated as 400m³ /day. Max Make up water is 400 KLD & Recycled water which will remain continuously in circuit is 50 KLD. Fresh water requirement will be obtained from the underground water. The permission for drawl of groundwater is obtained from CGWA vide Lr. No. CGWA/IND/Proj/2016-166-R dated 02/08/2016. Renewal is under process. Online application submitted on 1/7/2019. Plant visit by CGWA held on 13/9/2019.

14.3.20 Existing power requirement for the plant is 1000 KVA. This is sufficient for Phase - 1 expansion. The additional power requirement for the plant is 1000 KVA for Phase -2 expansion, which will be obtained from UPSEB. DG sets of 1 X 600 KVA, 1 X 380 KVA are also installed. No additional DG Sets are required. It is also proposed to use Solar power for regular plant operation at RBL for Phase-II. It is proposed to

install Min 100 KWp (by using Approx 315 nos of Panels with each capacity of 320 Wp) roof top solar system at Loading Shed and Ball Mill Shed with net metering system which will be utilized for regular plant operation in Phase-II.

- 14.3.21 Fuel (Diesel) consumption (for DG) is 10500 ltr/year. Additional requirement for expansion in Phase-II will be approx. 9500 Ltr/year. Total requirement 20000Ltr/year.
- 14.3.22 Baseline Environmental Studies were conducted from April' 2016 to June' 2016. The data was validated for one month during 20/5/2019 to 15/6/2019. Ambient air quality monitoring has been carried out at 8 locations during 20/5/2019 to 15/6/2019 and the data submitted indicated: PM₁₀ (54.9µg/m³ to 82.2µg/m³), PM_{2.5} (20.3 to 45.2µg/m³), SO₂ (8.2 to 15.2 µg/m³) and NO₂ (16.3 to 33.6 µg/m³). The results of the modeling study done earlier indicate that the maximum increase of GLC for the proposed project is 2.88 µg/m³ with respect to thePM₁₀.
- 14.3.23 Ground water quality has been monitored in 3 locations in the study area during 20/5/2019 to 15/6/2019 and analyzed. pH: 7.31to7.61, Total Hardness: 180 to 260 mg/l, Chlorides: 34to 66mg/l, Fluoride: 0.27to 0.35mg/l. Heavy metals are within the limits. Surface water sample was analyzedfor one location for data validation. pH: 7.68; DO: 5.6 mg/l and BOD: BDL mg/l.
- 14.3.24 Soil characteristics-Soil is silty loam. The pH ranges from 7.39 to 7.67. Phosphate & Potassium values range from 11 to 17 & 25 to 36 Kg/ha.
- 14.3.25 Noise levels are analysed for 4 locations for validation & are in the range of 52.9 to 68 dB(A) for day time and 43.7 to 59.8 dB(A) for night time.
- 14.3.26 There are no people in the core zone of the project. No R&R is involved.
- 14.3.27 An area of 4.6 ha (46 %) will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project activities.
- 14.3.28 For the existing unit, the Consent to Establish/ Consent to Operate from the Uttar Pradesh State Pollution Control Board obtained vide Lr. No.1097 / UPPCB/ Raebareli (UPPCBRO) /CTO/air /Raebareli /2017 dated 23/01/2018 for air (valid up to 31/12/2019) & for water vide Lr. No.1805/UPPCB/Raebareli (UPPCBRO)/CTO/water/Raebareli /2017 dated 23/01/2018 (valid up to 31/12/2019).
- 14.3.29 The Public hearing of the project was held on 28/6/2018 at 10 AM under the chairmanship of Additional District Magistrate at the site for the expansion of plant production capacity (Asbestos Cement sheets) from the existing 1,20,000 TPA to 3,20,000 TPA. The issues raised during public hearing are disposal of waste, green belt development, dust control, medical camps, surveillance audit of safety measures etc.
- 14.3.30 An amount of Rs 6.98 lakhs has been earmarked in the current year has been earmarked for Corporate Environment Responsibility based on public hearing issues.

The capital cost of the project is Rs.39 Crores and the capital cost for environmental protection measures is proposed as Rs.126.95 lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs.70.5 Lakhs. Proposed schedule for approval and implementation is 18 months from zero date.

- 14.3.31 Greenbelt will be developed in 4.6 Ha which is about 46 % of the total acquired area. Local and native species will be planted with a density of 2500 trees per hectare.
- 14.3.32 There is no court case or violation under EIA Notification to the project or related activity.
- 14.3.33 Consultant: Ecomen Laboratories Pvt. Ltd. (Sl. No.44, List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019).

Observations of the Committee

- 14.3.34 The Committee noted following deficiencies in the EIA report.
- i. Rain water harvesting details have not been furnished.
 - ii. Green belt development in the existing unit is not satisfactory.
 - iii. Dedicated Environment Management Cell has not been established.
 - iv. Permission for the ground water withdrawal for the existing and the proposed expansion has not been obtained.
 - v. Action plan for Corporate Environment Responsibility shall be furnished based on the concerns expressed during the public hearing and findings of social impact assessment study as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

Recommendations of the Committee

- 14.3.35 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. Rain water harvesting details shall be furnished.
 - ii. Action plan for green belt development covering 46% of the total plant area shall be prepared and submitted.
 - iii. Action plan for storm water management shall be furnished.
 - iv. Dedicated Environment Management Cell shall be established and the details shall be furnished.
 - v. Permission for the ground water withdrawal for the existing and the proposed expansion shall be submitted.
 - vi. Action plan for Corporate Environment Responsibility shall be furnished based

on the concerns expressed during the public hearing and findings of social impact assessment study as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

14.4 Integrated Cement Project - Cement Plant Clinkerization Plant, each of 10 MTPA production capacity with Captive Power Plant of 99 MW, Limestone Mine for 12MTPA by **M/s Adani Cementation Ltd., (Lakhpat Cement Works)** located at Village Maldo, Mudhvay, Koriyani and Kapurasi, Taluka Lakhpat, **District Kutch, Gujarat-** [Online Proposal No. IA/GJ/IND/69706/2017; File No. J-11011/497/2017-IAII(D)] –**Environment Clearance – regarding.**

14.4.1 **M/s Adani Cementation Ltd.,** has made online application vide proposal no. **IA/GJ/IND/69706/2017** dated 7th December 2019 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

14.4.2 An Integrated cement project “Lakhpat Cement Works” has been proposed by M/s Adani Cementation Limited which includes a Cement Plant of rated production capacity of 10.0 MTPA Clinkerization as well as 10.0 MTPA OPC/PPC/PSC/PCC Cement grinding facilities in phased manner, a limestone mine with a proposed production of 12 MTPA over lease area of 251.9 ha area and a berthing jetty of 19.0 MTPA bearing capacity located in Village Maldo, Mudhvay, Koriyani & Kapurasi, Taluka Lakhpat, District Kutch, State Gujarat. The project was initially received in the Ministry on 26th September, 2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. As per the requirement of the Industry-I Committee, separate ToR was also taken from EAC (Non-coal Mining) for the Mine vide letter number J-11015/121/2017-IA.II (M) dated 9th Jan 2018; and EAC (Infrastructure-II) for the Jetty vide letter number F. No. 10-63/2017-IA-III dated 29th August 2018.

14.4.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 10th October, 2019 vide Online Proposal No. IA/GJ/IND/69706/2017. After that EDS was raised on the proposal and reply was uploaded on 19th October, 2019. Again, EDS was raised on the proposal and reply was uploaded on 7th December, 2019.

14.4.4 The project of M/s Adani Cementation Limited (ACL) located in Village Maldo, Mudhvay, Koriyani & Kapurasi, Taluka Lakhpat, District Kutch, State Gujarat is for setting up of a new Cement Plant for production of 10 million tonnes per annum (million TPA) Clinkerization as well as a 10 MTPA Cement grinding. The captive power plant will have both waste heat recovery system (24 MW) and a power plant based on CFBC technology (75 MW). The WHRS will have 6 nos. of WHR boilers.

14.4.5 The proposed capacity for different products for new site area as below:

Name of units	No. of units	Capacity of each unit	Production Capacity
Limestone Mine	1	Area: 251.9 Hectare	4 MTPA for 5 years and simultaneously peak production is 12 MTPA
Cement Plant	1	Clinker Cement	10 MTPA 10 MTPA
Captive Power Plant	1	CFBC Boiler WHR Boiler	75 MW (25 MW x 3) 24 MW (8 MW x 3)
Berthing Jetty (Material Handling)	1	Total Material Handling • Clinker • Cement • Limestone • Coal/Petcoke/Flyash/Slag/Gypsum	19 MTPA • 5 MTPA • 10 MTPA • 1 MTPA • 3 MTPA

14.4.6 The total land required for the project is 454.27 ha, out of which for the cement plant and CPP is 190.3 ha is earmarked. 45.07 ha of agricultural land and 145.16 ha of open scrub are the major land cover of the proposed cement plant area. Stage-I forest clearance has been obtained for 2.6564 ha of land which is proposed for conveyor corridor. Government land involved is 141.84 ha for the proposed cement plant and CPP, acquisition is under process at Collector Office. There are no Rivers passing through the project area. In the 10-km study area site, Kapusari Nadi and Kali Nadi are flowing towards NW direction following the slope. Kori Creek is at distance of 4.2 km from the project site in NW direction.

14.4.7 The topography of the area is plain and reported to lie between 23°42'43.65" to 23°44'50.99" N Latitude and 68°34'41.81" to 68°42'40.94" E Longitude in Survey of India topo sheet No. 41A/10, at an elevation of 27 m AMSL. The ground water table reported to range between 5-10 m below the land surface during the post-monsoon season and 5-10 m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 411 m. Further, the stage of groundwater development is reported to be 0 % and 9.33% in core and buffer zone respectively and thereby these are designated as safe/critically exploited areas.

