

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

SUMMARY RECORD OF THE SECOND (2ND) MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE HELD DURING 10TH TO 12TH DECEMBER 2018 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The second meeting of the Re-constituted Expert Appraisal Committee (EAC) for Industry-I Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held during **10^h to 12th December 2018** in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

2.0 After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim.

The minutes of 1st meeting held during **26th to 28th November 2018** as circulated were confirmed with following corrections:

1.16 Modernization of Rourkela Steel Plant by addition of new slab caster#4 within existing SMS-II to achieve production of M/s SAIL Rourkela Steel Plant as per EC vide letter no J-11011/66/2014-IA.II(I) dated 15/12/2016” located at SAIL Rourkela Steel Plant Rourkela Orissa - Environmental Clearance under para 7 (ii) of EIA Notification, 2006 [Online Proposal No. IA/OR/IND/75723/2018; MoEFCC File J-11011/66/2014-IA.II(1).

Reference	For	Read as
Details given in MoM Point No. 12.0, Page No. 157	The committee observed that the instant proposal is for installation of 1.5 T SMS without increasing the permitted hot metal production of 4.5 MTPA and crude steel production of 4.2 MTPA	The committee observed that the instant proposal is for installation of 1 MTPA Caster#4 in existing SMS#2 without increasing the permitted hot metal production of 4.5 MTPA and crude steel production of 4.2 MTPA.
Details given in MoM Point No. 13.0, Page No. 157	After detailed deliberations, the committee recommended for environmental clearance for installation of 1.5 T slab caster in SMS-3 without increasing the permitted hot metal production of 4.5 MTPA and crude steel production of 4.2 MTPA subject to following specific conditions:	After detailed deliberations, the committee recommended for environmental clearance for installation of 1 MTPA slab caster in SMS#2 without increasing the permitted hot metal production of 4.5 MTPA and crude steel production of 4.2 MTPA subject to the following specific conditions:
Details given in MoM Point	Emissions from the bag filter shall not be more than 30 mg/Nm ³	Emissions from the bag filter attached to LHF shall not be more than 30 mg/NM3

No. 13.0 (7.0), Page No. 157		
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1.17 Expansion of hot metal from 0.5 to 0.75 MTPA, Ductile Iron pipe from 0.30 to 0.50 MTPA and 0.1 MTPA castings and fittings by M/s. Tata Metaliks Private Limited at village Gokulpur, PachimMedinipur District, West Bengal [Online proposal No. IA/WB/IND/21443/2014; MoEFCC File No. J-11011/377/2013-IA.II(I)] – Environmental Clearance.

Reference	For	Read as
page 167 of 294	“environmental clearance for the proposed expansion cum modification of 0.85 MTPA Integrated Steel Plant with 184 MW CPP under the provisions of EIA Notification, 2006”	‘ environmental clearance for Expansion of hot metal from 0.5 to 0.75 MTPA, Ductile Iron pipe from 0.30 to 0.50 MTPA and 0.1 MTPA castings and fittings under the provisions of EIA Notification, 2006’

1.31 Proposed expansion cum modification of 0.85 MTPA Integrated Steel Plant with 184 MW CPP by M/s Super Smelters Limited at Jamuria Industrial Estate in Village Ikra, PO – Mondalpur, Distt Paschim Bardhaman, West Bengal –[Online Proposal No. IA/WB/IND/30645/2008; MoEFCC F.No. J-11011/86/2008-IA II (I)] – Environmental Clearance.

Reference: Para 3 at page 206 & 207 of 294

For:

Name of unit	No. of unit	Capacity of each unit	Production Capacity
Sinter Plant	2	60m ² , 15m ²	690000 TPA Sinter
Coal Washery	1	0.9 MTPA	405000 TPA Clean Coal 342000 TPA Middlings
Rolling Mill	1	0.316 MTPA MS 0.396 MTPA AS 0.142 MTPA SS	0.396 TPA 0.316 TPA 0.142 TPA
CPP(WHRB)	1	51 MW DRI	51 MW
Iron Ore Beneficiation	1	2 MTPA	1250000TPA Fe Conc
Pellet Plant	1	1.2 MTPA	1200000 TPA Pallets
MBF	1	380m ³ , 65m ³	458000 TPA HM/Pig
Lime Plant	1	120 TPD	10000 TPA CaO
Oxygen Plant	1	120 TPD	3600m ³ /hr
DRI Kilns	2, 3, 2	100 TPD, 300 TPD, 500 TPD	672000 TPA Sponge Iron
IF	2, 4	25 TPD, 20 TPD	416000 TPA Liquid steel
SAF	4,1,1	9 MVA FeCr,9 MVA FeMn, 9MVA SiMn	58000 TPA, 19000 TPA, 13800 TPA

EAF +LF+CCM	1,1,1	1x50T, 1x50T, 1x50T	250000 Stainless Steel
AOD	1	1x45T	
CPP (FBC)	1	133 MW	133 MW
Coke Oven	1	0.5 MTPA	500000 TPA

Read as:

Name of the unit	No. of unit	Capacity of each unit	Production Capacity
Sinter Plant	2	1x60 m ² , 1x15 m ²	690000 TPA Sinter
Coal washrey	1	0.9 MTPA	405000 TPA Clean Coal 342000 TPA Middlings
Rolling Mill	1	0.316 MTPA MS, 0.396 MTPA AS, 0.142 MTPA SS,	0.396 TPA 0.316 TPA 0.142 TPA
CPP WHRB	1	51 MW DRI	51 MW
Iron Ore beneficiation	1	2 MTPA	1200000 TPA Fe Concentrate
Pellet Plant	1	1.2 MTPA	2 Units of 0.6 MTPA Each (Total 1.2 MTPA)
MBF	1	380m ³ , 65m ³	458000 TPA HM/Pig
Lime Plant	1	120 TPD	10000 TPA CaO
Oxygen Plant	1	120 TPD	3600m ³ /hr
DRI Kilns	2,3,2	100 TPD, 300 TPD, 500 TPD	672000 TPA Sponge Iron
IF	2,4	25 TPD, 20 TPD	4X 25TPD 4X20TPD with Total Capacity as 712000 TPA Steel
SAF	4,1,1	9 MVA (Fe-Cr), 9 MVA(Fe- Mn), 9 MVA(Si-Mn)	58000 TPA, 19000 TPA, 13800 TPA
AOD	1	1x45T	142000TPA
CPP –FBC	1	133 MW	133 MW
Coke Oven	1	0.5 MTPA	500000 TPA

1.20 Expansion of 1.44 MTPA Integrated Steel Plant located at Rengali, Sambalpur, Odisha of M/s Shyam Metaliks and Energy Limited [Online proposal No. IA/OR/IND/80405/2018; MoEFCC File No. J-11011/495/2006-IA.II(I)] – Environmental Clearance – Expansion of pellet plant from 0.6 MTPA to 1.2 MTPA under para 7(ii) of the EIA Notification, 2006.

Reference: Item No. at page 206 & 207 of 294

The subject is mentioned as:

“1.20 Expansion of 1.44 MTPA Integrated Steel Plant located at Rengali, Sambalpur, Sambalpur, Odisha of M/s Shyam Metaliks and Energy Limited [Online proposal No. IA/OR/IND/80405/2018; MoEFCC File No. J-11011/495/2006-IA.II(I)] – Environmental Clearance – Expansion of pellet plant from 0.6 MTPA to 1.2 MTPA under para 7(ii) of the EIA Notification, 2006”

The aforesaid para may be read as:

“1.20 Expansion of 1.44 MTPA Integrated Steel Plant located at Rengali, Sambalpur, Sambalpur, Odisha of M/s Shyam Metaliks and Energy Limited [Online proposal No. IA/OR/IND/80405/2018; MoEF&CC File No. J-11011/495/2006-IA.II(I)] – Environmental Clearance – Expansion of pellet plant from 0.3 MTPA to 1.2 MTPA under para 7(ii) of the EIA Notification, 2006”.

10th December 2018 (Teesta)

2.1 Expansion of Integrated Cement Project - Clinker (1.48 to 4.38 MTPA), Cement (2.28 to 6.14 MTPA), CPP (25 to 60 MW) and WHRB (4.7 to 15 MW) by M/s. Nirma Limited at Villages - Nimbol and Sinla, Tehsil - Jaitaran, District Pali, Rajasthan [Proposal No. IA/RJ/IND/80954/2009; F.No. J-11011/1/2010-IA-II(I)] – Environmental Clearance.

1.0 M/s Nirma Limited made online application vide proposal no. IA/RJ/IND/80954/2009, dated 15th October, 2018 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:

2.0 The Expansion of Integrated Cement Project - Clinker (1.48 to 4.38 MTPA), Cement (2.28 to 6.14 MTPA), CPP (25 to 60 MW) and WHRB (4.7 to 15 MW) of M/s. Nirma Limited located at Villages - Nimbol and Sinla, Tehsil - Jaitaran, District - Pali (Rajasthan) was initially received in the Ministry on 11th Nov., 2016 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 13th meeting held on 23rd Nov., 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 04th Aug., 2017 vide letter no. J-11011/01/2010-IA.II(I).

3.0 The project of M/s. Nirma Limited located at Villages - Nimbol and Sinla, Tehsil - Jaitaran, District - Pali (Rajasthan) is Expansion of Integrated Cement Project - Clinker (1.48 to 4.38 MTPA), Cement (2.28 to 6.14 MTPA), CPP (25 to 60 MW) and WHRB (4.7 to 15 MW). The existing project was accorded environmental clearance vide letter no. J-11011/01/2010-IA-

II(I) dated 29th March, 2011 in the name of M/s. Siddhi Vinayak Cement Ltd. and transfer of EC in the name of M/s. Nirma Limited from M/s. Siddhi Vinayak Cement Ltd. has also been obtained from MoEFCC, New Delhi vide letter no. J-11011/01/2010-IA-II(I) dated 31st July, 2017. The Status of compliance of earlier EC was obtained from Regional Office, Lucknow vide letter no. IV/ENV/R/ind-130/820/2011/211, dated 20th Nov., 2017 in the name of M/s. Siddhi Vinayak Cement Ltd. and vide letter no. IV/ENV/R/ind-130/820/2011/285, dated 01st Feb., 2018 in the name of M/s. Nirma Ltd. There are no non-compliances reported by Regional officer. The proposed capacity for the different products as below:

Units	Existing Capacity	Additional Capacity			Total Capacity After Expansion
		Through optimization in Existing Line	Proposed New Line	Total	
Clinker (MTPA)	1.48	0.56	2.34	2.9	4.38
Cement (MTPA)	2.28	0.78	3.08	3.86	6.14
CPP (MW)	25	5	30	35	60
WHRB (MW)	4.7	1.3	9	10.3	15
D.G. Set (MW)	4.8	Nil			4.8

4.0 Total land required for the project is 95.764 ha (which includes 70 ha existing plant area and 25.764 ha additional area), which is industrial land and totally under the possession of M/s. Nirma Limited. No forest land is involved. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is almost flat and reported to lies between 26^o 19' 31.29" N to 26^o 20' 11.25" N Latitude and 73^o 50' 18.94" E to 73^o 51' 17.78" E Longitude in Survey of India toposheet no. 45 F/11 and 45 F/15 at an elevation of about 290 - 300 m. The ground water level reported to ranges between 60 m bgl to 70 m bgl below the land surface during the post-monsoon season and 80 m bgl to 90 m bgl 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 95 m. Further, the stage of groundwater development is reported to be 100 % and 132 % in core and buffer zone respectively and thereby these are designated under Over-exploited Category.

6.0 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 authenticated list of flora and fauna provided through the primary survey reporting presence of two schedule - I fauna (i.e. Indian Peafowl (*PavoCristatus*) and Indian monitor lizard (*Varanusbengalensis*) in the study area (Chapter 3, Pg. No. 103 - 107 of Final EIA/EMP Report).