14.4.8 The Narayan Sarovar Wildlife Sanctuary is located at a distance of 2.4 km in the South of the mine area. The important habitats present in the study area include mainly forest areas, mangrove ecosystems and water bodies. The core area of the project site has recorded presence of a Critically Endangered shrub species *Commiphora wightii* and 4 Schedule I species of birds of which 2 are reportedly migratory. The buffer zone has recorded presence of 15 species of high conservation value among which 14 are faunal species and one is the Critically Endangered shrub species. Of the reported 14 faunal species, 5 species are reported from the core area i.e. proposed cement plant area and proposed mining block. One species of Reptile, 8 species of birds and 5 species of mammals are Schedule-I species reported from the study area. A baseline terrestrial

ecology study for the proposed project has been carried out by Bhagwati Enviro Care Pvt. Ltd. The study carried out identification of ecologically sensitive receptors based on field investigation in both core and buffer area from the project site.

- 14.4.9 The raw material required for the cement plant are limestone, silica sand, fly ash and bottom ash, gypsum and coal. The cement production will include OPC/PPC/PSC/PCC. The whole process will include limestone raising, gypsum crushing, transport to pre-blending stockpiles, Vertical Roller Mill /Roller Press for raw material grinding, 6-stage double string preheater with (ILC) in-line calciner, Waste Heat Recovery system, Coal/Lignite fired rotary kiln with 3 supports, Vertical Roller Mill for coal grinding, storing & dozing of fuel, clinker cooler, clinker storage silo, clinker extraction system, clinker Conveying system to grinding mills, clinker bulk loading in Belt conveyor for transportation to jetty, Vertical Roller Mill /Roller Press with Ball Mill for clinker grinding, cement silos, packing and truck loading, bulk loading facility and transport to jetty through Belt conveyor. The proposed cement plant will be provided with all the water conservation measures like water treatment plant from where the treated water will be used for gardening, cooling and general purposes.
- 14.4.10 The cement plant will have a 10.0 MTPA Clinkerization as well as a 10.0 MTPA cement grinding facilities. The Lignite/Low Grade Limestone for the plant would be procured from GMDC mine. The raw material transportation will be done through conveyor and road.
- 14.4.11 The fresh water requirement of the project is estimated as 9000 m³ /day which will be met from the Desalination Plant.
- 14.4.12 The maximum power demand for the proposed units have been estimated at about 125 MW (75 MW CPP, 24 MW WHRS, 26 MW Grid Power) based on specific power consumption of 58 kWh/t of clinker and 30 kwh/t of Cement.
- 14.4.13 Baseline Environmental Studies were conducted during winter season i.e. from December, 2017 to February, 2018. Ambient air quality monitoring has been carried out at 9 locations during December, 2017 to February, 2018 and the data submitted indicated: PM₁₀ (64.7 µg/m³ to 75.1 µg/m³), PM_{2.5} (23.3 to 32.9 µg/m³), SO₂ (8.5 to 18.7 µg/m³) and NO_x (10.6 to 19.9 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 108.6 µg/m³ with respect to the PM₁₀.
- 14.4.14 Ground water quality has been monitored in seven locations in the study area and analysed. pH: 7.1 to 7.4, Total Hardness: 309.7 to 600.6 mg/l, Chlorides: 253 to 548 mg/l, Fluoride: 0.29 to 0.48 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 6 locations. pH: 7.5 to 8.1; DO: 5.4 to 6.4 mg/l and BOD: 0.8 to 2.4 mg/l and COD from 20.3 to 38.4 mg/l.
- 14.4.15 Noise levels are in the range of 41.4 to 50.4 dB(A) for daytime and 32.7 to 42.9 dB(A) for night time.

- 14.4.16 As per the census of India, 2011, there are 3592 people in the four villages of core zone of the project. It has been envisaged that 131 households are getting affected by the project, which will be provided compensation and preference in the employment.
- 14.4.17 As per approved mine plan, there will be generation of 5.645 Mcum of OB and 0.10 Mcum of top soil from 1st to 5th year of mining. The waste dumped on surface within lease area would get backfilled into the pits and the area transformed into the reservoir. The topsoil removed during mining will be utilised for spreading on the earthen bunds and used for plantation. No stacking of top soil is envisaged at conceptual stage.
- 14.4.18 It has been envisaged that an area of 63.9 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities. For the proposed limestone mine, at the end of mine life, about 83.50 Ha of lease area will be under plantation, of which 5.0 Ha will be boundary greenbelt and 78.50 Ha will be plantation on reclaimed areas.
- 14.4.19 The Public hearing of the project was held on 28th April, 2019 at Village- Koriyani, Lakhpur under the chairmanship of Smt. Remya Mohan (I.A.S), District Magistrate and District Collector Bhuj, Kutch for the proposed project. The issues raised during public hearing are related to public health, hospital facility, women empowerment, problem of air and water pollution and employment and land compensation. An amount of Rs. 46 Crores (0.61 % of Project cost i.e. Rs. 7525 Crores) has been earmarked for Enterprise Social Commitment based on public hearing issues.
- 14.4.20 The capital cost of the project is Rs.7525 Crores and the capital cost for environmental protection measures is proposed as Rs. 10700 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 1200 Lakhs. The detailed CER plan has been provided in the EIA report. The employment generation from the proposed project is 630 persons per day during construction phase. During the operation phase, there will be direct and indirect employment generation. 150 skilled workers will be directly employed by the industrial units. Indirect employment in the form of contractual workers, petty business and ancillary suppliers will be more than 450. On mining site, about 170 people will get employment.
- 14.4.21 Greenbelt will be developed in 63.9 ha which is about 33 % of the acquired area for cement plant and CPP. For the proposed limestone mine, at the end of mine life, about 83.50 Ha of lease area will be under plantation, of which 5.00 Ha will be boundary greenbelt and 78.50 Ha will be plantation on reclaimed areas. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/ MoEF&CC guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 1000 saplings will be planted and nurtured in area of 1 ha per year.
- 14.4.22 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 14.4.23 Name of the consultant: GreenCIndia Consulting Private Limited [S.No. 75, List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019]

Observations of the Committee

- 14.4.24 The Committee noted that there are several deficiencies in the EIA report inter-alia including the following:
- i. Details sought in Form-2 have not been adequately addressed.
 - ii. Action plan for the green belt development plan has not been furnished.
 - iii. Compliance to the ToR conditions is not specific.
 - iv. Overburden management due to the lime stone mining activity has not been addressed in the report.
 - v. Corporate Environmental Policy does not elaborate the sharing of responsibility in case of accident/failures.
 - vi. Bio-diversity conservation plan has not been submitted.
 - vii. Scientific assessment of issues related to sea water ingress has not been adequately addressed with proper supporting documentation.
 - viii. Commitment to the issues raised during public consultation along with action plan for implementation with budget has not been furnished.
 - ix. Status of CRZ clearance for the captive jetty has not been furnished.
 - x. Status of Forest land diversion has not been furnished.
 - xi. Cost earmarked towards CER is not as per the slabs stated in the Ministry's O.M. dated 1/05/2018.
 - xii. Lay out drawing is not specific and not to the scale.

- 14.4.25 In addition to the above, the Committee members expressed that they have not received the copies of the EIA report on time for perusal. Further, it was opined that the project proponent has not uploaded the entire EIA report on PARIVESH.

Recommendations of the Committee

- 14.4.26 In view of the foregoing and after detailed deliberations, the committee recommended to return the proposal in present form.
- 14.5 Proposed Expansion of the Steel Plant by installation of Pellet Plant with Grinding Facility (2x0.85 MTPA), Sponge Iron Plant (1x350 TPD Kiln), Induction Furnaces (3x25T), Capacity revision from 600 TPD to 1000 TPD of Rolling Mill along with 7 MW capacity Captive Power Plant (WHRB based, utilizing waste heat from the proposed sponge plant) and Producer Gas Plant (12x4000 Nm³/hr) by **M/s. Bravo Sponge Iron Pvt. Ltd.**, located at Village Mahuda, P.O. Rukni, P.S. Para, **District Purulia, West Bengal.** -[Online Proposal No. IA/WB/IND/125425/2015; File No. J-11011/758/2009-IAII(I)] – **Environment Clearance – regarding.**
- 14.5.1 **M/s. Bravo Sponge Iron Pvt. Ltd** has made online application vide proposal no. IA/WB/IND/125425/2015 dated 7/12/2019 along with copy of EIA/EMP report and

Form – 2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

Details submitted by the project proponent

- 14.5.2 The proposed expansion of Steel Plant for ultimate production of 1.7 MTPA Pellets, 745 TPD Sponge Iron, 1350 TPD Billets, 1000 TPD Rolled products, 25 MW Captive Power Plant (15 MW WHRB + 10 MW AFBC) & 48,000 Nm³/hr producer gas is located at Village Mahuda, P.O. Rukni, P.S: Para, District: Purulia in West Bengal by M/s Bravo Sponge Iron Pvt. Limited. Application was made on the MoEF&CC portal on 16/11/2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The proposal was considered in the second meeting of the Re-constituted Expert Appraisal Committee (EAC), Industry-1 held during 10-12th December, 2018 to determine the Terms of Reference (TOR) for undertaking detailed EIA study for obtaining Environmental Clearance in accordance with the provisions of the EIA Notification 2006. Terms of Reference (ToR) was received vide letter No. J-11011/758/2009-IA. II(I) dated 18/12/2018. Public Hearing was conducted on 22/07/2019.
- 14.5.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 7/12/2019 vide online proposal No. IA/WB/IND/125425/2015.
- 14.5.4 The project of M/s Bravo Sponge Iron Pvt. Ltd. is located in Village Mahuda, P.O. Rukni, P.S: Para, District: Purulia, West Bengal State is for expansion of Steel Plant for ultimate production of 1.7 MTPA Pellets, 745 TPD Sponge Iron, 1350 TPD Billets, 1000 TPD Rolled products, 25 MW Captive Power Plant (15 MW WHRB + 10 MW AFBC) & 48,000 Nm³/hr producer gas.
- 14.5.5 The existing and proposed capacity for different units and products is as below:

S.No	Unit	Units as per State Clearance	Units as per MoEF&CC EC dated 18.04.17	Total	Units under operation	Balance units		Proposed expansion	Final configuration
						Under implementation	To be implemented		
1	Pellet Plant with Grinding Facility	-	-	-	-	-	-	2 X 0.85 MTPA	1.7 MTPA
2	Sponge Iron Plant	1X100 TPD (as per NOC dated 5.12.2002) + 1x95 TPD (as per State	2X100 TPD	1X100 TPD + 1x95 TPD + 2X100 TPD	1X100 TPD + 1x95 TPD + 2X100 TPD	-	-	1 X 350 TPD	745 TPD (1X100 TPD + 1x95 TPD + 2X100 TPD + 1X350 TPD)

S.No	Unit	Units as per State Clearance	Units as per MoEF&C EC dated 18.04.17	Total	Units under operation	Balance units		Proposed expansion	Final configuration
						Under implementation	To be implemented		
		EC dated 24.03.2008)							
3	SMS (Induction Furnace with CCM)	-	600 TPD (4 x 15 T)	600 TPD (4 x 15 T)	300 TPD (2 x 15 T)	150 TPD (1 x 15 T)	150 TPD (1 X 15T)	750 TPD (3 x 25T)	1350 TPD (4 x 15 T + 3 x 25T)
4	Rolling Mill	-	600 TPD	600 TPD	-	-	600 TPD*	Capacity revision from approved 600 TPD* to 1000 TPD	1000 TPD
5	Captive Power Plant	-	18 MW (8 MW WHRB + 10 MW AFBC)	18 MW (8 MW WHRB + 10 MW AFBC)	10 MW (4x10 TPH WHRB + 1X20 TPH AFBC*)	-	8 MW (1X20 TPH Proposed AFBC + *Balance 12 TPH Steam from existing AFBC)	7 MW WHRB	25 MW (15 MW WHRB + 10 MW AFBC)
6	Producer Gas Plant	-	-	-	-	-	-	12 x 4000 Nm³/hr	48,000 Nm ³ /hr

14.5.6 The Status of compliance of existing EC was obtained from Regional Office Bhubaneswar vide File No. 102-577/16/EPE/2389 dated 28/10/2019 wherein several non-compliances have been reported. Subsequently, PP has submitted Action Taken Report to the Regional Office on 20/11/2019 which have been examined and the report was furnished on 5/12/2019. As per the report, following non-compliances have been reported.

- i. Project proponent is yet to install the Effluent Treatment Plant and zero liquid discharge is not maintained.
- ii. Concreting of internal roads within the plant site is yet to be completed.
- iii. Green belt development all along the plant boundary covering 33% of the plant area is not satisfactory.
- iv. Noise monitoring report is not being submitted along with the six-monthly compliance report.

- 14.5.7 The proposed project will be installed on the available land of total 78.37 acres (31.73 hectares) within the existing plant premises. Land is already in possession of the Company. The river Damodar passes at a distance of 9 km towards North, from the project site. Modification / diversion in the existing natural drainage pattern at any stage has not been proposed.
- 14.5.8 The topography of the area is flat and reported to lie between Latitude - 23°32'48.67"N to 23°33'9.42"N and Longitude - 86°32'32.55"E to 86°32'59.22"E and at an elevation of 190 m AMSL.
- 14.5.9 No national park / wildlife sanctuary / biosphere reserve/tiger reserve / elephant reserve, etc. is reported to be located in the core and buffer zones of the project. The area also does not report to form corridor for Schedule-I fauna.
- 14.5.10 The raw material requirement for the existing and the proposed expansion are furnished as below:

Raw Material	Existing Units + Units under Implementation	Proposed Plant	Total	Mode of Transport	Source
Sponge Iron Plant:					
Pellet	223680	198198	421879	Internal	
Coal	140778	124740	265518	Rail / Road	Imported / West Bengal & through e-auction
Dolomite	76646	67914	144560	Rail / Road	
SMS (IF route) :					
Pig Iron	37915	47394	85309	Rail / Road	
Sponge Iron	173250	216563	389813	Internal / Road	
Ferro Alloys	387	484	872	Road	
Scrap	25011	31263	56274	Internal / Road	
Rolling Mill :					
Billets	207900	138600	346500	Internal	
Power Plant-AFBC :					
Coal	44355		44355	Rail	West Bengal & through e-auction
Dolochar	53104		53104	Internal	
Pellet Plant :					
Iron Ore Fines	-	1793400	1793400	Rail	Orissa/Jharkhand
Bentonite	-	11956	11956	Rail / Road	Kutch, Gujarat
Limestone	-	17080	17080	Rail / Road	Birimtrapur, Orissa
Coal	-	68320	68320	Rail / Road	West Bengal & through e-auction.
Producer Gas Plant :					
Coal	-	118800	118800	Rail / Road	West Bengal

Raw Material	Existing Units + Units under Implementation	Proposed Plant	Total	Mode of Transport	Source
				Road	& through e-auction.

- 14.5.11 The targeted production capacity of the Steel Plant after expansion is 1.7 MTPA Pellets, 745 TPD Sponge Iron, 1350 TPD Billets, 1000 TPD Rolled products, 25 MW Captive Power Plant (15 MW WHRB + 10 MW AFBC) & 48,000 Nm³/hr producer gas. The major raw materials, which will be handled, consist of Iron Ore, Coal, Dolomite, Limestone, Ferro Alloys, Scrap, etc. The raw materials will be purchased from mines located in Orissa, West Bengal, Jharkhand, Gujarat (depending upon availability). Coal will be imported. Raw materials will be received through railways / roadways.
- 14.5.12 The daily make up water requirement for the entire project is estimated as 2284 m³/day (Existing Units: 400 m³/day, Units under implementation / to be implemented: 277 m³/day, Proposed Units: 1607 m³/day). The raw water will be sourced from DVC supply and project proponent has already made an agreement with Damodar Valley Corporation on 11/04/2018.
- 14.5.13 The power requirement of the project is estimated as 67.5 MW (Existing: 12.5 MW + Unit under implementation / to be implemented: 11.3 MW + Proposed: 43.7 MW), which will be sourced from existing and proposed 25 MW capacity Captive Power Plant and the remaining power will be obtained from DVC.
- 14.5.14 Baseline Environmental Studies were conducted during post-monsoon season, i.e. from 1st Oct, 2018 to 31st Dec, 2018. Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated: PM₁₀ (50µg/m³ to 95 µg/m³), PM_{2.5} (18µg/m³ to 45µg/m³), SO₂ (4µg/m³ to 18 µg/m³) and NO_x (10 µg/m³ to 38 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed & existing units is 5.808µg/m³ (ESE direction), 5.808 µg/m³ (ESE direction) and 6.061 µg/m³ (ENE direction), with respect to the SO₂, NO_x and PM respectively.
- 14.5.15 Ground water quality has been monitored at 9 locations in the study area and analyzed. pH: 6.7 to 7.4, Total Hardness: 108 to 176 mg/l, Chloride: 68 to 140 mg/l, Sulphate: 22 to 52 mg/l, Nitrate: 3.6 to 12.5 mg/l. Heavy metals are within the limits.
- 14.5.16 Surface water samples were analysed from 10 locations – 1 Damodar river water sample, 1 canal water and 8 pond water samples. For flowing water body, pH: 6.8 and 6.9; DO: 6.8 mg/l and 7.1 mg/l and BOD: 3 and 5 mg/l. For 8 pond water samples, pH: 6.4 to 7.4; DO: 5.7 to 6.3 mg/l and BOD: 4 and 8 mg/l.
- 14.5.17 Noise levels are in the range of 55.7 - 69.9 dBA for day time and 45.2 – 55.1 dBA for night time.
- 14.5.18 The solid waste generation and its utilization details are furnished as below:

Sl. No.	Type	Quantity in Tons/Year	Utilization
1.	Dolochar from 1x350 TPD DRI Kiln	25,000	To be used in FBC Boiler.
2.	Slag & Dust from IFs	33,500	Slag to be used for Land filling / Road Construction purpose.

Sl. No.	Type	Quantity in Tons/Year	Utilization
3.	End Cuts, Scale & Scrap from CCM	5,000	To be used as raw materials in IFs.
4.	End cuts and missed rolls from Rolling Mill	16,500	To be used as raw materials in IFs.
5.	Tar generated from Producer Gas Plant	3,564	To be disposed as per MoEF&CC Guideline.

- 14.5.19 The Public hearing for the project was held on 22/07/2019 at Para Community Hall, Para Block, District Purulia in West Bengal under the chairmanship of Shri. Mufti Samim Sawkat, Additional District Magistrate (Gen.), Purulia. The issues raised during the public consultation are skill development to the unemployed youth, safety measures for labors, CSR programme for women, pollution control measures and utilization of ground water which have been addressed in the EIA report.
- 14.5.20 The company proposes to invest Rs. 381 Lakhs on Corporate Environment Responsibility (CER). This fund shall be utilized over a period of 3 years. The Company has identified certain areas, to be considered for implementing the CER activities in the context of the local scenario of the area:

Sl. No.	PROPOSED CER ACTIVITIES	INVESTMENT (IN LAKHS)			Total (in Lakhs)
		Year 1	Year 2	Year 3	
A)	PUBLIC HEARING RELATED ACTIVITIES				
1.	Skill development to unemployed local youth 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.	5	5	5	15
2.	Development of Road (2 Km) in surrounding villages (@ Rs. 12 Lakhs per Km)	8	8	8	24
3.	Purchase of Mobile Water Tanker	-	26	-	26
4.	Construction of 5 Set Toilets at nearby villages (@ Rs. 3.00 Lakhs per set of 2 Toilets, separately for Ladies & Gents)	6	6	3	15
5.	Drinking Water Infrastructure facility at nearby villages (Tubewell: 15 nos. @ Rs. 2.0 Lakhs per tubewell)	10	10	10	30
6.	Street Lighting (Solar) provision at suitable public places – 20 nos. (@ Rs. 0.50 Lakhs per Solar Light).	4	4	2	10
7.	Construction of school building in the nearby village	60	50	50	160
8.	Construction of a building for providing training classes for local women.	5	3	3	11
B)	NEED BASED ACTIVITIES				
9.	Construction of a health check-up centre along with necessary facilities in nearby village.	7	6	6	19
10.	Rain Water Harvesting ponds in nearby villages (3 nos. @ Rs. 5 Lakhs per pond).	5	5	5	15

Sl. No.	PROPOSED CER ACTIVITIES	INVESTMENT (IN LAKHS)			Total (in Lakhs)
		Year 1	Year 2	Year 3	
11.	Construction of 14 nos. of ground water Recharging system for rainwater in nearby villages (@2.5 lakhs per system)	15	10	10	35
12.	Development of parks, plantation of trees in the nearby areas.	5	4	4	13
13.	Development of Community Hall	4	2	2	8
Sub-Total		134	139	108	381
GRAND TOTAL					

14.5.21 The capital cost of the project is Rs 475.0 Crores and the capital cost for environmental protection measures is proposed as Rs 27.0 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 2.70 Crores. Additional 1000 persons apart from the existing 670 persons (total 1670 persons) will get employment during operational phase. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Item	Cost (in Crores)	Cost (in Crores)
Cost of Air Pollution Control Systems	17.00	1.70
Cost of Water conservation & Pollution Control	2.00	0.20
Cost of Solid Waste Management System	0.50	0.05
Green belt development	1.50	0.15
Noise Reduction Systems	0.50	0.05
Occupational Health Management	0.50	0.05
Risk Mitigation & Safety Plan	2.50	0.25
Environmental Management Department	2.50	0.25
GRAND TOTAL	27.00	2.70

14.5.22 Greenbelt will be developed in 10.47 Ha which is about 33% of the total plant area. Local and native species will be planted with a density of 1500 trees per hectare. Total no. of 15,700 saplings will be planted and nurtured in 10.47 Hectares.

14.5.23 There is no court case or violation under EIA Notification to the project or related activity.

14.5.24 Name of the Consultant: M/s. Envirotech East Pvt. Ltd. (Sl. No. 55 in the List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019).

Observations of the Committee

14.5.25 The Committee noted the following deficiencies in the EIA report submitted to the Ministry.

- i. Closure report from Regional Office on the observed non-compliances have not been furnished.
- ii. High level of Particulate matter in the Ambient Air has been reported and NOx in the source and the reasons for such high level reporting has not been mentioned.

- iii. COD parameter in the surface water sample has not been monitored. Hence, fresh assessment of surface water quality for all the parameters is required.
- iv. Hazard Identification and Risk Assessment (HIRA) report submitted is not satisfactory. Rules and Regulations pertaining to the HIRA has been wrongly mentioned in the report.
- v. Traffic assessment study has not been carried out.

Recommendations of the Committee

14.5.26 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. Closure report from Regional Office on the observed non-compliances regarding Effluent Treatment Plant, concreting of internal roads, green belt development and noise quality monitoring shall be furnished.
- ii. Fresh assessment of surface water quality for all the parameters shall be carried out and report submitted.
- iii. Hazard Identification and Risk Assessment (HIRA) report specific to the project activity shall be prepared and submitted.
- iv. Traffic assessment study report shall be carried out and submitted.
- v. Existing road conditions to be used for transportation of raw materials and finished products inter-alia including its dimensions along with photographs shall be submitted.
- vi. Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be furnished.
- vii. Line source modelling shall be carried out based on the quantity of raw materials and products to be transported different modes such as road and rail respectively and report shall be furnished.
- viii. Reasons for higher level of presence of Particulate matter in the Ambient Air and NOx in the source shall be furnished.
- ix. Corporate Environmental Policy envisaging sharing of responsibility in case of accident/failures shall be furnished.
- x. Time bound action plan for green belt development covering 33% of the plant with a tree density of 2500/ha shall be prepared and submitted.
- xi. Details of the producer gas plant along with the pollution control systems envisaged shall be furnished.

14.6 Cement Plant of **M/s Reliance Cement Company Pvt. Ltd. (RCCPL)** located at Village Mukutban&Adegoan, Taluka Zari Zamni, **District Yavatmal, Maharashtra** [Online Proposal No. IA/MH/IND/113541/2019; MoEF&CC File No. J-11011/145/2009-IAII(I)] – Validity Extension of Environment Clearance-reg.

14.6.1 **M/s Reliance Cement Company Pvt. Ltd,** has made online application vide proposal no. IA/MH/IND/113541/2019 dated 4th December 2019 along with prescribed Form-

6 and other documents under the provisions of EIA Notification, 2006 for seeking extension of validity of the Environmental Clearance for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

14.6.2 MoEF&CC has granted Environmental Clearance for above referred project for Integrated Cement Plant (Clinker- 2.9 MTPA, Cement-4.8 MTPA) along with Captive Power Plant (75 MW) at Survey Nos. 42-46, 49-66, 104-131, 135-138, 162 and 164-168 etc., Village: Mukutban and Sy Nos. 312-322, 324-329 and 381-384 etc., in Village Adegaon and Captive Limestone (Limestone-3.75 MTPA, 572.17 ha) at Villages Pimparwadi, Bahilampur, Hirapur, Ruikot and Govindpur, District Yavatmal, Maharashtra vide File No. J-11011/145/2009-IA-II(I) dated 25.02.2013 and further accorded name change in the EC vide letter dated 20.11.2019. The captive Mine was opened on 14.06.2018 and the mine development work is in progress.

14.6.3 Civil Work started in January 2019 after getting final approval for diversion of forest land from Govt. of Maharashtra and finalizing the vendors. Present Status as on date showing major activities and schedule of completion of balance project work is as below:

Sl. No.	Major activities of the project	Present Status activity wise		Activity End by
		Details	Completed	
1.	Raw Mill Section	Civil Work in progress	30%	Sep, 2021
2.	Pyro Section	Civil Work in progress	32%	Oct, 2021
3.	Cement Grinding Section	Civil Work in progress	26%	Oct, 2021
4.	Packing and Loading	Civil Work in progress	25%	Oct, 2021
5.	Captive Power Plant	Civil Work and structural work in progress	29%	Jun, 2021
6.	Railway Sliding	Civil Work in progress	29%	Dec, 2021

Observations of the Committee:

14.6.4 The construction work on the site was started by the Project Proponent after final approval of Forest Diversion proposal and work is in progress.

14.6.5 The name of the company was changed to RCCPL Ltd and the name change in the Environmental Clearance was issued on 20.11.2019.

Recommendations of the Committee:

14.6.6 After detailed deliberations, the committee recommended the proposal for extension of validity of Environmental Clearance up to three years, i.e. 24.02.2023.

14.7 Expansion in Existing Cement Plant for Captive Power Plant of Capacity 15 MW of **M/s Shree Digvijay Cement Company Limited** located at Digvijaygram, **Jamnagar, Gujarat**. [Online Proposal No. IA/GJ/IND/126763/2019; File No. J-11011/409/2019-IAII(I)] – **Prescribing of Terms of Reference – regarding.**

The Project Proponent has made request for withdrawal of the proposal. Hence, the proposal is withdrawn.

- 14.8 Ferro Alloy Plant (2x9 MVA Sub-Merged Arc Furnace to produce 24,000 TPA (Fe-Mn/Fe-Si/Si-Mn) and Induction Furnace (1x15 Ton) along with 5 MT Ladle and 1 Nos 2 Strand Continuous Caster for manufacturing 36, 000 TPA M.S. Billets by **M/s. Aryavarta Khanija Pvt. Ltd.**, located at Village & Post-Hat Ashuria, Mauza-Basudevpur, P.S-Barjora, **District-Bankura, West Bengal**. [Online Proposal No. IA/WB/IND/127431/2019; File No. J-11011/410/2019-IAII(I)]– **Prescribing of Terms of Reference – regarding.**

- 14.8.1 M/s. Aryavarta Khanija Private Limited has made application vide online proposal no. IA/WB/IND/127431/2019 dated 26/11/2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

- 14.8.2 M/s Aryavarta Khanija Pvt. Ltd. has proposed to set up a Ferro Alloy Plant (2x9 MVA Sub-Merged Arc Furnace to produce 24,000 TPA (Fe-Mn/Fe-Si/Si-Mn) and Induction Furnace (1x15 Ton) along with 5 MT Ladle and 1 Nos 2 Strand Continuous Caster for manufacturing 36, 000 TPA M.S. Billets located at Village & Post-Hat Ashuria, Mauza-Basudevpur, P.S-Barjora, District-Bankura, West Bengal.

- 14.8.3 The environmental site settings of the proposed project site are given as below.

S. No.	Features	Details	
1	Village, Police Station, District, State	Village & Post-Hat Ashuria, Mauza-Basudevpur, P.S-Barjora, District-Bankura, Pin-722122, West Bengal.	
2	Survey of India Toposheet	73M2, 73M3, 73M6 and 73M7 (Project Site)	
3	Project Site Co-ordinates	Longitude	Latitude
		87°17'47.29"E	23°24'36.97"N
		87°17'56.26"E	23°24'33.14"N
		87°17'54.26"E	23°24'29.30"N
4	Land area and Land use of project site	9.58 Acre (3.877 hectare). 100 % Land Purchased & Land is Agriculture Land (Single Crop).	
		Application submitted for Change of Land Use.	
5	National Highway & Approach Road for material transportation	Project site is well connected to Hathasuria-Pakhanna Road which is 1.25 km distance toward South. State Highway - 9 = 2 KM towards West. State Highway – 8 = 9.2 KM towards SE. NH-2 = 11.8 KM towards NE.	

S. No.	Features	Details
6	Nearest Railway Station	Durgapur Railway Station at 12.0 Km towards North direction.
7	Nearest Town/ City/ District HQ	District- Bankura (30 KM towards SW)
8	Nearest River	Damodar River 5.0 Km (NE)
9.	National Park, Wildlife Sanctuary, ESZ, Biosphere Reserve	None in 10 km area of the project site
10.	Nearest Airport	KaziNazrul Islam Airport- 25 KM towards NNW

14.8.4 The land area acquired for the proposed plant is 3.87 ha. No/forestland involved. The entire land has been acquired for the project. 1.27 hectare (33%) land will be used for green belt development of the total area.