7.0 The raw materials required for the proposed expansion project are Limestone, Gypsum, Fly ash, Clay, Red Ochre/Iron Ore and Silica Sand. Cement Plant is based on Dry Process Technology for Cement manufacturing with Pre- Heater and Pre- Calciner Technology. The type of cement manufactured is / will be OPC and PPC.

8.0 The cement manufacturing process largely comprises of the steps including limestone

Handling & Storage; Raw Mix Preparation & Homogenization; Fuel Preparation (Coal/Pet coke/Lignite); Calcination &Clinkerization; Cement Grinding, Storage, Packing & Dispatch; etc. No waste will be generated during Cement manufacturing process.

9.0 The targeted production capacity of the Clinker (1.48 to 4.38 MTPA), Cement (2.28 to 6.14 MTPA), CPP (25 to 60 MW) and WHRB (4.7 to 15 MW). Limestone is being / will be sourced from the Captive Limestone Mines & and third party limestone suppliers and transported through covered conveyer belt. Gypsum is being / will be sourced from Bhavnagar, Gujarat; RSSM & FCI, Rajasthan and transported through road. Clay and Silica Sand is being / will be sourced from nearby market through road. Red Ochre/Iron Ore is being / will be sourced from Chhoti Sadri, Bhilwara, Chittorgarh and nearby market by road. Raw material required for the project along with source with distance and mode of transportation is given below:

S. No.	Name of Raw Material	Quantity (MTPA)			Source	Approx. Distance & Mode of Transportation
		Existing	Additional	Total after expansion		
1.	Limestone	2.22	4.35	6.57	Captive Limestone Mines & third party suppliers	Adjacent to 10 km, by Road
2.	Gypsum	0.11	0.19	0.3	Bhavnagar, Gujarat; RSSM & FCI, Rajasthan	670 km, by Road
3.	Fly ash	0.68	1.16	1.84	CPP, Suratgarh, Kota Thermal & Barmer (JSW)	450 km, by Road 370 km, by Road
4.	Clay	0.125	0.245	0.37	Nearby market	10 km, by Road
5.	Red Ochre/ Iron Ore	0.15	0.29	0.44	Chhoti Sadri, Bhilwara, Chittorgarh and nearby market	375 km, by Road
6.	Silica Sand	0.09	0.18	0.27	Nearby Market	10 km, by Road

10.0 Existing total fresh water requirement for the plant is 1123 KLD, additional fresh water requirement for the expansion project will be 1377 KLD. Thus, the total fresh water requirement after expansion will be 2500 KLD; which is being / will be sourced from Ground Water. The permission for drawl of groundwater has been obtained from CGWA vide letter no. 21-4(493)/WR/CGWA/2011-4952 dated 10th December 2012 and application for the renewal of the existing NOC has been submitted to CGWA on 15th May., 2016. Application for additional water requirement of 1377 KLD has also been submitted to CGWA on 08th Feb., 2018.

11.0 Existing power requirement for the plant is 27.5 MW. Additional requirement for

expansion project is 42 MW. Thus, the total power requirement after proposed expansion will be about 69.5 MW; which is being / will be sourced from Captive Power Plant, RSEB, WHRB & D.G. Set (for back-up).

12.0 Baseline Environmental Studies were conducted during Winter Season i.e. from Dec., 2016 to Feb., 2017. Ambient air quality monitoring was carried out at 8 locations during 01st Dec., 2016 to 28th Feb., 2017 and the data submitted indicated: PM₁₀ (59.4 to 89.3 $\mu\text{g}/\text{m}^3$), PM_{2.5} (27.3 to 48.4), SO₂ (7.1 to 12.9 $\mu\text{g}/\text{m}^3$) and NO₂ (14.3 to 26.9 $\mu\text{g}/\text{m}^3$). The results of the modeling study indicate that the maximum increase of GLC for the proposed expansion project is 1.52 $\mu\text{g}/\text{m}^3$ with respect to the PM, 0.65 $\mu\text{g}/\text{m}^3$ with respect to the SO₂, 0.71 $\mu\text{g}/\text{m}^3$ with respect to the NO_x.

13.0 Ground water quality has been monitored at 8 locations in the study area and analyzed. pH: 7.06 to 7.31, Total Hardness: 288 to 480.70 mg/l, Chlorides: 272.26 to 474.71 mg/l, Fluoride: 0.58 to 0.85 mg/l. Heavy metals are within the limits. Surface water samples were not collected from the above locations as all the water bodies are seasonal and were found dry during the study period.

14.0 Noise levels are in the range of 52.1 to 67.1 Leq dB(A) for day time and 42.2 to 57.3 Leq dB(A) for night time.

15.0 It has been reported that there is no habitation in the core zone of the project. No/ R&R is involved. It has been envisaged that none of families to be rehabilitated, which will be provided compensation and preference in the employment.

16.0 No solid waste will be generated in the cement manufacturing process. Dust collected from various air pollution control equipments is being / will be totally recycled back into the process. STP Sludge is being / will be utilized as manure for greenbelt development within the plant premises. Used oil & grease is being / will be generated from plant machinery / Gear boxes; which is being / will be sold out to the CPCB authorized recycler. It has been envisaged that an area of 31.6 ha (i.e. 33% of the total project area - 95.764 ha) has been proposed to be developed under greenbelt / plantation; out of which, 22.1 ha have already been developed under greenbelt / plantation and 9.5 ha is under development as greenbelt to attenuate the noise levels and trap the dust generated due to the project development activities.

17.0 It has been reported that Consent to operate from Rajasthan State Pollution Control Board *vide* letter no. F(CPM)/Pali(Jaitaran)/ 2683(1)/2016-2017/6226-6228, dated 04th Oct., 2017 for Clinker and Cement which is valid up to 31st Aug., 2022, CTO *vide* letter no. F(CPM)/Pali(Jaitaran)/ 1(1)2011-2012/3851-3854 dated 27th Nov., 2015 for CPP & D.G. Set; which is valid up to 31st Oct., 2018, CTO renewal application of the CPP & DG set has been submitted *vide* letter no. NL-RJ/ENV-132A/574/2018 dated 2nd July, 2018 and CTO *vide* letter no. F(CPM)/Pali(Jaitaran)/ 1(1)2011-2012/9802-9804 dated 19th Jan., 2017 for WHRS; which is valid up to 30th Sept., 2022.

18.0 Public hearing of the project was held on 08th June, 2018 at Govt. Upper Primary School, Sinla, Gram Panchayat - Digrana, Tehsil - Jaitaran, District – Pali (Rajasthan) under the chairmanship of Mr. Sudhir Kumar Sharma, District Collector, Pali (Rajasthan) for proposed

expansion Project having production capacity of Clinker (1.48 to 4.38 MTPA), Cement (2.28 to 6.14 MTPA), CPP (25 to 60 MW) and WHRB (4.7 to 15 MW) under the Rajasthan State Pollution Control Board. The issues raised during public hearing are Employment, Environment & Pollution, Education, Health, CSR activities related, Land related and Plantation etc. An amount of Rs. 4.74 Crores (0.50 % of the total project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues. Environment & Pollution, Education, Health, CSR activities related, Land related and Plantation etc. The Statement of main issues raised by the public and response of the project proponent with action plan is as follows:

S. No.	Issue	Response by project proponent (after PH)	Time Bound Action Plan proposed & Budgetary provision
1.	Employment	Proposed expansion project will generate around 375 employments, where the preference will be given to suitable candidates from local as per their qualification. Nirma Ltd. has already given employment to the local villagers and around 69 no. of villagers are employed in the plant.	Preference in employment shall be given to suitable local candidates. Apart from providing direct employment. The company have proposed to undertake / impart skill development programs to empower the local unemployed youths for a self-sustaining career.
2.	Environment & Pollution	<ul style="list-style-type: none"> ▪ Company is taking various measures for the control of air pollution such as installation of APCEs, covered storage facilities, etc. ▪ Secondary fugitive emission is controlled as per CPCB guidelines and measures are adopted to control the fugitive emission. i.e. regular water spraying on roads and / or dust prone areas identified, maintaining greenbelt / plantation within the plant premises etc. ▪ Transportation of raw material and finished product is being done by covered trucks and not be overloaded. All the raw materials and products are stored in silos & covered sheds. Material transportation is being done through covered conveyor belts inside the plant premises. Road sweeping machines are used inside the plant. ▪ Regular noise and ambient air quality monitoring is also being carried out by the company and the results are found within the 	Company has allocated Rs. 40 Crores as a capital cost and Rs. 5 Crores / annum as a recurring cost for Environmental Protection Measures.

S. No.	Issue	Response by project proponent (after PH)	Time Bound Action Plan proposed & Budgetary provision
		<p>prescribed limits. Same practice will be continued in future also.</p> <p>The company is abstracting ground water as per permission granted by CGWA i.e. 1123 KLD. As per conditions given in CGWA NOC; the company is recharging 200% of the total water withdrawal. For recharging, the company has implemented rain water harvesting programme by installation of artificial recharge structure within plant premises and deepening of water ponds within plant and in nearby villages. 13 nos. of bore wells has been constructed for recharging the ground water. 2 nos. of ponds have been deepened within plant premises and 10 nos. of ponds in nearby villages has been deepened to accumulate rain water and recharge. Around amount of Rs. 2,13,71,719 has been spent for rain water harvesting and recharging of ground water.</p>	<p>The company will further spend amount of Rs. 70 lacs for rain water harvesting and recharging of ground water.</p>
3.	Education	<p>The company will carry out infrastructure developmental and financial support in nearby government & private schools for education as per company's policy.</p> <p>Company will assist in orphan girl's education by providing them scholarship, school fees, uniform, books etc.</p> <p>Company will provide support in terms of finance, infrastructure, etc. to the existing schools and will also provide scholarship, school fees, uniform, books etc. to the girls.</p>	<p>An amount of approx. Rs. 1.19 Crore will spend on infrastructure development and financial support in nearby government & private schools.</p>
4.	Health	<ul style="list-style-type: none"> ▪ The company has started to provide ambulance facility in emergency to help local villagers. ▪ The company is also proposing to 	<p>Amount of approx. Rs. 35 lacs will spend for providing health facilities.</p>

S. No.	Issue	Response by project proponent (after PH)	Time Bound Action Plan proposed & Budgetary provision
		<p>provide facilities in Public Health Centres of nearby villages.</p> <ul style="list-style-type: none"> ▪ Company will also organize medical health camps for local villagers. 	
		<ul style="list-style-type: none"> ▪ Nirma Ltd. will organize veterinary camps in the nearby villages. 	An amount of Rs. 35 lacs will spend for organizing camps.
		<ul style="list-style-type: none"> ▪ Company has started silicosis check-up for plant workers; and no case of silicosis has been found, however records has been maintained as per Factory Act. ▪ Company will continue the same on half-yearly basis 	Approx. Rs. 1.45 Crores have been earmarked for Occupational Health & Safety as capital cost per year.
5.	CSR Activities related	<ul style="list-style-type: none"> ▪ The company has spent approx. Rs. 16.78 Crores in various sectors i.e. education, infrastructure development, rain water harvesting, health & hygiene, sports & recreational etc. in last 4 years. ▪ The company has deepened 10 nos. of ponds in surrounding villages. Around amount of Rs. 1,23,71,719 has been spent for the same. ▪ Various works have been done in Sinla village as per requirement of Village Sarpanch such as drinking water supply, rain water harvesting, development of crematorium, etc. The company has also received appreciating letter from nearby villages sarpanch for the CSR work done so far. ▪ The company has constructed bypass road from village Nimbol to Murkhasni Mega highway for transportation of raw material and finished product; and internal roads in Sinla, Latoti Village for 	Amount of Rs. 4.74 Crore will be spent for various activities under CER.