14.8.5 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

14.8.6 The targeted production capacity of the plant is 2 Nos of 9 MVA Furnace for Ferro Alloys (24,000 TPA) and 1 No of 15 Ton Induction Furnaces for Billet Plant (36,000 TPA). The main raw materials required for manufacture of Si, Mn, i.e., Mn ore is available from the mines of Manganese Ore India Ltd, Nagpur, and also from private mine owners in Orissa & Jharkhand. Coal and Coke required for manufacture are available in and around Jharkhand and Orissa in sufficient quantity while dolomite is brought from Orissa. Other ingredients such as quartz are abundantly available from Jharkhand. The ore transportation will be done through Rail and Covered Trucks.

14.8.7 The proposed capacity for different products is as given below:

Sl. No	Plant Size	Annual Installed Capacity	
		Phase-I	Phase-II
1	Ferro Alloys (2x 9 MVA SAF)	12,000	12,000
2	Billet (1x 15 Ton Induction Furnace)	---	36,000

14.8.8 Based on annual installed capacity of the plant; the estimated power requirement for smooth operation of the unit will be around 25 MW.

14.8.9 The raw materials requirement for the proposed project activity is given as below.

Ferro Alloy Plant

Ferro Manganese				
Sl.No	Input	QTY	Output Material	QTY
1	Manganese Ore	52,800	Ferro Manganese	24,000
2	Coke	10,800	Slag	18,000

Ferro Manganese				
Sl.No	Input	QTY	Output Material	QTY
3	Coal	6,240	Bag Filter Dust	9,600
4	Dolomite	6,000	Oxidation/Burning Losses	24,720
5	Carbon Paste	480		
	Total	76,320		76,320

Silico Manganese				
Sl.No	Input	QTY	Output Material	QTY
1	Manganese Ore	44,400	Silico Manganese	24,000
2	Coke	10,800	Slag	24,000
3	Coal	8,400	Bag Filter Dust	9,600
4	Dolomite	3,600	Oxidation/Burning Losses	26,160
5	Quartz	5,280		
6	Carbon Paste	480		
7	Ferro Manganese Slag	10,800		
		83,760		83,760

Ferro Silicon				
Sl.No	Input	QTY	Output Material	QTY
1	Quartzite	44,400	Ferro Silicon	24,000
2	Mill Scale	9,120	Slag	4,863
3	Charcoal	23,520	Bag Filter Dust	7,199
4	Coke Breeze	6,000	Oxidation/Burning Losses	48,178
5	Carbon Paste	1,200		
	Total	84,240		84,240

For Billets Plant:-

Input Output Matrix	Ton/Ton %	Per 1000 Kg
Raw Materials		
Sponge Iron	72.62%	830.00
Pig Iron	19.42%	222.00
MS Scrap	4.29%	49.00
Ferro Silico Manganese	1.22%	14.00
CPC	1.92%	22.00
Melt Coke	0.52%	6.00

14.8.10 Water Consumption for the proposed project will be 96 m³/day (Source: Damodar river). Industrial waste water will be treated in in Settling Tank and used for dust

suppression & domestic waste water will be disposed in septic tank/soak pits.

Particulars	Water Requirement (KLD)
Water for cooling (Make up) for Ferro Alloy Plant	50
Water for cooling (Make up) for Billet Plant	30
Domestic purposes & other uses	16
Total	96

- 14.8.11 Total project cost is INR 67.60 Crores. Proposed employment generation from proposed project will be total 99 employments direct & indirect employment.
- 14.8.12 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 14.8.13 Name of the consultant: Grass Roots Research and Creation India (P) Ltd. [Sr. No. 82, List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019].

Recommendations of the Committee

- 14.8.14 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 Annexure-1 read with additional ToRs at Annexure-2:**
- i. No Ferro-Chrome shall be manufactured without clearance from MoEF&CC.
 - ii. Fourth hole extraction system shall be installed in SAF.
 - iii. Water will be drawn from Damodar river and no ground water drawl is permitted.
 - iv. Particulate emissions from the stacks shall be less than 30 mg/Nm³ with bag house as APCD.
 - v. No reheating furnace shall be used.
 - vi. 100 % solid waste utilization shall be adopted.
 - vii. Public Hearing is to be conducted by the concerned State Pollution Control Board.
 - viii. The issues raised during the public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, inter alia, contain the year-wise activities with corresponding financial allocations.
 - ix. The project proponent should carry out social impact assessment of the project and submit the same along with the EIA report.
 - x. Action plan for Corporate Environment Responsibility shall be furnished based on the concerns expressed during the public hearing and findings of social impact assessment study as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

14.9 Proposed Integrated Steel Plant with Beneficiation cum Palletization -1.6 MTPA capacity, Sponge iron - 7,60,000 TPA; Hot Metal/ M.S Billets/ M.S. ingots 7,50,000 TPA; Rolled Products/TMT Bars/ Structural Steel – 7,00,000 TPA & Producer Gas plant - 80,000 NM³/hr; Ferro Alloy unit of 2x9 MVA to Produce Fe-Si (OR) Fe-Mn (OR) Si-Mn (OR) Pig Iron, Power Generation 106 MW (CFBC - 40 MW, WHRB - 66 MW) of **M/s. Real Ispat & Power Limited** located at Villages Bakulahi & Dhourabhata, Tehsil Bhatapara, **District Baloda Bazar, Chhattisgarh** - [Online Proposal No. IA/CG/IND/127880/2019; File No. J-11011/411/2019-IAII(I)]–
Prescribing of Terms of Reference – regarding.

14.9.1 **M/s. Real Ispat & Power Limited** has made application vide online proposal no. IA/CG/IND/127880/2019 dated 27/11/2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

14.9.2 M/s. Real Ispat & Power Ltd. is proposed to set up an Integrated Steel Plant comprising of I/O Beneficiation cum Pelletization Plant of 1.6 MTPA, DRI kilns of 2x650 TPD, 2x350 TPD & 2x100 TPD to produce 7,60,000 TPA of Sponge iron with 2x20 MW, 2x10 MW & 2x3 MW WHRB facility, Induction Furnaces of 5x30 T, 5 x 20 T to produce 7,50,000 TPA of M.S. Billets / M.S. Ingots / Hot Metal, Rolling Mill of 7,00,000 TPA of Rolled Products/ TMT Bars / Structural Steel & Producer Gas Plant of 80,000 Nm³/hr capacity, Ferro Alloy unit of 2 x9 MVA to Produce Fe-Si (OR) Fe-Mn (OR) Si-Mn (OR) Pig Iron, CFBC Power Plant of 40 MW.

14.9.3 It is proposed to manufacture the above products based on the following technology

- Production of Iron ore concentrate using Iron ore fines as raw materials.
- Production of Pellets.
- Production of Sponge Iron through DRI Kilns.
- Power generation through WHRB & CFBC
- Production of MS and SS Ingots/ billets/ blooms through Induction Furnaces
- Production of Rolled Products in Rolling Mill
- Producer Gas + PCI generation for supplying fuel for Pellet Plant & Rolling Mill.
- Manufacturing of Ferro Alloys through SEAFs

14.9.4 The proposed project will be located at Khasra numbers 2, 27/6, 27/4, 27/12, 27/13, 27/14 of Bakulahi Village and 379, 380/2, 381, 409/2, 409/3, 409/6, 409/7, 409/8, 417/1, 417/2, 417/3, 417/4, 417/5, 417/6, 417/7, 417/8, 417/9, 417/10 of Dhourabhata Village, Bhatapara Tehsil, Baloda Bazar District, Chhattisgarh.

- i. MoEF&CC has accorded EC for the Integrated Steel Plant vide letter no. J-11011 / 170 / 2009 – IA II (I) dated 25th March 2010 in the same location with 300 Acres of land.
- ii. Project could not be implemented due to delay in land acquisition & sluggish industrial scenario.

- iii. EC validity of 7 years has been expired on 25th March 2017 and could not submit the request letter to MoEF&CC for Extension of validity of EC before the expiry of validity period.
- iv. Now fresh proposal has been submitted to MoEF&CC for grant of EC as per the provisions of EIA notification dated 14-09-2006 and its amendments thereof.
- v. For the present proposal (with revised plant configuration) 156.909 Acres of land is envisaged and is already acquired by the Project Authorities.

14.9.5 Total land envisaged is 156.909 Acres (63.52 Ha.). Total land in possession of the management. Of the total area, 52 Acres (21 Ha.) (33%) land will be used for greenbelt developed. No Forest land involved.

14.9.6 The environmental site settings of the project site are given as below:

Particulars	Distance wrt to the site
Nearest Village	: Bakulahi (0.15 kms.) & Dhourabhata (0.35 Kms.)
Water bodies	: Shivrath River- 5.9 Kms. JamuniyaNadi -5.8 Kms. and Few other Seasonal Streams & ponds are present within 10 Km. radius of the proposed project site .
Reserve Forest / Protected Forest	: Nil within 10 Km. radius
Industrial areas / cluster (MoEF&CC Office Memorandum dated 13 th January 2010) & its subsequent amendments & areas notified as per Hon'ble NGT order vide dated 10 th July 2019	: Nil within 10 Km. radius & also the Plant area does not fall in the areas given in Hon'ble NGT order issued on 10 th July 2019.
National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve / Elephant Corridor / migratory route for Birds	: There are no notified National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ migratory routes for Birds with in 10 Km. radius of the plant.
Costal Regulation Zone [CRZ]	: Nil with in 10 Km. radius
Interstate boundary	: Nil with in 10 Km. radius (110 Kms. Madhya Pradesh)
Nearest National Highway / State Highway	: SH # 10 (Bhatapara to Baloda Bazar) – 9.0 Kms.
Nearest Railway Station	: Nipania Railway Station – 2.3 Kms.

14.9.7 No National park/Wild life sanctuary/Biosphere reserve/tiger reserve/elephant reserves / Reserved Forests / Protected Forests are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule – I fauna. Shivrath River- 5.9 Kms. & Jamuniya Nadi -5.8 Kms. are present within 10 Km.

radius of the project site.