S. No.	Issue	Response by project proponent (after PH)	Time Bound Action Plan proposed & Budgetary provision
		<p>villagers. An amount of Rs. 13,37,53,239/- has been spent for the same.</p> <ul style="list-style-type: none"> ▪ The company has developed public garden - “Shanti Park” in Jaitaran. 	
		<ul style="list-style-type: none"> ▪ Drinking water has been regularly supplied to nearby villages (i.e. Sinla, Dungarnagar etc.) from the last 4 years. ▪ Company is spending approx. Rs. 13.5 Lacs on yearly basis for the drinking water supply. ▪ Company will continue the same practice in future also. 	An amount of Rs. 35 lacs have been earmarked for drinking water supply.
6.	Plantation	<p>The company has planted 37,000 saplings till this monsoon within plant premises. As there is low survival rate, the company is regularly replacing new saplings with died saplings.</p> <ul style="list-style-type: none"> ✓ The company has developed public garden - “Shanti Park” in Jaitaran. ✓ Company has also planted trees in crematorium at Sinla&Digrana village as per requirement of Village Sarpanch. ✓ Nirma Ltd. will develop plantation on both sides of the roads connecting plant to Village Sinla, Nimbol etc. 	<p>Further, the company will plant around 15,000 nos. of saplings within plant premises. Cost incurred for the same will be Rs. 25 lacs.</p> <p>Rs. 15 lacs have been earmarked greenbelt development / planation in nearby area.</p>

19.0 An amount of Rs. 4.74 Crores (0.50% of the total project cost, as per OM of MoEFCC dated 01st May, 2018) has been earmarked for Enterprise Social Commitment based on public hearing issues. Details of ESC Plan is given below:

S. No.	Activity Heads	YEARS (RS. IN LACS)						Total Amount
		1 st	2 nd	3 rd	4 th	5 th	6 th to 7 th	
1.	Educational Programme	17	17	17	17	17	34	119
2.	Health & Welfare Programme	20	20	20	20	20	40	140

3.	Environment Protection Measures	12	12.6	12.6	12.6	12.6	22.6	85
4.	Infrastructure Development	0	40	0	40	0	50	130
GRAND TOTAL		49	89.6	49.6	89.6	49.6	146.6	474

Detailed Activity-wise Action Plan for CER Activities

Sector	Activity	YEARS (RS. IN LACS)						Total Amount
		1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year	6 th to 7 th Year	
Educational Programme	Orphan girl's education	1	1	1	1	1	2	7
	Financial support by providing school fee, uniform, books & scholarship	1	1	1	1	1	2	7
	Infrastructure development in nearby private and government schools	15	15	15	15	15	30	105
	Sub Total	17	17	17	17	17	34	119
Health & Welfare Programme	Providing drinking water in nearby villages	5	5	5	5	5	10	35
	Providing facilities in nearby Public Health Centers	5	5	5	5	5	10	35
	Organize veterinary camps in nearby villages	5	5	5	5	5	10	35
	Organize "SwachhtaPakhvada" on six monthly in nearby villages	5	5	5	5	5	10	35
	Sub Total	20	20	20	20	20	40	140
Environment protection measures	Plantation around deepened ponds, nearby villages, schools, government buildings	2	2.6	2.6	2.6	2.6	2.6	15
	Rain water harvesting programme by deepening	10	10	10	10	10	20	70

Sector	Activity	YEARS (RS. IN LACS)						Total Amount
		1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year	6 th to 7 th Year	
	ponds in nearby villages							
	Sub Total	12	12.6	12.6	12.6	12.6	22.6	85
Infrastructure development	Construction / repairing of road in nearby villages	0	40	0	40	0	50	130
	Sub Total	0	40	0	40	0	50	130
Grand Total								474

20.0 The capital cost of the project is Rs. 900 Crores and the capital cost for environmental protection measures is proposed as Rs. 40 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 5.0 Crores / annum. The detailed CSR plan has been provided in the EMP in its page No. 200 to 201. The employment generation from the proposed expansion project is 375 persons. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Particular	Capital Cost	Recurring Cost / annum
Air Pollution Control	38	4.0
Water Pollution Control and Rain Water Harvesting Measures	1.25	0.5
Greenbelt Development	0.25	0.25
Environment Monitoring and management	0.50	0.25
Total	40	5.0

21.0 Greenbelt will be developed in 31.6 ha which is about 33% of the total plant area; out of which 22.1 ha has already been covered under greenbelt/ plantation. Additional 9.5 ha area will be developed under greenbelt / plantation. Greenbelt will be developed along the plant boundary as per CPCB/MoEFCC, New Delhi guidelines. Local and native species will be planted with a proposed density of 1500 trees per hectare. Total no. of 51250 saplings will be planted and nurtured in 31.6 hectares in 5 years.

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

23.0 Name of Consultant - J.M. EnviroNet Pvt. Ltd.; S. No. in QCI List - "91" (as updated on 12th Nov., 2018)

Observations of the committee:

24.0 After detailed deliberations, the committee observed the following inadequacies in the EIA report.

- The responses of the Project Proponent during PH were not recorded in the minutes of Public Hearing.
- Pollution control measures were not properly detailed in the EIA/EMP report.
- PP has not obtained the Ground water withdrawal permission for the additional water requirement.
- The committee observed that the area is in the category of the over exploitation area.
- The PP has not obtained the approval of conservation plan for Schedule-I species from the Chief Wildlife warden.
- The Corporate Environmental Policy is not as per the ToR prescribed. The Policy shall clearly specify the mechanism for reporting of non-compliances/infringements if any to the board of directors and stake holders at large at the periodical interval.
- There are several non-compliances reported by the regional officer in the certified compliance report issued to the Unit.
- Green belt development has not been complied as per the earlier EC conditions.

Recommendations of the committee:

25.0 In view of the above, the committee of the view that the EIA/EMP shall be revised inter alia including the above observations and recommended to return the proposal in present form.

2.2 Capacity Addition of Integrated Steel Plant from 5.0 MTPA to 10.0 MTPA and Captive Power Plant from 300 MW to 600 MW at M/s JSW Steel Ltd., Dolvi Works, Dolvi Village, Raigad District, Maharashtra–[Proposal No. IA/MH/IND/78340/2018; F.No. J-11011/76/2013-IA.II(I)] – Environmental Clearance for changes in the plant configuration under para 7(ii) of EIA Notification, 2006.

1.0 M/s JSW Steel Ltd., Dolvi Works made an application vide online proposal no. IA/MH/IND/78340/2018 dated 2nd November, 2018 seeking environmental Clearance for changes in the plant configuration under para 7(ii) of EIA Notification, 2006 at Integrated Steel Plant from 5.0 MTPA to 10.0 MTPA and Captive Power Plant from 300 MW to 600 MW at M/s JSW Steel Ltd., Dolvi Works, Dolvi Village, Raigad District, Maharashtra.

Details submitted by the project proponent:

2.0 JSW Steel Ltd, Dolvi Works had been granted Environmental Clearance (EC) for expansion of its integrated steel plant from 5 MTPA to 10 MTPA of finished product vide letter no J-11011/76/2013-IA II (I) dated 25th Aug, 2015. The EC letter was further amended to

exclude the proposed 1.0 MTPA & 2.5 MTPA coke oven units and transfer of the same to Dolvi Coke Projects Limited (A Sister Company) and 10 MTPA Slag and clinker grinding unit to JSW Cement Limited (A Sister Company). The plant's current annual production capacity is **5 MTPA** of steel.

3.0 Located on the west coast of India, the plant has a jetty with a capacity of 10 million tonnes per annum. This provides the unit with logistical advantages in importing raw materials and savings on freight cost.

4.0 Production capacity of various units after the proposed Expansion from 5 MTPA to 10 MTPA as per existing revised EC are given in **Table** below:

SI No.	Unit Name	Capacity at 5 MTPA stage (A)	Addl. Proposed Capacity under 5 MTPA to 10 MTPA Expansion (B)	Total Capacity after Expansion as per existing EC (A+B)
1	DRI (Gas based Mega Module)	2.0 MTPA	2.0 MTPA	4.0 MTPA
2	Pellet Plant	4.0 MTPA	4.0 MTPA	8.0 MTPA
3	Coke Oven including By-product plant	1.0 MTPA	-	1.0 MTPA
4	Sinter Plant	6.0 MTPA	8.0 MTPA	14.0 MTPA
5	Blast furnace including pig casting	3.6 MTPA	4.5 MTPA	8.1 MTPA
6	SMS(CONARC)	5.2 MTPA	-	5.2 MTPA
7	SMS(BOF)	-	6.0 MTPA	6.0 MTPA
8	Ladle Furnace(LF)	2X200t+250t	2 X 300 T	2X200t+250t + 2 X 300 T
9	VD/VOD & RH-TP	1X200t+ 1X205t	2 X 300 T	1X200t+ 1X205t + 2 X 300 T
10	CSP(HRC Coil) Thin Caster-cum-Hot Strip Finishing Train	3.5 MTPA	-	3.5 MTPA
11	Conventional Slab Caster	2X1 Strand 3.68 MTPA	2X2 Slab Casters 5.73 MTPA	9.41 MTPA
12	Billet Caster	-	1X6 Strands	1X6 Strands
13	Plate Mill	1.5 MTPA	-	1.5 MTPA
14	Hot Rolling Mill with Shearing and Slitting	-	5.0 MTPA	5.0 MTPA
15	Bar Mill	-	1.4 MTPA	1.4 MTPA
16	CRM	1 MTPA	1.5 MTPA	2.5 MTPA
17	Galvanizing Line	0.6 MTPA	-	0.6 MTPA
18	Electrical Steel CRGO Line	0.4 MTPA	-	0.4 MTPA
19	Tin Plate Mill	0.4 MTPA	-	0.4 MTPA
20	Colour Coating line	0.5 MTPA	-	0.5 MTPA

SI No.	Unit Name	Capacity at 5 MTPA stage (A)	Addl. Proposed Capacity under 5 MTPA to 10 MTPA Expansion (B)	Total Capacity after Expansion as per existing EC (A+B)
21	Lime/dolo Plant	1800 tpd	3X600 TPD	3600 TPD
22	Oxygen Plant	4100 tpd	3500 TPD	7600 TPD
23	Captive Power Plant	300 MW	300 MW	600 MW
24	Township	-	150 acres township of 7500 dwellings	150 acres township of 7500 dwellings

5.0 JSW is submitting the compliance status of the steel plant periodically to MSPCB and MoEFCC's Regional Office, Nagpur. The latest certified compliance status report vide letter no 5-71/2015(Env)/4529 dated 26/10/2018 by the Regional Office-MoEF&CC, Nagpur has been submitted along with EC application.

6.0 In the earlier proposal for expansion of steel production capacity from 5 MTPA to 10 MTPA, JSW Steel has proposed setting up of two identical sinter plants of 4 MTPA sinter production capacity each and one pellet plant of 4 MTPA production capacity. As part of the present proposal, JSW is proposing to remove one of the proposed sinter plants and in place of proposed 4 MTPA pellet plant, to install a bigger pellet plant of 9 MTPA capacity. Revised plant configuration after proposed changes is shown in following table:

SI No	Unit Name	Existing Capacity at 5 MTPA stage (A)	Addl. Proposed Capacity under 5 MTPA to 10 MTPA Expansion as per previous EC (B)	Revised Unit Capacity under 5 MTPA to 10 MTPA Expansion (C)	Total Plant Capacity at 10 MTPA after present proposal (A+C)	Remarks
1	DRI (Gas based Mega Module)	2.0 MTPA	2.0 MTPA	2.0 MTPA	4.0 MTPA	No change
2	Pellet Plant	4.0 MTPA	4.0 MTPA	9.0 MTPA	13.0 MTPA	Increase by 5 MTPA
3	Coke Oven including By-product plant	1.0 MTPA	-	-	1.0 MTPA	No change
4	Sinter Plant	6.0 MTPA	8.0 MTPA	4.0 MTPA	10.0 MTPA	Decrease by 4 MTPA
5	Blast furnace including pig casting	3.6 MTPA	4.5 MTPA	4.5 MTPA	8.1 MTPA	No change

Sl No	Unit Name	Existing Capacity at 5 MTPA stage (A)	Addl. Proposed Capacity under 5 MTPA to 10 MTPA Expansion as per previous EC (B)	Revised Unit Capacity under 5 MTPA to 10 MTPA Expansion (C)	Total Plant Capacity at 10 MTPA after present proposal (A+C)	Remarks
6	SMS(CONARC)	5.2 MTPA	-	-	5.2 MTPA	No change
7	SMS(BOF)	-	6.0 MTPA	6.0 MTPA	6.0 MTPA	No change
8	Ladle Furnace(LF)	2X200t+250t	2 X 300 T	2 X 300 T	2X200t+250t + 2 X 300 T	No change
9	VD/VOD & RH-TP	1X200t+1X205t	2 X 300 T	2 X 300 T	1X200t+1X205t + 2 X 300 T	No change
10	CSP(HRC Coil) Thin Caster-cum-Hot Strip Finishing Train	3.5 MTPA	-	-	3.5 MTPA	No change
11	Conventional Slab Caster	2X1 Strand 3.68 MTPA	2X2 Slab Casters 5.73 MTPA	2X2 Slab Casters 5.73 MTPA	9.41 MTPA	No change
12	Billet Caster	-	1X6 Strands	1X6 Strands	1X6 Strands	No change
13	Plate Mill	1.5 MTPA	-	-	1.5 MTPA	No change
14	Hot Rolling Mill with Shearing and Slitting	-	5.0 MTPA	5.0 MTPA	5.0 MTPA	No change
15	Bar Mill	-	1.4 MTPA	1.4 MTPA	1.4 MTPA	No change
16	CRM	1 MTPA	1.5 MTPA	1.5 MTPA	2.5 MTPA	No change
17	Galvanizing Line	0.6 MTPA	-	-	0.6 MTPA	No change
18	Electrical Steel CRGO Line	0.4 MTPA	-	-	0.4 MTPA	No change
19	Tin Plate Mill	0.4 MTPA	-	-	0.4 MTPA	No change
20	Colour Coating line	0.5 MTPA	-	-	0.5 MTPA	No change

Sl No	Unit Name	Existing Capacity at 5 MTPA stage (A)	Addl. Proposed Capacity under 5 MTPA to 10 MTPA Expansion as per previous EC (B)	Revised Unit Capacity under 5 MTPA to 10 MTPA Expansion (C)	Total Plant Capacity at 10 MTPA after present proposal (A+C)	Remarks
21	Lime/dolo Plant	1800 tpd	3X600 TPD	3X600 TPD	3600 TPD	No change
22	Oxygen Plant	4100 tpd	3500 TPD	3500 TPD	7600 TPD	No change
23	Captive Power Plant	300 MW	300 MW	300 MW	600 MW	No change
24	Township	-	150 acres township of 7500 dwellings	150 acres township of 7500 dwellings	150 acres township of 7500 dwellings	No change

7.0 After the present proposal, the pollution load from the proposed sinter plant shall be reduced and pollution load from the new 9 MTPA pellet plant shall increase. However, high efficiency bag filters/ESP shall be installed to limit the particulate matter concentration to 10 mg/Nm³. Therefore, output PM pollution load from the 9 MTPA pellet plant shall be reduced as compared with previously considered Pellet plant of 4 MTPA stage. Major source of SO₂ pollution load in sinter and pellet plants is coke breeze. After the present proposal, requirement of coke breeze shall be reduced by 235,000 TPA. Therefore, a major decrease in SO₂ pollution load is envisaged. Thermal NO_x is the major pollutant in pellet plant induration process. As the capacity of pellet plant is being increased, an increase in NO_x pollution load is also estimated. However, the increase in NO_x loads shall be less than the proportional increase in size of the capacity as a result of implementation of energy efficient technologies. Therefore, after the present proposal, there shall be a decrease in PM and SO₂ pollution load and marginal increase in NO_x load. Further, no impact on water, land environment is expected & no additional fuel shall be required for the proposed changes.

8.0 Proposed mitigation plan for dealing of additional pollution load: The efficiency of ESPs/ bag filters shall be such that the emission of dust from stack will not be more than 10 mg/Nm³. Depending upon the quality of emissions from different sources, suitable air pollution control systems will be provided. The chimney heights will be as per CPCB norms to ensure Ground Level Concentration (GLC) of different pollutants within permissible limits. No additional effluents shall be generated after the present proposal. The plant is designed for complete recirculation of water except during monsoon.

Observations of the Committee: -

9.0 After detailed deliberations, the committee opined that the proposal involves the re-appropriation of several units which were granted EC during 2012 and 2015 and have not been established. Therefore, the committee felt the need to reassess the environmental impacts. Public hearing was conducted in 2014 for the expansion project and in the instant proposal there is no

increase in overall production of steel. Hence, the committee recommended for the ToR without fresh Public Hearing. The project proponent requested for consideration of the baseline data from the carrying capacity study being conducted by NEERI. The Committee agreed to the request.

Recommendations of the Committee: -

10.0 After detailed deliberations, the Committed recommended for the grant of ToR as per the generic ToR enclosed at **Annexure I read with additional ToRs at Annexure-2**. Further, the Committee also recommended exempting the proposal from the conduct of fresh public hearing.

2.3 Expansion of Clinker Production (3.5 MTPA to 5.1 MTPA) and Cement production(1.0MTPA To 3.0 MTPA) (by installation of Unit – III) For Clinker Production of 1.6 MTPA and Cement 2.0 MTPA and Installation of 90 MW Coal Based Thermal Power Plant by M/S Lafarge India Ltd (Sonadih Cement Plant) located at Village Sonadih, P.O.Raseda, Dist.-Baloda Bazar-Bhatapara, Chhattisgarh. By M/s NUVOCO VISTAS CORP. LTD. SONADIH UNIT [Online Proposal No. IA/CG/IND/58554/2016; MoEFCC File No. J-11011/386/2005-IA.II(I)] –Environmental Clearance – further consideration based on ADS reply.

1.0 M/S Lafarge India Limited made online application vide proposal no. IA/CG/IND/58554/2016 dated 28/08/2018 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 Project Proponent:

2.0 M/s NUVOCO VISTAS CORP. LTD (NUVOCO) (formerly Lafarge India Ltd.) is operating a Cement Plant near Sonadih Village, P.O Raseda Village, Balodabazar Tehsil, Balodabazar -Bhatapara District, Chhattisgarh was initially received online on 23.08.2016 vide Application No. IA/CG/IND/58764/2016. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 11th meeting of EAC Sep, 2016 and prescribed Terms of Reference (ToR) 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 J-11011/386/2005-IA.II (I) dated 14.03.2017.

3.0 M/s NUVOCO has approached MOEF&CC for transfer of terms of reference from LAFARGE INDIA LIMITED to NUVOCO VISTAS CORPORATION LIMITED. MOEF&CC has approved the transfer of Terms of Reference to NUVOCO VISTAS CORP. LTD vide letter no. J-11011/386/2005-IA.II (I) dated 20.10.2017. Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 28/08/2018 vide Online Application No. IA/CG/IND/58764/2016.

4.0. The project of NUVOCO VISTAS CORP. LTD (NUVOCO) (formerly Lafarge India Ltd.) is operating a Cement Plant near Sonadih Village, P.O Raseda Village, Balodabazar Tehsil, Balodabazar -Bhatapara District, Chhattisgarh. NUVOCO proposes to increase clinker production capacity of the Cement Plant from 3.5 MTPA to 5.1 MTPA by installing one more process line of

1.6 MTPA clinker production capacities. Cement production after expansion of the cement plant will be increased from 1.0 to 3.0 MTPA. To support the cement plant with uninterrupted power, it is proposed to setup 75 MW Coal based Thermal power plant within the existing cement plant complex. Existing and proposed capacity of Cement Plant:

	Present Capacity (MTPA)		Proposed Enhancement (MTPA)		Capacity after proposed expansion (MTPA)	
	Clinker	Cement	Clinker	Cement	Clinker	Cement
UNIT – I	3.5	1.0	-	-	3.5	1.0
UNIT – II						
UNIT – III (New Unit)	-	-	1.6	2.0	1.6	2.0
Total	3.5	1.0	1.6	2.0	5.1	3.0
Coal based Thermal Power Plant, MW	-		75		75	

5.0 The project is located an area of 91.886 Ha in the jurisdiction of Sonadih, Baloda Bazar Tehsil, Balodabazar-Bhatapara District (C.G.) which is owned by NUVOCO. The new unit of cement plant and new power plant will be located within the existing plant area. No forestland involved. No River passes through the project area. No perennial water bodies are present which needs modification/diversion.

6.0 The topography of the area is Flat terrain with hillocks and reported to lie between 21°43'30.00"-21°44'11.29"N latitude and 82°12'25.20"E-82°13'11.50"E Longitude in Survey of India topographic sheet No. 64/K/2, at an elevation of 240m above msl. The groundwater table reported to range between 3-5m below the land surface during the post-monsoon season and 5-10 m below the land surface during the pre-monsoon season. No ground water will be used for the plant.

7.0 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in 10 km radius of the study area. The nearest Reserved forest is Mohtara RF at 3.6 km in the SW direction. During the ecological studies, Peafowl, Schedule – I species is observed. To protect these schedule – I fauna, a conservation plan has been formulated with total fund of INR 10 Lakhs.

8.0 The major raw material used in the manufacture of cement is Limestone. The limestone requirement of the plant after expansion will be met captive limestone mines i.e., from the existing mine (Sonadih Limestone Mine) and new mine (ML-1) of NUVOCO. The following table shows the present and proposed raw material consumption in the cement plant: Raw Material Requirement (TPA) is as follows:

	Quantity (MTPA)			Source	Mode of Transport
	Present	Additional	Total		
	Unit I + II	Unit – III			
Limestone	5.36	2.45	7.81	Own Limestone Captive mines	Road (internal)

Coal/ Pet coke	Cement plant	0.658	0.302	0.96	SECL Coal Mines/Private party	Rail/Road
coal	CPP	-	0.63	0.63	SECL Coal	
Gypsum		0.05	0.10	0.15	Private Party	Rail
Sand		0.133	0.057	0.190	Private Party	Road
Iron ore/Flue Dust		0.028	0.012	0.040	Private Party	Road
Fly ash		0.30	0.47	0.77	Power plants of Chhattisgarh	Road (Bulker)
Alternate Raw Material/ Fuel		0.09	0.04	0.13	Private Party	Road

9.0 The plant is designed to manufacture cement by adopting the dry process technology. The process largely comprises of Crushing the limestone; Raw Mix preparation; Raw mix homogenization; Coal preparation; Calcination and Clinkerisation; Cement Grinding Packing. NUVOCO proposes to install 75 MW coal based Power Plant. Power generation process is based on Rankine Steam cycle. The steam generated in the boiler when expanded through a turbine, turns the turbine shaft, which in tandem is coupled to an electric power generator.

10.0 Coal is obtained from SECL coal mines. The coal requirement of Unit – III will be obtained from E-auction. NUVOCO has recently commissioned railway siding by laying of 26 km length. The cement/clinker produced from Sonadih Cement Plant after expansion will be transported by rail/road. For transport of other raw material, NUVOCO will ensure that all the trucks employed are “Environmentally Compliant”.

11.0 The present water requirement of the plant including colony is about 3700 m³/day. For the expansion phase, additional water consumption of 1100 m³/day is required. The present requirement is met from Seonath River, located at a distance of about 1 km from the plant site. Additional water requirement will be met from Seonath River. NUVOCO has obtained permission to draw water 2.0 cusec i.e. 4896 m³/day which is adequate to meet the requirement of Unit – III along with present consumption.