14.9.8 Total project cost for proposed project is approx. Rs. 930.68 Crores. Proposed employment generation from proposed project will be 1000 nos. direct employment and 1000 nos. indirect employment.

14.9.9 The targeted production capacity of the total plant is 0.7 million TPA. The ore for the plant would be procured from NMDC, Chhattisgarh / Orissa. The ore transportation will be done through by road (through covered trucks).

14.9.10 Following is the proposed plant configuration and production capacity details:

S.No.	Proposed Units	Unit Configuration	Production Capacities
01	Iron Ore Beneficiation Plant	2.0 MTPA	2.0 MTPA
02	Pellet Plant	2 x 0.8 MTPA (or) 1x1.6 MTPA	1.6 MTPA
03	Coal Gasifier+ PCI For Pellet Plant & Rolling Mill	10 x 8000 Nm ³ /hr	80000 Nm ³ /hr
04	Sponge Iron Plant	2x650 TPD + 2x350 TPD + 2x100 TPD	7,60,000 TPA
05	Power Plant	WHRB	66 MW
		CFBC	40 MW
06	Steel Melt Shop with CCM	5 x 30 T + 5 x 20 T + twin Caster	7,50,000 TPA
07	Ladle Refining Furnace (LRF)	2 x 25 T & 1 x 35 T	7,50,000 TPA
08	Rolling Mill with Standby Reheating Furnace 50 TPH	2 x 3.5 LTPA	7,00,000 TPA
09	Ferro Alloys Plant	2 x 9 MVA	2 x 9 MVA
	Silico Manganese (SiMn)		36,000 TPA
	(or)		
	Ferro Manganese (FeMn)		66,000 TPA
	(or)		
	Ferro Silicon (FeSi)		18,000 TPA
	(or)		
	Pig Iron		72,000 TPA

14.9.11 The total power requirement for the proposed project will be 136.2 MW, this will be met mainly with captive power plant of 106 MW (i.e. 66 MW WHRB and 40 MW FBC based power plant), remaining 30 MW power will be sourced from the State Grid.

14.9.12 Proposed raw material and fuel requirement for proposed project are Iron Ore, Dolomite, Scrap, Ferro Alloys, Manganese ore, quartz requirement would be fulfill by external purchase /in house. Fuel Consumption will be mainly Coal & Furnace Oil.

14.9.13 The raw material requirement for the proposed project activity is furnished as below.

S.No.	RAW MATERIAL	QUANTITY (TPA)	SOURCES	MODE OF TRANSPORT
1. For Iron Ore beneficiation plant (Iron ore concentrate) – 2.0 MTPA				
1	Iron ore fines	20,00,000	Chhattisgarh/	By Rail & Road

S.No.	RAW MATERIAL		QUANTITY (TPA)	SOURCES	MODE OF TRANSPORT
				Orissa	through covered trucks
2. For manufacturing Pellets - 1.6 MTPA					
1	Iron ore Concentrate		17,00,000	In-House	Covered Conveyor
2	Bentonite		21,000	Gujarat	By Rail & Road through covered trucks
3	Lime Powder		22,500	Chhattisgarh/MP	By Rail & Road through covered trucks
4	Coke breeze		54,000	Indonesia / South Africa / Australia	By Sea, Rail & Road (Covered trucks)
5	Coal (Gasifier) 40,000 NM ³ + PCI	Indian	1,26,000	SECL/ Orissa	By Rail & Road through covered trucks
		Imported	80,600	Indonesia / South Africa / Australia	By Sea, Rail & Road (Covered trucks)
	Furnace Oil		40300 KL	Local	By Road through tanker
3. For manufacturing Sponge Iron of 7,60,000 TPA					
1	Iron Ore Pellets		11,40,000	In-house	Covered Conveyor
2	Dolomite		38,000	Chhattisgarh	By Road through covered trucks
3	Coal	Indian Coal	9,88,000	SECL/ Orissa	By Rail & Road through covered trucks
		Imported Coal	6,32,350	Indonesia / South Africa / Australia	By Sea, Rail & Road (Covered trucks)
4. For manufacturing Induction Furnace (MS Billets) – 7,50,000 TPA					
1	Sponge Iron		7,60,000	In-house	Covered Conveyor
2	Pig Iron		72,000	In-house	Covered Conveyor
3	Scrap		38,000	Open market, Baloda bazar	By Road through covered trucks
4	Ferro Alloys		37,500	In-house	Covered Conveyor
5. For manufacturing Rolled Products / TMT bars / Structural Steel – 7,00,000 TPA					
1	Billets / Ingots		7,50,000	In house generation	Covered Conveyor
2	Coal for Gasifier (40000 Nm ³)+ PCI	Indian	1,26,000	Chhattisgarh/ Orissa	By Rail & Road through covered trucks
		Imported	80,600	Indonesia / South Africa / Australia	By Sea, Rail & Road (Covered trucks)
	Furnace Oil		40300	Local	By Road through tanker
6. For Ferro Alloys : 2x9 MVA (FeSi (or) SiMn (or) FeMn (or) Pig Iron					
6. (i) For manufacturing Ferro Silicon – 18,000 TPA					
1	Quartz		27,360	Chhattisgarh/ Andra Pradesh	By Rail & Road through covered trucks
2	Mill Scale		14,040	In-house	Covered Conveyor
3	M.S. Scrap		630	Chhattisgarh	By Road through covered trucks

S.No.	RAW MATERIAL		QUANTITY (TPA)	SOURCES	MODE OF TRANSPORT
4	LAM Coke		10080	Chhattisgarh	By Road through covered trucks
5	Bag filter dust		1080	In-house	Pipeline
6. (ii) For manufacturing Silico Manganese - 36,000 TPA					
1	Manganese Ore		58680	MOIL / OMC	By Rail & Road through covered trucks
2	FeMn Slag		22248	In house generation	Covered Conveyor
3	LAM Coke		13860	Chhattisgarh	By Road through covered trucks
4	Quartz		7200	Chhattisgarh/ Andra Pradesh	By Rail & Road through covered trucks
5	Bag filter dust		3600	In house generation	Pipeline
6. (iii) For manufacturing Ferro Manganese – 66,000 TPA					
1	Manganese Ore		170625	MOIL / OMC	By Rail & Road through covered trucks
2	LAM Coke		27375	Chhattisgarh	By Road through covered trucks
3	Quartz		2250	Chhattisgarh/ Andra Pradesh	By Rail & Road through covered trucks
4	Bag filter dust		12,750	In house generation	Pipeline
6. (iv) For manufacturing Pig Iron – 72,000 TPA					
1	HG Iron ore		1,06,200	Chhattisgarh/ Orissa	By Rail & Road through covered trucks
2	LAM Coke		35,280	Chhattisgarh	By Road through covered trucks
3	Lime stone		29,520	Chhattisgarh/ MP	By Rail & Road through covered trucks
7. For Power Generation –CFBC power plant of 40 MW					
1	Coal	Indian	2,48,400	Chhattisgarh/ Orissa	By Rail & Road through covered trucks
		Imported	1,60,000	Indonesia / South Africa / Australia	By Sea, Rail & Road (Covered trucks)
Note: Railway siding proposed is at 0.5 Kms. from the Site.					

14.9.14 Water consumption for the proposed project will be 13,255 KLD. Water drawl permission was obtained in 2009 & applied for renewal of the same, which is under process.

14.9.15 The effluent generated from I/O Beneficiation plant, Pellet plant, DRI kilns, Submerged Electric Arc Furnaces, SMS units will be recycled with closed loop cooling water system. Effluent from Rolling Mill will be sent to settling tank & will

be recycled through closed circuit cooling system. Mill scales will be reused in SMS. Effluent from Gasifier will have mainly phenolic compounds and will be used in After Burning Chamber of DRI kilns for quenching and to regulate the temperature of the hot flue gas in accordance with inlet requirement of waste heat recovery Boiler. Sanitary wastewater / sewage generated will be treated in STP. Garland drains will be provided around all the raw material stacking areas. Zero Liquid Effluent Discharge system will be maintained in the proposed project

- 14.9.16 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 14.9.17 Name of the Consultant: M/s. Pioneer Laboratories & Consultants Pvt. Ltd., Hyderabad (Sl. No. 119 in the List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019).

Observations and recommendations of the Committee

- 14.9.18 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 Annexure-1 read with additional ToRs at Annexure-2:**
- i. No dumping of char is permitted.
 - ii. Provision for industrial vacuum cleaner to control the fugitive emissions shall be made.
 - iii. No tailing pond is allowed.
 - iv. Briquetting of the dust shall be carried out.
 - v. Air cooled condenser shall be installed in the power plant.
 - vi. Closed loop system in the producer gas plant shall be provided.
 - vii. Particulate emissions from the stacks shall be less than 30 mg/Nm³ with bag house as APCD. Emission from ESP shall be less than 50 mg/Nm³.
 - viii. 100 % solid waste utilization shall be adopted.
 - ix. Traffic management plant to avoid congestion on the roads shall be furnished.
 - x. Explore the possibility of railway siding for transportation of raw materials/ finished products and the outcomes shall be submitted as part of the EIA report.
 - xi. Explore the possibility of reducing no. of DRI kilns while maintaining the same production level.
 - xii. No Ferro-Chrome shall be manufactured without clearance from MoEF&CC.
 - xiii. Fourth hole extraction system shall be installed in SAF.
 - xiv. Public Hearing is to be conducted by the concerned State Pollution Control Board. The issues raised during the public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan

shall, inter alia, contain the year-wise activities with corresponding financial allocations.