12.0 The present power requirement of 41 MVA is met from CSEB grid. Additional Power requirement is 25 MVA for Unit – III and the total power requirement of complex i.e. 66 MVA is met from the proposed Coal based Thermal Power Plant. NUVOCO has installed DG sets of 16 MW capacity as standby units for supply of power during contingency.

13.0 Baseline Environmental Studies were conducted during Winter season i.e. from December 2016 to February 2017, Ambient air quality monitoring has been carried out at 8 locations during December 2016 to February 2017 and the data submitted indicated: PM₁₀ (41.8 µg/m³ to 56.6 µg/m³), PM_{2.5}(18.0 to 26.3µg/m³), SO₂ (8.0 to 13.9 µg/m³) and NO_x (9.1 to 14.8µg/m³). The result of the modeling study indicates that the maximum increase of GLC for the proposed project is 15.2 µg/m³ with respect to the PM10, 4.8 µg/m³ with respect to the SO₂ and 10.6µg/m³ with respect to the NO_x.

14.0 Ground water quality has been monitored in eight locations in the study area and analysed. pH: 6.67 to 7.59, Total Hardness: 179 to 593 mg/l, Chlorides: 16 to 273 mg/l, Fluoride: 0.53 to 1.27 mg/l. Heavy metals are within the limits. Surface water sample was analyzed in eight locations. pH: 7.59 to 7.98; Total Hardness 119 to 245mg/l, Chlorides: 19 to 37 mg/l, Fluoride: 0.69 to 0.99 mg/l. Heavy metals are within the limits.

15.0 Noise levels are in the range of 68.6 to 46.4 dB(A) for daytime and 55.1 to 40.3 dB(A) for nighttime.

16.0 The total area of cement plant is owned by NUVOCO. No additional area is required for the expansion, hence the point of Rehabilitation and Resettlement does not arise. Thus no adverse impact is anticipated.

17.0 The major solid waste generated from the project along with quantity and disposal is given below.

- Solid waste generated from colony is disposed after segregating the waste into bio-degradable and non-degradable.
- Bio degradable waste - Composting
- Non-degradable waste - land filled at within plant site.
- STP sludge will be used as Manure in the Plantation work.
- NUVOCO is storing hazardous waste in an isolated storage area with covered shed is provided within plant site with all safety precautions of handling.
- Waste mix Solid & Waste Mix Liquid, TDI tar waste, Plastic waste, Tyre chips etc..., from various industries which are being used as an alternate fuel in Kiln.
- Ash generated from proposed power plant will be totally consumed in the cement plant.

18.0 The Chhattisgarh Environment conservation Board issued the Water & Air consent to operate renewal for The existing production capacity i.e. Clinker- 3.5 MTPA, Cement- 1.0 MTPA and 3 Nos DG set-16 MW, vide letter no. 1853 &1855/TS/CECB/2018 dtd 21.5.2018 and consent is valid up to 31st August 2021.

19.0 The Public hearing of the project was held on 04.05.2018 by Chhattisgarh Environment Conservation Board at Raseda Bhata, Raseda, Village, Balodabazar Tehsil, Balodabazar Bhatapara (C.G) District under the Additional Collector Smt. Leena Kamalesh Mandaavi, for setting up of Sonadih Cement Plant-Increase of Clinker production from 3.5 to 5.1 MTPA, Cement from 1.0 to 3.0 MTPA (by Installation of Unit – III) & Installation of 75 MW Coal Based Thermal Power Plant. The issues raised during public hearing along with action plan and budget allotment are addressed in Final EIA report. Summary of the Public hearing issues along with action plan and budget are given below:

S.No	Issues Raised In Public Hearing	Response Of The Project Proponent After Public Hearing	Time Bound Action Plan	Budgetary Provision
1.	Sound pollution of the company at night, they face trouble	The noise levels at night time are less than 65 Db (A) at the plant boundary. However, precautions like thickening of greenbelt towards village will be carried out at Plant boundary.	About 74000 trees have been planted in the factory and its boundary. More than 37 Ha was brought under greenbelt development. Density will be improved by planting @500 trees /Ha. This will be continued under EMP.	Rs 15 Lacs /annum in EMP, recurring cost.
	At the same time, the crop is also experiencing waste and health related problems.	There was no complaint about agri loss from farmers in the nearby village. However necessary steps will be taken if any issues come up in future.	All Pollution control equipment will be installed before commissioning of the plant and the release is restricted to less than 30 mg/Nm ³ .	Rs 55.20 crores will be spent for Air pollution control equipment and an amount of Rs 1.94 cr. will be spent annually for the same towards EMP
2.	Employment not provided to locals	Nuvoco giving preference to local persons in the employment in existing manpower 798 local employees out of 864 employees are from local area.	In expansion phase, locals will be employed as per their qualification.	-
3.	All plantation done in plant & Mines area , no plantation is done in Villages	Nuvoco is doing Plantation outside plant also in association with Chhattisgarh Govt under Harihar Chhattisgarh campaign regularly, In the year 2017	Plantation will done in next three years	Rs 60 Lakhs as part of CER

		8000 sapling planted in village Tarasiv of distt. Balodabazar on the land provided by Govt. Plantation also done at school collage campus, bank of pond, road side plantation		
4.	Without the helmet, the villagers are not let the inside the gate as bank is inside the colony, due to which villagers has to face difficulty in going to bank. So Bank should be brought outside the colony.	Crash helmet is mandatory as per MV act and implemented in our premises so no relaxation is given.	-	-
5.	Since last 10 years no school has been built, CSR was not done any job neither school, nor hospital and no development work has been done, Bus not provided to Girls to go to school, In DAV school seat should be increased, staff should be increased and provide admission to Village children	An amount of Rs 7crores was spent on the CSR activities in last five years. Roads were laid, borewells were dug and pond deepening were done. Apart from it livelihood projects were also done for villagers. Medical services were provided.	Necessary CSR activities will be done every year. About Rs 15 cr. have been spent in last 5 years in the fields of Health, education, infrastructure, plantation, training and drinking water. Bus facility for commuting students.	Rs 3.0 crores per annum towards CSR activities RS 41 lakhs towards CER in 3 years
6	All plantation done in plant & Mines area Plantation not done in Villages	Nuvoco is doing Plantation outside plant also in association with Chhattisgarh Govt under Harihar Chhattisgarh campaign regularly, In the year 2017 8000 sapling planted in village Tarasiv of distt.	Plantation will be done in future also. In three years time, about Rs 20lacs/annum will spent towards this programme	Rs 60 lakhs years under CER scheme.

		Balodabazar on the land provided by Govt.		
7	Light arrangement is not at Main road of village in Rasedi	It is under purview of Gram panchayat. However we will extend necessary support if required.	In 6 months time, about 60 LED lights will be provided in Rasedi village.	Rs 3.0 lakhs will be spent as part of CER
8	Tanker should provide to supply drinking water	It is already done and will be continue as per need and requirement. The borewells will be re-erected.	Drinking water facility will be provided in Rasedi and Sonadi villages, in next 3 Years towards CER	Rs 40 lakhs as part of CER
9	I am working here since 2001 and out of 700 workers 300 is local , we will support to plant if they work for Development of villages and provide electricity, water, Road and education	Nuvoco had been providing and will continue to do so for future also. All development activities are being implemented and will continue. In the fields of electricity, water, Road, health and education	LED lights will be installed. Roads will be converted into RCC. Providing more medical camps and providing a new Public Health Centre in next 3 years.	Rs 3 crores will be spent under CER and it will be continued under CSR later also.
10	Student of villages going outside for studying, only Employees children are studying in company's school.	Bus facility will be provided to all	Within 6 months, the bus facility will be made available	Rs 40 lakhs will be spent for this in next three years under CER and will be continued under CSR ever.
11	Company open mine in my land without my permission	All statutory provisions is being followed by M/s Nuvoco	Nuvoco is operating plant in their own premises and the village administration may check the same also.	-
12	My gound Adivasi land of 15-16 acre is not purchase by company, Sarpanch is broker of company	Land purchased as per requirement under the lease hold area. The said land is not under the mine lease.	-	-
13	Accumulated water	This arrangement	De-silting of Ponds and	Rs 90 Lakhs

	from mines pit should be given to Village pond which help for forming and also water table increase	will be made by discussing with panchayat.	Deepening of 1 pond of each village of Raseda, Medh, Dhabadih & Bhatapara – villages	under CER will be spent for the same.
14	Skill development training is less for youth, training should be provided for employment, Development has happened but management should keep in mind that the dependents of the dependent villages will get proper employment.	Skill development centre is running and youth are getting trained in Office Assistant trade	Unemployed will be trained in different trades and will be provided with employability opportunities. Organizing vocational training programs for employment generation in association with Chhattisgarh skill development Authority. Computer training, on office & Accounting – telly , Scaffolding, Knitting and tailoring, (Approximate 100 beneficiaries/year)	Rs 25 lakhs under CER
15	The Sarpanchs are having setting with the management, hence the development is not happening, the company works, but the Sarpanch do not work properly. The company has just built a CC road but the Sarpanch has not done the job properly	CSR activities is being done with consensus of all stake holder including district administration	Construction and repairing of Village road will be done	Rs. 150 Lakhs will be spent as part of CER.

20.0 Corporate Environment Responsibility (CER) budget towards capital expenditure in accordance to the MoEFCC's office Memorandum # F.No. 22-65/2017-IA.III dated 01.05.2018 for Social Welfare Measures has been workedout as per the following table

Capital Cost of Expansion Project (Rs Crores)	As per MoEFCC's office Memorandum # F.No. 22-65/2017-IA.III dated 01.05.2018		CER Budget (Rs Crores)
	Capital Investment/Additional Capital Investment (Rs)	Brownfield project - % of the additional capital investment	
100	< 100 crores	1.0	1.00

400	>100 crores to <500 crores	0.75	3.00
500	>500 crores to <1000 crores	0.50	2.50
645	>1000 crores to 10000 crores	0.25	1.61
Total			8.11

Summary of budget towards Corporate Environment Responsibility (CER) alongwith the activities:

S. No	DESCRIPTION	BUDGET IN RS. LAKHS FOR 3 YEARS
1	Village Infrastructure Development	450
2	Sustainable Livelihood Training/Skill Development	100
3	Provision of Medical facilities	100
4	Provision of Additional Infrastructure for schools	40
5	Support for Anganwadis	80
6	Miscellaneous expenditure	41
Total		811

DETAIL BREAKUP OF BUDGET TOWARDS CER ALONG WITH ACTIVITIES

Sl. No.	Item	1 st Year	2 nd Year	3 rd Year	Total
1.	VILLAGE INFRASTRUCTURE DEVELOPMENT				
1	De-silting of Ponds and Deepening of 1 pond of each village of Raseda, Medh, Dhabadih & Bhatapara – villages Approx Rs 22 Lacs per pond	30	30	30	90
2	Construction and repairing of Village road from Raseda to Khenda & Raseda to Latuwa	50	50	50	150
3	Community Stage construction at villages Sonadih, Gudeliya, Raseda, Rasedi	10	10	10	30
4	Plantation/Avenue plantation will do under 'Harihar Chhattisgarh' on the land allotted by Distt. Administration. Local species Neem, cassasimea, Jamun, Awala, etc	20	20	20	60
5	Water Facility- Sonadih Laying of water pipe line from Mines to Sonadih village dam, digging /repairing of Bore well & supply of drinking water by tankers during summer season at rasedi, Raseda & Sonadih Villages	15	15	10	40
6	Construction of Pond Steps (Pachari) – will be done as per demands from affected villages @ 2 lakhs /per pachari (approximate 10 nos)	6	7	7	20

Sl. No.	Item	1 st Year	2 nd Year	3 rd Year	Total
1.	VILLAGE INFRASTRUCTURE DEVELOPMENT				
7	Providing LED light, Rasedi (approximate 60 Nos fittings @ Rs 5000 per fittings)	3	-	-	3
8	Construction of Burial ground, Sonadih village (construction of approach road, shed, drinking water facility,	10	10	7	27
9	Square beautification at Baloda bazaar in consultation with Distt. Administration & Public representative	10	10	10	30
	Total	154	152	144	450
2.	SUSTAINABLE LIVELIHOOD TRAINING/SKILL DEVELOPMENT				
1	Agriculture Productivity enhancement Project (SRI technique, Enhance Vegetable production with improve technique	25	25	25	75
2	Organising vocational training programs for employment generation in association with Chhattisgarh skill development Authority. Computer training, on office & Accounting – telly Scaffolding, Knitting and tailoring, (Approximate 100 beneficiaries/year)	15	5	5	25
3	Total	40	30	30	100
3.	PROVISION OF MEDICAL FACILITIES				
1	Providing medical facility in the affected villages with provision of medicines and checkup, Providing Ambulance facilities, Organising Yearly health check camps with Expert Doctors	30	35	35	100
	Total	30	35	35	100
4.	PROVISION OF ADDITIONAL INFRASTRUCTURE FOR SCHOOLS				
1	Providing equipment and other infrastructure support to start 8-10 Nos of smart classes in affected village school (@5 lakh/per school	13	13	14	40
	Total	13	13	14	40
5.	SUPPORT FOR ANGANWADIS				
1	Project on Development of Anganwadis as model Anganwadis in nearby villages	25	25	30	80
	Total	25	25	30	80
6	MISCELLANEOUS THINGS, NEED BASED AND POINTS RAISED IN PUBLIC HEARING.				
1	Providing a Bus facility to college going girls students, from Rasedi, Raseda, Sonadih to	12	14	15	41

Sl. No.	Item	1 st Year	2 nd Year	3 rd Year	Total
1.	VILLAGE INFRASTRUCTURE DEVELOPMENT				
	Baloda Bazar				
	Total	12	14	15	41

21.0 The cost of the proposed expansion is estimated to be about Rs. 1645 Crores which includes the cost of Environmental Management Plan of Rs. 90 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 6.25 Crores. The details are as follows:

	Capital Cost (Rs. in Lakhs)	Recurring Cost per annum (Rs. in Lakhs)
Air pollution control equipment - Unit-III	5520	194
Air pollution control equipment - CPPs	3360	185
Sewage Treatment Plant	0	5
Rainwater harvesting	20	5
Greenbelt	0	15
Environmental Monitoring	100	221
Total	9000	625

22.0 NUVOCO proposes to recruit about 50 persons for operation of Unit – III and Coal based Thermal Power Plant.

23.0 M/s NUVOCO has developed 33% of the plant area under greenbelt which is covering about 32.5 Ha. A wide green belt has been developed towards three sides of the plant where village and colony is there. Extensive plantation has been done all along the periphery of the plant with local plant species. All the open spaces have been utilized for plantation purposes. NUVOCO have planted more than 2000 saplings per hectare. About 6.0 lakh saplings have been planted till date. NUVOCO has developed Greenbelt with local species in an area of 37 ha. @ 2000 saplings per hectare

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

25.0 EIA Consultant: BS Envirotech, Hyderabad, NABET Accreditation No: NABET/EIA/1619/SA 064.

26.0 The proposal was considered in 35th meeting of Expert Appraisal Committee held during the 8-10th October, 2018. After detailed deliberations, the committee sought the following information for further consideration of the proposal.

- i) Compliance to the earlier EC is not in place as per the report submitted by the RO Nagpur on 17th July 2018.

- ii) Public hearing issues related to cracks developed in the building near mine site have not been addressed. Therefore, action plan for monitoring the vibrations and its control including compensation damages shall be submitted.
- iii) Scheme for utilization of waste heat from the kilns shall be furnished with energy balance flow.
- iv) Proportion of local children studying in the Company school from nearby villages to be furnished. The table for CER should be revised based on the inputs received during public consultation and social impact assessment.
- v) TOR condition No. 9 has not been complied fully. The policy furnished does not have date of approval by the Board and has been signed by the previous CEO.
- vi) Monitored data for vibration levels due to blasting shall be submitted.
- vii) Details of NO_x level control as per the recent amendment of MoEF&CC has not been furnished.
- viii) Risk issues and safety measures related to the handling of hazardous chemicals such as ammonia if any, shall be incorporated in the EIA report.
- ix) Rain water harvesting scheme is very generic and details shall be made available.

27.0 M/s NUVOCO has submitted the following information online on 10-10-2018

- Based on the site visit on 15.05.2018. Certain partial compliances were reported for which NUVOCO has submitted the updated compliance status on 16.09.2018. Based on the updated compliance submitted by the NUVOCO, RO has recertified the compliance status vide letter dated 05.10.2018
- Based on the point raised in the public hearing issue on blasting, a deep hole blasting study was conducted on B2NW (Block no.-0) Vibration & noise parameters were captured in seismograph around 535 mtrs away at location (long-82°12'05.979"E, lati-21°44'57.769"N) near sonadih village.
- Report shows 3.80 mm/second PPV vector sum which is within the range permitted by DGMS and not exceeding the prescribed limit of Dominant Excitation Frequency describe as per DGMS circular no. 7 of 1997
- NUVOCO as part of social responsibility and humanitarian aspects, in consultation with Sarpanch will compensate for any damage done.
- Additionally, monitoring of vibrations due to blasting will be done around the location of the houses from where the complaints (if any) are received.
- NUVOCO informed that they are implementing 11 MW Waste Heat Recovery Based Power plant
- Out of 680 children, 541 are Non NUVOCO wards and 139 are from NUVOCO families

Revised CER Based on Input Received During Public Consultation and Social Impact Assessment:

SL No	Item	1 st Year	2 nd Year	3 rd Year	Total	Basis for CER Allocation PH/NEED BASED
1	VILLAGE INFRASTRUCTURE DEVELOPMENT					
1	De-silting of Ponds and Deepening of 1 pond of each village of Raseda, Medh, Dhabadih – villages Approx 30000 cum per pond @ Rs 100 per cum including transportation of excavated material upto 3-4 kms of distance.	30 Raseda Village	30 Dhabadih Village	30 Medh	90	PH point Point no. 11,15,17 & 19
2	Construction and repairing of main bitumen road from Raseda to Khainda & Raseda to Latuwa. Total distance of 10 kms width – 5 to 6 mts. Refer Annexure 3 for rates.	50	50	50	150	Point no. 4 & 27
3	Construction of community hall in villages Sonadih, Gudeliya, Raseda, Rasedi	7	15	8	30	PH point 2 infrastructure development
4	Plantation/Avenue plantation will do under 'Harihar Chhattisgarh' on the land allotted by Distt. Administration. Local species Neem, cassasimea, Jamun, Awala, etc including fencing, land preparation, fertiliser and pesticide application, watering. Maintenance for 3 years will ne covered under CSR budget	20	20	20	60	PH point 1,2,3,
5	Water Facility- Sonadih Laying of water pipe line from Mines to Sonadih village dam, digging /repairing of Bore well – it includes laying of 2 kms of pipeline, installation of 75 hp pump – 6 inch dia & water discharge head of 40m and 1km of cable.	25	15		40	PH point no.18
6	Construction of Pond Steps (Pachari) – will be done as per demands from affected villages @ 2 lakhs /per pachari (approximate 10 nos) – 10 mts wide with 8-10 steps of 1 ft height.	6	8	6	20	PH point 2 infrastructure development

SL No	Item	1 st Year	2 nd Year	3 rd Year	Total	Basis for CER Allocation PH/NEED BASED
7	Providing LED street light, in Rasedi village (approximate 60 Nos fittings @ Rs 5000 per fittings)	3	-	-	3	PH point 2,
8	Construction of approach road – 1 km & 3m wide, shed – 15m x 8m , drinking water facility - Borewell, plantation and fencing. Total area of 9 acres) - in cremation ground at Sonadih Village – Annexure 2		10	7	17	Infrastructure development raise in PH points 1,2,3,4,11,15,18
9	Construction of CC road in Sonadih – 600 mt, Gudeliya – 500 mt and Deori – 400, 3.5 mts wide and 6 inch thickness.	12	10	8	30	PH point No.4,23 and need based
10	Construction of CC Road in Raseda – 600 mts and Dhabadih 550 mts, 3.5 mts wide and 6 inch thickness @ Rs. 3700 per cum.		12	10	22	PH point No.4,23 and need based
11	Construction of cycle shed in Raseda school			6	6	No.4,23 and need based
	Total	153	170	145	468	
2	SUSTAINABLE LIVELIHOOD TRAINING/SKILL DEVELOPMENT					
1	Providing medical facility in the affected villages - Purchase of 1 mobile ambulance van and 7 electronic tele-medicine medical checkup kit (Rs. 3 lac per kit) with facility of conduction 35 different checkups. Recurring expense of doctor, medicine will be covered under our CSR budget.	10	12	9	31	2,3,11,14,15,17,27&28
	Total	10	12	9	31	
3	PROVISION OF MEDICAL FACILITIES					
1	Providing medical facility in the affected villages with provision of medicines and check up, Providing Ambulance facilities, Organising Yearly health check camps with Expert Doctors	10	12	9	31	
	Total	10	12	9	31	

SL No	Item	1 st Year	2 nd Year	3 rd Year	Total	Basis for CER Allocation PH/NEED BASED
4	PROVISION OF ADDITIONAL INFRASTRUCTURE FOR SCHOOLS					
1	Providing equipments and other infrastructure support to start 8Nos of smart classes in affected village school – Rasedi, Raseda, Medh, Khapri, Sonadih, Dhabadih (@4 lakh/per school	12	12	8	32	PH point 2,3,11,20 &27
2	Construction 2 extra school rooms at Raseda school		8		8	PH point 2
3	Providing bench and table for students in schools at Raseda, Rasedi, Medh, Khapri, Sonadih and Dhabadih for approx 1000 students.	12	13		25	PH point 2,3,11,20 &27
4	Purchase of bus for providing a Bus-facility to college going girls students, from Rasedi, Raseda, Sonadih, Medh, Khapri to attend college at Baloda Bazar. Recurring expense to be covered under our CSR Budget	-	22	-	22	Ph point No.2&28
	Total	24	55	8	87	
5	SUPPORT FOR ANGANWADIS					
1	Project on Development of Anganwadis as model Anganwadis in Baloda Bazar block covering approx 170 Anganwadis- Expense details attached in Annexure 1	50	60	60	170	Need based identification
	Total	50	60	60	170	

- The revised Environmental policy signed by the new CEO has been submitted.
- This document describes the standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental norms / conditions by implementation of Environment management system.
- The hierarchical system of the company to deal with the environmental issues was submitted
- As per the new notification, NOx Level are maintained below 800 mg/Nm³ by implementing the following primary measures like :

1. Optimizing kiln inlet temperature and improve Raw Meal burnability,

2. Use of latest technology Lafarge Burner (Low NOx).
 3. O₂ optimization.
- The above measures will be implemented for the new kiln to maintain outlet NOx concentration of new limit of 800 mg/Nm³.
 - In case of power plant, in order to control NOx, NUVOCO will implement CFBC boilers where Nox emission guaranteed by the suppliers is less than 100 mg/Nm³.
 - No Hazardous chemicals are handled. No ammonia is used in the process / plant
 - NUVOCO has implemented Rainwater Harvesting Measures in the plant where
 - rainwater water is collected through lined drains and routed to the water reservoir of capacity of 2.3 lakh m³ (Capacity enhanced in 2009 from 1.3 to 2.3 lakh m³). Water is used for plant in the summer season.
 - NUVOC has implemented 6 Rainwater Harvesting Structures in Plant and Residential Premises
 - Regular deepening of the ponds in the nearby villages is done to increase the water holding capacity and the Rs 90 Lakhs budget has been allotted
 - NUVOCO further proposed 96 Rainwater Harvesting Structures with a Budget of Rs 50 Lakhs. Detailed 5 Year Action Plan for Implementation is submitted.