14.10 Expansion of Cement Plant of **M/s Deccan Cements Ltd.**, Increase of production clinker from 1.7 to 3.2 MTPA, cement from 1.8 to 4.0 MTPA (by Installation of new unit (Unit III), & power from 18 to 33 MW (by Installation of WHRB power Plant) located at Village Mahankaligudem, Mandal Palakeedu, **District Suryapet, Telangana-** [Online Proposal No. IA/TG/IND/128616/2019; File No. J-11011/572/2007-IAII(I)] – **Prescribing of Terms of Reference – regarding.**

14.10.1 **M/s Deccan Cements Ltd.**, has made online application vide proposal no. IA/TG/IND/128616/2019 dated 30th November 2019 along with Form-1, Prefeasibility Report and other documents under the provisions of the EIA Notification, 2006 for proposing ToR to undertake detailed EIA study for the proposed expansion of cement project mentioned in the subject above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

14.10.2 **M/s. Deccan Cement Limited (DCL)** proposes to increase Clinker Production from 1.7 to 3.2 MTPA, Cement Production from 1.8 to 4.0 MTPA, Power from 18 to 33 MW of existing Cement Plant located at Mahankaligudem Village, Palakeedu Mandal, Suryapet District, Telangana. DCL has submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on 30.11.2019 vide Online Application No. IA/TG/IND/128616/2009.

14.10.3 The existing project was accorded environmental clearance vide lr.no. J - 11011/572/2007-IA II (I) dated 27.12.2007 & J - 11011/572/2007-IA II (I) dated 11.05.2017. Consent to Operate was accorded by Telangana State Pollution Control Board (TSPCB) vide lr.no. TSPCB/RCP/NLG/CFO&HWA /HO/2017. Validity of CTO is up to 31.12.2022.

14.10.4 The proposed expansion unit will be located at Mahankaligudem Village, Palakeedu Mandal, Suryapet District, Telangana.

14.10.5 The present DCL cement plant is located in an area of 53.8 Ha. The land area acquired for the proposed expansion is 20.7Ha which is own land. No forestland is involved. The entire land has been acquired for the project. Of the total area 74.5 ha (33% i.e., 25 Ha) land will be used for green belt development.

14.10.6 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

14.10.7 Total project cost is approx Rs. 600 Crores. Proposed employment generation from expansion will be 170 direct employment and 50 indirect employment.

14.10.8 The targeted production capacities are given in below table:

Cement Plant	Present approved Capacity as per MoEF EC (MTPA)			Capacity after proposed expansion (MTPA)		
	Clinker	Cement	Power (MW)	Clinker	Cement	Power (MW)
Unit – I	0.5	0.3	18	0.5	0.3	33MW

Cement Plant	Present approved Capacity as per MoEF EC (MTPA)			Capacity after proposed expansion (MTPA)		
	Clinker	Cement	Power (MW)	Clinker	Cement	Power (MW)
Unit – II	1.2	1.5		1.2	1.5	<ul style="list-style-type: none"> • 18 MW Coal based power plant • 15 MW Waste Heat Recovery Power Plant
Line – III	-	-		1.5	2.2	
Total	1.7	1.8		3.2	4.0	

- 14.10.9 With increase of clinker production capacity, the limestone requirement increases from 2.3 to 4.6 MTPA. This additional requirement of limestone will be met from captive limestone mines located adjacent to the cement plant. The limestone transportation will be done through road.
- 14.10.10 The peak power consumption in the DCL Cement plant complex including mine is 24 MW. The Power requirement is met from existing captive thermal power plant and grid. Additional power required for the proposed expansion is about 24 MW. Additional power requirement will be met from proposed WHRB power plant and grid.
- 14.10.11 The raw material required for production of clinker is Limestone, Iron ore, Bauxite and Coal. The requirement of raw material per annum on an average for the production of clinker and cement is presented below.

Raw Material Requirement, MTPA

Sl. No.	Material	Before Expansion	After Expansion	Source Locality	
1	Limestone	2.3	4.6	Captive Limestone Mines	
2	Gypsum	0.09	0.20	EID, Parry, Coramandal Fertilizers, Vizag.	
3	Fly ash	0.215	0.380	DCL Captive Power plant and VTPS, KTPP, KTPS, NTPC and ITC.	
4	Coal	Cement Plant	0.310	0.564	Singareni Collieries Company Ltd and Imported Coal
		Power Plant	0.16	0.16	
5	Pet Coke	Cement Plant	-	0.353	Indigenous
6	IR Laterite		0.113	0.212	Mulugu
7	Iron Ore		0.0025	0.0047	Bellary
8	AL Laterite		0.012	0.023	Rajahmundry

- 14.10.12 Fresh Water requirement increases from 2420 m³/day to 3728 m³/day. The above requirement will be met from Krishna River/Ground water. DCL has obtained the permission from Irrigation Department for 3750 m³/day vide G.O. No. 28, dated. 17.05.2016 from Dept. of Irrigation & CAD, Government of Telangana. Wastewater generated is only from domestic activities at cement plant and residential colony. A full fledged sewage treatment plant (STP) is in operation designed for a maximum load of 300 m³/day which is sufficient to handle additional wastewater generation. Treated domestic wastewater is reused for greenbelt development within DCL cement plant complex.
- 14.10.13 There is no court case or violation under EIA Notification to the project or related activity.
- 14.10.14 EIA Consultant: B. S. Envi-Tech Pvt Ltd. [S.No.20, List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019].

Observations and recommendations of the Committee

- 14.10.15 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 Annexure-1 read with additional ToRs at Annexure-2:**
- i. Provision for industrial vacuum cleaner to control the fugitive emissions shall be made.
 - ii. Air cooled condenser shall be installed in the power plant.
 - iii. Particulate emissions from the stacks shall be less than 30 mg/Nm³ with bag house as APCD. Emission from ESP shall be less than 50 mg/Nm³.
 - iv. Traffic management plant to avoid congestion on the roads shall be furnished.
 - v. Scheme to harvest rain water more than the annual water consumption shall be furnished.
- 14.11 Increase of Clinker production from 2.5 MTPA to 3.4 MTPA & Cement (OPC/PPC/PSC/Composite Cement) & GGBS from 4.8 MTPA to 6.0 MTPA and installation of 1X18 MW Captive Power Plant of **M/s JSW Cement Ltd** located at Village Bilakalagudur, Mandal Gadivemula, **District Kurnool, Andhra Pradesh**. [Online Proposal No. IA/AP/IND/129035/2019; File No. J-11011/889/2007-IAII(I)]– **Prescribing of Terms of Reference – regarding.**
- 14.11.1 **M/s JSW Cement Ltd.**, has made online application vide proposal no. IA/AP/IND/129035/2019 dated 3rd December 2019 along with Form-1, Prefeasibility Report and other documents under the provisions of the EIA Notification, 2006 for proposing ToR to undertake detailed EIA study for the proposed expansion of cement project mentioned in the subject above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

- 14.11.2 M/s. JSW Cement Limited (JSWCL) proposes to increase Clinker Production from 2.5 MTPA to 3.4 MTPA and Cement production (OPC/PPC/PSC/Composite Cement) & GGBS from 4.8 to 6.0 MTPA and install 1X18 MW Captive Power Plant within the existing Cement Plant located at Bilakalagudur Village, Gadivemula Mandal, Kurnool District, Andhra Pradesh.
- 14.11.3 The existing project was accorded environmental clearance vide Ir.no. J-11011/889/2007-IA-II(I) dated 25.08.2008 & J-11011/889/2007-IA-II(I) dated 09.03.2016. Consent to Operate was accorded by Andhra Pradesh Pollution Control Board vide order no. APPCB/KNL/KNL/124/HO/CFO/2016 dated 16.06.2017. Validity of CTO is up to 30.09.2022.
- 14.11.4 The proposed expansion unit is located at Bilakalagudur Village, Gadivemula Mandal, Kurnool District, Andhra Pradesh.
- 14.11.5 The land area acquired for the proposed expansion is 263.05 Ha is owned by JSWCL. No Forest land is involved. The entire land has been acquired. No additional land will be required for the expansion. Out of the total area 95.95 Ha (33%) land will be used for greenbelt development.
- 14.11.6 No national parks/wildlife sanctuary/Biosphere Reserve etc. are reported to be located in the core and buffer zone. The area also does not report to form corridor for Schedule –I fauna.
- 14.11.7 Total project cost is INR 420 crores. Presently 800 people are employed. Proposed employment generation for the expansion project will be 80 people.
- 14.11.8 The capacity of the cement plant before and after expansion is given below:

	PRESENT CAPACITY	PROPOSED EXPANSION	CAPACITY AFTER EXPANSION
Clinker Production (MTPA)	2.50	0.9	3.4
Cement Production (MTPA) OPC/PPC/GGBS/PSC/ Composite Cement)	4.80	1.2	6.0
Captive Power Plant (MW)	1X18	1X18	36
Captive Limestone Mine (MTPA)	7.0	Nil	7.0

- 14.11.9 Additional clinker will be transported to group companies at Vijayanagar (near Bellary), Salboni (West Bengal) through rail or road.

14.11.10 Present peak power requirement of the cement plant is 40MW. Presently the power requirement is met from the existing 18MW power plant and the power grid. Additional power requirement will be 8.5 MW and the same will be sourced from the new 1X18MW Captive Power Plant and APCPDCL with a dedicated 132 kV overhead grid line.

14.11.11 The proposed raw material requirement for clinker production and 18 MW Captive Power Plant is:

S. No.	Raw material	Existing requirement (TPA)	Additional requirement for the proposed expansion (TPA)	Total requirement after proposed expansion (TPA)	Source	Distance /Transportation
1.	Limestone	3650000	1304842	4954842	Captive Mine	1 km
2.	Aluminous Laterite	193750	45932	239682	Kerala	850 km
3.	Flue Dust	77500	31322	108822	JSW Steel, Bellary	250 km
4.	B.F Slag	0	18706	18706	JSW Steel, Bellary	250 km
5.	Red Mud	0	12474	12474	Belgam	540 km
6.	Co al*	Cement Plant	337500	121500	Imported/ indigenou s	237 km (Krishnap atnam Port)
		Power Plant	90000	90000		
7.	Pet Coke*	240000	86400	326400	Indigenou s	750 km

14.11.12 Raw material requirement – Cement (OPC/PPC/PSC/Composite Cement) & GGBS is:

S. No.	Raw material	Existing requirement (TPA)	Additional requirement for the proposed expansion (TPA)	Total requirement after proposed expansion (TPA)	Source	Distance /Transportation
1.	Clinker	2500000	900000	3400000	Captive	-
2.	GGBS	2960000	134000	3094000	JSW Steel, Bellary	250 km
3.	Fly ash	0	330000	330000	CPP/Nearby	250 km
4.	Gypsum	125000	13800	138800	Imported/ Chemical	400 km

14.11.13 The present water requirement is 2000m³/day. Additional water requirement for the expansion proposal is 550m³/day. JSWCL has obtained permission for the withdrawal of 4500 m³/day water from state ground water authority.

- 14.11.14 No wastewater will be generated from the cement manufacturing process. Approximately 84 m³/day of wastewater will be generated from the Captive Power Plant. Wastewater will be suitably treated and the treated water will be used internally for dust suppression. Approximately 4.0 m³/day of domestic wastewater will be generated which will be treated in the existing STP and the treated water will be used for plantation and horticulture. No wastewater will be discharged outside the premises. “Zero Discharge” will be maintained.
- 14.11.15 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 14.11.16 EIA Consultant: B. S. Envi-Tech Pvt Ltd. [S.No.20, List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019].

Observations and recommendations of the Committee

- 14.11.17 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 Annexure-1 read with additional ToRs at Annexure-2:**
- i. Provision for industrial vacuum cleaner to control the fugitive emissions shall be made.
 - ii. Air cooled condenser shall be installed in the power plant.
 - iii. Particulate emissions from the stacks shall be less than 30 mg/Nm³ with bag house as APCD. Emission from ESP shall be less than 50 mg/Nm³.
 - iv. Traffic management plant to avoid congestion on the roads shall be furnished.
 - v. Scheme to harvest rain water more than the annual water consumption shall be furnished.
- 14.12 Enhancement in DRI production from 2,70,000 MTPA to 3,50,000 TPA in the existing kilns of 1x350 TPD and 1x500 TPD through usage of high grade coal and pellets and 2x15 MW power plant (19.5 MW WHRB and 10.5 MW AFBC) by **M/s. Jayaswal Neco Industries Ltd.**, located at Siltara Industrial Centre, Village Girod and Dhaneli, **District Raipur Chhattisgarh** [Online Proposal No. IA/CG/IND/129156/2019; File No. J-11011/809/2007-IAII(I)] – **Prescribing of Terms of Reference – regarding.**
- 14.12.1 **M/s. Jayaswal Neco Industries Limited** has made application vide online proposal no. IA/CG/IND/129156/2019 dated 7/12/2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

- 14.12.2 M/s. Jayaswal Neco Industries Limited is operating the following units at Siltara Industrial Centre, Village Girod and Dhaneli, District Raipur Chhattisgarh.

Capacity	Consent & Cost	Letter No. & Date	Total production	Present status	Remarks
350 TPD DRI plant and 15 MW power plant (120000 MT of Sponge Iron)	Consent to Establish (CTE) INR 90 Crores	4053/TS/CEC B/2005 Dated 31.08.2005	Sponge Iron – 2,70,000 TPA; Power Plant – 2x15 MW.	Unit commissioned and under operation presently.	Acquired from M/s. Abhijeet Infrastructure limited
500 TPD DRI plant and 15 MW power plant (150000 MT of Sponge Iron)	Consent to Establish (CTE) INR 93.5 Crores	2292/TS/CEC B/2006 Dated 02.05.2006			Acquired from M/s. M/s Corporate Ispat Alloys Limited

14.12.3 It was informed that the capital investment for each of the aforesaid units was less than INR 100 crores, hence Environmental Clearance was not required as per the provisions of EIA Notification, 1994. Further, the aforesaid units have obtained NOC prior to 14/09/2006, hence EC was not required as per the provisions of the EIA Notification, 2006. Presently, the units is operating based on the CTO renewal accorded by the Chhattisgarh Environment Conservation Board (CECB).

14.12.4 The present proposal of M/s. Jayaswal Neco Industries Limited is for grant of Terms of Reference (ToR) for enhancement in the sponge iron production from 2,70,000 MTPA to 3,50,000 TPA in the existing kilns of 1x350 TPD and 1x500 TPD through usage of high-grade coal and pellets.

Observations of the Committee

14.12.5 The Committee noted that adjacent to the project site, M/s. Jayaswal Neco Industries Limited is operating an Integrated Steel Plant for which Environmental Clearance was accorded by the Ministry vide letter no. J-11011/809/2007-IA.II(I) dated 8/09/2008. However, the project proponent has not submitted the integrated proposal by consolidated all the existing units. Further, the Committee opined that a report on cumulative impact assessment of all the units envisaged in the existing ECs are required in order to take holistic view on the instant proposal under consideration.

Recommendations of the Committee

14.12.6 In view of the forgoing and after detailed deliberations, the Committee recommended to return the proposal in present form and advised the project proponent to integrate the proposal by consolidating all the existing units.

14.13 Expansion of Integrated Mini Steel Plant of **M/s. IND Synergy Ltd (ISL)** located at Village Kotmar and Mahupalli, Tehsil & District Raigarh, **Chhattisgarh** – [Online Proposal No IA/CG/IND/129979/2019; File No. J-11011/170/2007-IAII(I)]– **Prescribing of Terms of Reference – regarding.**

14.13.1 **M/s. IND Synergy Ltd** has made application vide online proposal no. IA/CG/IND/129979/2019dated 10/12/2019 along with the application in prescribed

format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

- 14.13.2 During the meeting, the project proponent has requested to withdraw the proposal as they are intending to further revise their expansion proposal.

Observations and recommendations of the Committee

- 14.13.3 In view of the forgoing and after detailed deliberations, the Committee recommended to permit the Project Proponent to withdraw the proposal.

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 PM₁₀, PM_{2.5}, SO₂, 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. Corporate Environment Responsibility (CER)
 - i. To address the Public Hearing issues, an amount as specified under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018 amounting to Rs.crores, shall be earmarked by the project proponent, towards Corporate Environment Responsibility (CER). Distinct CER projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These CER projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat & District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/donations and or free camps shall be included in the above CER budget
 12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
 13. A tabular chart with index for point wise compliance of above ToRs.
 14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report

- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 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 (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.
- ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised 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.

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 (PM₁₀ 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 PM₁₀ 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(PM₁₀ 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 PM₁₀ 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 basebleaching 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)





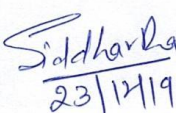

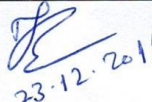
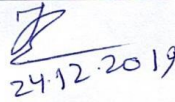
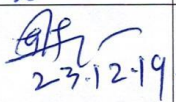
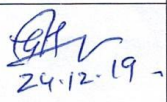
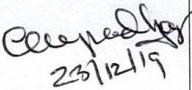
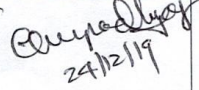
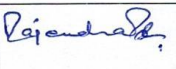
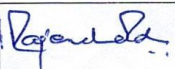
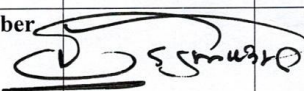
1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Emission from sulphuric acid plant and sulphur muck management.
3. Details on installation of Continuous Emission Monitoring System with 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


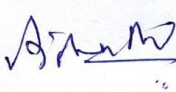
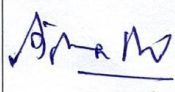
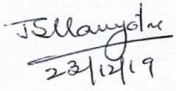
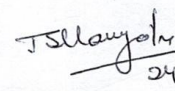
Executive Summary

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 its acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest, eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)
- viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
- ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
- x. Likely impact of the project on air, water, land, flora-fauna and nearby population
- xi. Emergency preparedness plan in case of natural or in plant emergencies
- xii. Issues raised during public hearing (if applicable) and response given
- xiii. CSR plan with proposed expenditure.
- xiv. Occupational Health Measures
- xv. Post project monitoring plan

**LIST OF PARTICIPANTS IN 14th MEETING OF EAC (INDUSTRY-I) HELD
ON 23-24 DECEMBER, 2019**

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE	
			23/12/2019	24/12/2019
1	Dr. Chhavi Nath Pandey, IFS(Retired) Email: pandeychhavinath55@gmail.com	Chairman	 23/12/2019	
Members				
2.	, Representative of Central Pulp and Paper Research Institute, Saharanpur. Email: director.cppri@gmail.com Dr. SHIVAKER MISHRA	Member	 23/12/19	 24/12/19
3.	Dr. Siddhartha Singh , Representative of Indian Meteorological Department, New Delhi. Siddhartha.singh77@gmail.com	Member	 23/12/19	 24/12/2019
4.	Dr. G. Bhaskar Raju Email: gbraju55@gmail.com	Member	— Absent —	—
5.	Dr. Jagdish Kishwan, IFS (Retd.) Email: jkishwan@gmail.com	Member	 23.12.2019	 24.12.2019
6.	Dr. G.V. Subramanyam Email: sv.godavarthi@gmail.com	Member	 23.12.19.	 24.12.19.
7.	Shri. Ashok Upadhyaya Email: ahupadhy@rediffmail.com	Member	 23/12/19	 24/12/19
8.	Shri. R.P. Sharma Email: rpsh3@hotmail.com	Member	 Rajendra	 Rajendra
9.	Shri. Sanjay Deshmukh DR. Email: docsvd@yahoo.com	Member	 S. Deshmukh	Absent

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE	
			23/12/2019	24/12/2019
10.	Prof. S.K. Singh Email: sksinghde@gmail.com singhsk@email.com	Member	 Not present in 2 nd second half	Absent
11.	Dr. R. Gopichandran Email: r.gopichandran@vigyanprasar.gov.in	Member	Absent	Absent
12.	Shri. Jagannath Rao Avasarala Email: avasaralajagan@gmail.com	Member		
13	Shri. J.S. Kamyotra Email: kamyotra@yahoo.co.in	Member	 23/12/19	 24/12/19
14.	Shri. Aravind Kumar Agrawal Director, MoEF&CC Email: dirind-moef@gov.in	Member Secretary	