Observations and recommendations of the Committee: -

28. After detailed deliberations, the Committee recommended for environmental clearance under the provisions of EIA Notification, 2006 for the proposed expansion of Clinker Production (3.5 MTPA to 5.1 MTPA) and Cement production (1.0MTPA To 3.0 MTPA) (by installation of Unit – III) For Clinker Production of 1.6 MTPA and Cement 2.0 MTPA and Installation of 90 MW Coal Based Thermal Power Plantwith following specific and general conditions:

A. Specific Conditions:

- i. All the raw material including lime stone stored should be covered.
- ii. All the buildings owned by the villagers and damaged due to blasting and operational vibrations will have to be repaired by the PP.
- iii. The PP will initiate regular vibration monitoring.
- iv. The PP will explore possibility of increasing power generation through WHRB.
- v. New NOx emissions standards as notified shall be complied using appropriate technology.

- vi. 96 nos rainwater recharge wells shall be constructed in addition to the existing rainwater harvesting within the next three years, i.e., 31st December 2021.
- vii. The CER activities shall be completed within the next three years i.e., by Dec, 2021.
- viii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report.

B. General Conditions:

I. Statutory compliance:

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- ii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R. No. 612 (E) dated 25th S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install Continuous Ambient Air Quality monitoring systems for monitoring of common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring alongwith results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

- v. Appropriate Air Pollution Control (APC) systems shall be provided at all the dust generating points including fugitive dust from all vulnerable sources, so as to comply with the prescribed stack emission and fugitive emission standards.
- vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better operation of baghouse.
- vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.
- viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- ix. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.
- x. Provide wind shelter fence and chemical spraying on the raw material stock piles; and
- xi. Provide Low NO_x burners as primary measures and SCR /NSCR technologies as secondary measure to control NO_x emissions.
- xii. Have separate truck parking area and monitor vehicular emissions at regular interval.
- xiii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport
- xiv. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, cement bagging plants.

III. Water quality monitoring and preservation

- i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. (case to case basis small plants: Manual; Large plants: Continuous)
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers / sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water

quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

- iv. Adhere to 'Zero Liquid Discharge'.
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- vii. The project proponent shall practice rainwater harvesting to maximum possible extent.
- viii. Water meters shall be provided at the inlet to all unit processes in the cement plant.
- ix. The project proponent shall make efforts to minimise water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

V. Energy Conservation measures

- i. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
- ii. Provide the project proponent for LED lights in their offices and residential areas.
- iii. Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards.

VI. Waste management

- i. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016
- ii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Greenbelt:

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

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

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will report directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out

- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it in atleast two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office of this Ministry as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

- x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

2.4 Expansion of Cement plant (Clinker 1.22MTPA to 2.80 MTPA, Cement 2.00 MTPA to 4.50 MTPA) along with Captive Power Plant (18MW to 48 MW) by M/s. Chettinad Cement Corporation Limited at Village Karikkali and Dholipatti and Limestone Mine (Seethainagar Mines, 379 ha and 2.00 MTPA to 4.50 MTPA) at village Alambadi, Mallapuram and Karikkali, Taluk Vedasandur, District Dindigul, Tamilnadu. [Online Proposal No. IA/TN/IND/83751/2018 dated 28/10/2018; MoEFCC File No. J-11011/518/2009-IA.II(I)] –Environmental Clearance for installation of slag grinding unit of 1.0 MTPA capacity under para 7(ii) of EIA Notification 2006.

1.0 M/s Chettinad Cement Corporation Limited has made online application vide proposal no. IA/TN/IND/83751/2018 dated 28th October, 2018 seeking environmental clearance for installation of slag grinding unit of 1.0 MTPA capacity under para 7(ii) of EIA Notification, 2006. 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

2.0 M/s Chettinad Cement Corporation Limited operating Cement plant (Clinker 1.22MTPA to 2.80 MTPA, Cement 2.00 MTPA to 4.50 MTPA) along with Captive Power Plant (18MW to 48 MW) at village Karikkali and Dholipatti and Limestone Mine (Seethainagar Mines, 379 ha and 2.00 MTPA to 4.50 MTPA) at village Alambadi, Mallapuram and Karikkali, Taluk Vedasandur, District Dindigul, Tamilnadu.

3.0 The existing project was accorded environmental clearance for expansion of cement plant (Clinker 1.22 MTPA to 2.80 MTPA & Cement 2.00 MTPA to 4.50 MTPA) along with Captive Power Plant (18 MW to 48 MW) vide MoEF&CC letter No. J-11011/518/2009-IA-II (I) dated 02.08.2010. EC for further expansion of cement plant (Cement 4.5 MTPA to 7.0 MTPA) and CPP (48 MW to 78 MW) along with 6 MW Waste Heat Recovery Boiler by addition of Cement Line-III of 2.5 MTPA and CPP of 1x30 MW was obtained vide MoEF&CC letter No. J-11011/110/2011-IA-II (I) dated 29.11.2012. While the CPP of 30 MW was commissioned in July 2014, Line-III of 2.5 MTPA along with 6 MW WHRB is not initiated due to lack in cement demand in the market and also due to Financial Constraints.

4.0 Karikkali cement plant is now being operated for 2.8 MTPA Clinker, 4.5 MTPA Cement and CPP of 78 MW. Renewed Consent to Operate was obtained from Tamil Nadu pollution Control Board for the Cement Plant vide orders 170817942226 (Water Act) & 170827942226 (Air Act) dated 08.05.2017, Valid till 31.03.2018 and for CPP vide orders 170817943033 (Water Act) & 170827943033 (Air Act) dated 08.05.2017 valid till 31.03.2018.

5.0 M/s. Chettinad Cement Corporation Private Limited proposes modification in the existing EC for Change in Product-Mix, Grinding of Granulated Blast Furnace Slag (GGBS) in Karikkali Cement Plant at 1.0 MTPA as Batch Operation within the EC quantity of 4.5 MTPA cement grinding. (Cement and Slag grinding will be 4.5 MTPA). The proposed capacity for different products for new site area as below:

Name of unit	No. of Units	Capacity of each Unit	Production Capacity
Clinker Production-Existing	Line I Line II	1.22 MTPA 1.58 MTPA	2.8 MTPA
Clinker Production-Proposed	-	Nil	No change to existing Production
Cement Production-Existing	Line I Line II	2.0 MTPA 2.5 MTPA	4.5 MTPA
Cement & Slag Production-Proposed	Line I Line II	2.0 MTPA 2.5 MTPA	4.5 MTPA (within this Consented Qty. Slag grinding of 1.0 MTPA will be carried out as Batch operation)
Thermal Power Plant-Existing	3	1x18 MW & 2x30 MW	78 MW

6.0 The proposed activity will be carried out within the existing plant premises at S.F.Nos. 498 parts etc., of Karikkali village and S.F.Nos. 67 parts etc., of Dhollipatti Village, Vedasandur Taluk, Dindigul District, Tamil Nadu.

7.0 The land area acquired for the plant is 72.95 Ha (No additional area for the proposed Change in Product-Mix). No forestland is involved. The entire land has been acquired for the project. Of the total area, 23.29 ha (31.93 %) land is under green belt.

8.0 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.

9.0 No additional capital is required for the proposed activity. Existing Project cost is Rs. 1,100.27 crores (No change in project cost). An amount of Rs. 91.32 Crores has been spent as EMP Capital Cost and Rs. 3.50 Crores/Annum is being spent as Operating Cost for EMP measures. There will be no increase in man power. The existing Plant provides direct employment to 423 persons and indirect employment to 500 persons.

10.0 The electricity load of 93 MW will be sourced from Captive Thermal Power Plants (1x18 MW & 2x30 MW) and TNEB (15 MW). Company has also installed standby DG Sets of 3x1.5 MW and 1x250 KVA capacity.

11.0 Proposed raw material and fuel requirement for project are:

Sl. No.	Raw Material	Source	Demand, MTPA	Mode of Transportation	Storage Facilities
I 1	Limestone	Own Mines nearby	4.040	From crusher by closed conveyors to plant	Stacker -Reclaimer system of capacity of 2x55,000 Tons.
2	Iron Ore &Bauxite	Bellary Salem	0.061 0.061	Covered 20 Ton truck by road	3x6000 Tons covered stock pile.
3	Gypsum	Salem &Thoothukudi	0.270	Covered 20 Ton truck by road & rail	1x10,000 T for gypsum linear covered stockpile
4	Fly Ash	Mettur&Thoothukudi TPSs	0.948	Covered 40 Ton browsers by road	Dry Fly Ash in 5000 T RCC Silo. Wet fly ash Storage of 1x14000 T covered stockpile
5	Slag	Jindal Steel Bellary & Salem	0.482	Covered 20 Ton trucks by road	1X14000 T for wet slag with linear covered stockpile
6	Coal	Imported &	0.297	By Rail &	Linear stockpiles of

7	Power Plant Coal	Indian	0.198	Covered 20 Ton Trucks by roads	2x3,000 T for Lignite/Petcoke and 2x10,000 T for coal
II	Cement	-	4.500	By Rail & Covered 20 Ton Trucks by roads	3 Nos. RCC silos of capacity 10,000 Tons each
III	Slag for proposed Slag Grinding	Jindal Steel Bellary & Salem	1.000	Covered 20 Ton trucks by road	Linear covered stockpile

12.0 There will be no increase in water demand due to the proposal. Karikkali Cement Complex requires 2,200 cu.m/day raw water which is met from the rain water harvested in about 14 Mine Pits in Seethainagar & Dholipatti Mines. Central Ground Water Authority (CGWA) has permitted to draw 2,200 cu.m/day rain water harvested in the Mine Pits vide its Letter No. 21-4(186)/SECR/CGWA/2010-23 dated 08.02.2013.

13.0 DM/RO rejects & Workshop effluents from Cement Plant of 20 cu.m/day from Cement Plant and Boiler Blowdowns & Cooling Tower Blowdowns from CPPs of 452 cu.m/day and thus, total 472 cu.m/day trade effluents are collected, neutralized and settled in a ETP of 500 cu.m/day and the treated effluent is being used at Coal Handling System, Dust Suppression System and Ash Handling System fully. About 225 cu.m/day Domestic Sewage is being generated from the Complex (Cement Plant-133 cu.m/day, Power Plant- 17 cu.m/day and Township - 75 cu.m/day). The combined sewage from Cement and Power Plants are treated in a 150 cu.m/day Sewage Treatment Plant in the Plant and Treated Sewage is being used for Green Belt.

14.0 The domestic sewage of 75 cu.m/day from the Township is separately treated in a 100 cu.m/day STP and the Treated Sewage is utilized for Green Belt in the Township as well as Lorry Parking Areas. Treated Effluents and Sewage are in compliance with stipulated Norms by TNPCB. Thus, 'Zero Effluent Discharge' is practiced at the Complex

15.0 Certified EC Conditions Compliance Report has been issued by the MoEF& CC, Regional Office, Chennai vide F.No. EP/12.1/2010-11/9/TN/1544 dated 28.09.2018.

16.0 Impact prediction for the proposed enhancement in the production / change in product mix / modernization, etc.:

I. Air Emissions: Adequate Air Pollution Control Measures (APC) measures to control PM emissions are provided in the Cement Complex viz. Electrostatic Precipitators to Clinker Cooler & Boilers, Bag House to Raw Mill/Kiln, Coal Mill, Cement Mill, etc. to control PM emission <math><30 \text{ mg/Nm}^3</math>. The dust collected from Bag House/Filters, etc. are totally recycled in the process for cement manufacturing. Existing APC Measures are adequate for Slag Grinding also

II. Water: There is no additional water demand for proposed Slag Grinding. Also, there is no increase in Effluent & Sewage Generation, their treatment and disposal i.e. there is no change to the existing Status.

III. Solid Wastes: No change in the Quantity of Solid Wastes Generation, Storage and its Disposal due to the Slag Grinding proposal.

IV. Green Belt: Total Plant Area is 72.95 Ha. So far, 47,856 Saplings have been planted over an area of 23.29 Ha (Coverage 31.93 %). Green Belt in an extent of 24.07 Ha (**Coverage 33.00 %**) will be covered by next year.

V. Rain Water Harvesting: Rainwater harvesting pond with a capacity of 1200 m³ has been provided in the plant premises. 100 % water requirement for existing plant & domestic purpose are being met from rain water harvested from the mine pits. No ground/surface water is being drawn for any of the requirements of the plant.

VI. Occupational Health: CCCPL Occupational Health Centre at the Plant has been established with a full fledged dispensary equipped with facilities: X-ray unit, Computerised ECG, Laboratory, Computerised blood chemistry analyzer, Ultra Short Wave Therapy, Physiotherapy Unit, Audiometer & Spirometer, Ambulance, etc. CCCPL is also providing ergonomic support to the workers with periodical review.

17.0 Proposed mitigation plan for dealing of additional pollution load: EMP is formulated for mitigation of adverse impacts and is based on present environmental status and impact appraisal.

I. Air Environment

- All efforts shall be undertaken to maintain the PM emission levels from the main stacks within 30 mg/Nm³.
- The periodical evaluation for the efficiency performance of ESPs and Bag Filters shall be carried out.
- Fugitive emissions due to storage, transportation, etc. and the leakages and spillages shall be continuously monitored and controlled.
- Water conservation measures shall be undertaken for effective implementation. Cooling water is put into closed circuit to minimize the evaporation losses.
- Thermal insulation is provided wherever necessary to minimize heat radiation from the equipment, piping etc, to ensure protection of personnel.

II. Noise Levels

- All rotating items are well lubricated and provided with enclosures as far as possible to reduce noise termination.

- Extensive vibration monitoring systems are provided to check and reduce vibrations.
- For all fans, compressors etc. vibration isolators are provided to reduce noise.
- Provision of silencers are made wherever possible.
- Proper lubrication and house keeping are maintained.
- The operator provided with necessary safety and protection equipment like ear plugs, ear muffs etc.

III. Water Environment

- The drawl of ground water shall be minimized and water control measures shall be undertaken.
- No trade effluent shall be discharged from the Plant.
- Cooling water is put into closed circuit to minimize the evaporation losses.
- The domestic sewages from the Cement Plant, Power Plant and Township shall be treated effectively in the Sewage Treatment Plants to meet the TNPCB Discharge Norms and the treated sewage shall be used for Green Belt.
- No percolation of treated water to the deep ground water table is done.
- Periodical monitoring for specific parameters shall be done regularly.
- CCCPL shall maintain the existing rain water harvesting structures effectively to supplement the water supply from the borewells.

IV. Land Environment

- It should be ensured that there is no industrial solid waste from the Plants.
- The fly ash and bottom ash from the Thermal Power Plant will be consumed in the Cement Plant fully.
- Solid wastes from STP Plant shall be used as manure for Green Belt.
- Waste Oil shall be collected and sold to the TNPCB authorised Agency for further treatment & disposal.
- The municipal wastes shall be collected, transported, treated in a landfill (composting) within the Plant vicinity to make use of it as manure for Green Belt.

V. Green Belt

- Green Belt shall be maintained effectively. Local species and fruit bearing trees may also be developed to have a thick canopy cover.
- The treated sewage shall be used fully for the Green Belt development.

18.0 EMP Budget: Existing EMP Operating Budget of Rs.3.50 crores/annum of shall be maintained for effective implementation.

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

20.0 EIA Consultant: Ensyscon Enviro Soutions, Chennai (Sl. No. 383 of AO List dated 07.12.2018)

Observations and recommendations of the Committee: -

21.0 After detailed deliberations, the committee recommended for environmental clearance for change in product-mix for grinding of granulated Blast Furnace Slag (GGBS) of 1.0 MTPA as Batch Operation within the EC quantity of 4.5 MTPA cement grinding. (i.e. Cement and Slag grinding will be 4.5 MTPA) under para 7(ii) of the EIA Notification, 2006 subject to following additional conditions:

- i. The emissions from cement grinding units shall be restricted to $\leq 30 \text{mg/Nm}^3$.
- ii. The cement grinding capacity shall be restricted to 4.5 MTPA inclusive of granulated slag.
- iii. Industrial vacuum cleaners shall be used to control the road dust within the plant and its vicinity.
- iv. All other terms and conditions mentioned in the earlier EC shall remain unchanged.

2.5 Expansion of Clinker production in existing Cement plant (1.7 MTPA) at village Puliur, Taluk & District Karur, Tamil Nadu by M/s Chettinad Cement Corporation Ltd [Online proposal No. IA/TN/IND/84313/2018; MoEF&CC File No. J-11011/186/2008-IA.II(I)] - Environmental Clearance for installation of slag grinding unit of 1.0 MTPA capacity under para 7(ii) of EIA Notification 2006.

1.0 M/s Chettinad Cement Corporation Limited has made online application vide proposal no. **IA/TN/IND/84313/2018** dated 1/11/2018 seeking environmental clearance for installation of slag grinding unit of 1.0 MTPA capacity under para 7(ii) of EIA Notification, 2006. 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

2.0 M/s Chettinad Cement Corporation Limited operating Cement plant (1.7 MTPA) at village Puliur, Taluk & District Karur, Tamil Nadu. The existing project was accorded

environmental clearance vide Ir.no. MoEF&CC letter No. J-11011/186/2008-IA-II (I) dated 25.08.2008. Renewed Consent to Operate was obtained from Tamil Nadu pollution Control Board vide orders 170818162783 (Water Act) and 170828162783 (Air Act) dated 08.05.2017.

3.0 M/s. Chettinad Cement Corporation Private Limited proposes modification in the existing EC for Change in Product-Mix, Grinding of Granulated Blast Furnace Slag (GGBS) in Puliur Cement Plant at 1.0 MTPA as Batch Operation within the EC quantity of 1.7 MTPA cement grinding. (Cement and Slag grinding will be 1.7 MTPA). The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Clinker Production-Existing	1	1.10 MTPA	1.10 MTPA
Clinker Production-Proposed	-	Nil	No change to existing Production
Cement Production-Existing	1	1.70 MTPA	1.70 MTPA
Cement & Slag Grinding-Proposed	1	1.70 MTPA	1.70 MTPA (Within the consented quantity slag grinding of 1.0 MTPA will be carried out as batch operation)
Thermal Power Plant-Existing	1	15 MW	15 MW

4.0 The proposed activity will be carried out within the existing plant premises at S.F.Nos. 1583, 1586 to 1593, 1607 and 1609 Village: Puliur, Taluk: Karur, District: Karur, State: Tamil Nadu.

5.0 The land area acquired for the plant is 31 Ha (No additional area for the proposed Change in Product-Mix). No forestland is involved. The entire land has been acquired for the project. Of the total area, 11.6 ha (37.4 %) land is under green belt.

6.0 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.

7.0 No additional capital is required for the proposed activity. Existing project cost is Rs. 309.76 crores (No change in project cost). An amount of Rs. 18.49 Crores has been spent as EMP Capital Cost and Rs. 1.50 Crores/Annum is being spent as Operating Cost for EMP measures. There will be no increase in man power. The existing Plant provides direct employment to 338 persons and indirect employment to 300 persons.

8.0 The electricity load of 30 MW will be sourced from Captive Thermal Power Plant (1x15 MW) and TNEB (15 MW). Company has also installed DG Sets of 2 x 4.32 MW & 1 x 1.0 MW in Cement Plant and 1 x 1.25 MW in Captive Power Plant.

9.0 Proposed raw material and fuel requirement for project are: Limestone (1.59 MTPA), Iron Ore (0.046 MTPA), Bauxite (0.046 MTPA), Gypsum (0.085 MTPA), Fly Ash (0.212 MTPA), Slag (0.303 MTPA), Imported and Indian Coal (1.25 MTPA), Petcoke (0.01 MTPA)

and Power Plant Coal (0.055 MTPA). The requirement would be fulfilled by own captive mines and from other industries. Fuel consumption will be mainly HSD (including Locomotives) @ 4,000 KL/day and LSHS for DG set @ 20 KL/day.

10.0 There will be no increase in water demand due to the proposal. Water Consumption for the existing project is 1200 cu.m/day which is met from the permitted borewells near River Amaravathi. Trade effluent generation of 70 cu.m/day from Captive Power Plant is neutralized, treated and taken to the cement plant for equipment cooling (where it is evaporated fully). Combined Domestic sewage of 102 cu.m/day from Cement plant and Power plant is treated in STP of capacity 150 cu.m/day and the treated sewage of 90 cu.m/day is being used for Green belt. Domestic waste water of 200 cu.m/day from township is separately treated in 250 cu.m/day capacity STP and the treated sewage is utilized for greenbelt in the township & Lorry parking areas. 'Zero Effluent Discharge' is in practice at the complex.

11.0 Certified EC Conditions Compliance Report has been issued by the MoEF& CC, Regional Office, Chennai vide F.No. EP/12.1/750/TN/1543 dated 28.09.2018.

12.0 Impact prediction for the proposed enhancement in the production / change in product mix / modernization, etc.:

I. Air Emissions:

Parameter	Cement Mill-1	Cement Mill-2
Stack Height (from GL), m	44.0	50.0
Stack Dia, m	3.0	1.8
Flow rate m ³ /hr.	425,000	165,000
Temperature, °C	90	90
Inlet duct conc. kg/m ³	500	600
Outlet duct conc. mg/Nm ³	<30	<30
Size of bag dia / length (mm/m)	110/3.0	110/3.0
Fabric	Non woven synthetic fabric	
Predicted PM10 GLC, ug/m ³	0.4	
Predicted SO ₂ GLC, ug/m ³	1.9	
Predicted NOx GLC, ug/m ³	0.6	
Distance from Source, km	1.0	

II. Water: There is no additional water demand for proposed Slag Grinding. Also, there is no increase in Effluent & Sewage Generation, their treatment and disposal i.e. there is no change to the existing Status.

III. Solid Wastes: No change in the Quantity of Solid Wastes Generation, Storage and its Disposal due to the Slag Grinding proposal.

IV. Green Belt: Total Plant Area is 31.0 Ha. So far, 24,584 Saplings have been planted over an area of 11.6 Ha (Coverage 37.42%).

V. Rain Water Harvesting: Rainwater harvesting pond has been provided in the Plant premises.

VI. Occupational Health: CCCPL Occupational Health Centre at the Plant has been established with a full fledged dispensary equipped with facilities: X-ray unit, Computerised ECG, Laboratory, Computerised blood chemistry analyzer, Ultra Short Wave Therapy, Physiotherapy Unit, Audiometer & Spirometer, Ambulance, etc. CCCPL is also providing ergonomic support to the workers with periodical review.

13.0 Proposed mitigation plan for dealing of additional pollution load: EMP is formulated for mitigation of adverse impacts and is based on present environmental status and impact appraisal.

I. Air Environment

- All efforts shall be undertaken to maintain the PM emission levels from the main stacks within 30 mg/Nm³.
- The periodical evaluation for the efficiency performance of ESPs and Bag Filters shall be carried out.
- Fugitive emissions due to storage, transportation, etc. and the leakages and spillages shall be continuously monitored and controlled.
- Water conservation measures shall be undertaken for effective implementation. Cooling water is put into closed circuit to minimize the evaporation losses.
- Thermal insulation is provided wherever necessary to minimize heat radiation from the equipment, piping etc, to ensure protection of personnel.

II. Noise Levels

- All rotating items are well lubricated and provided with enclosures as far as possible to reduce noise termination.
- Extensive vibration monitoring systems are provided to check and reduce vibrations.
- For all fans, compressors etc. vibration isolators are provided to reduce noise.
- Provision of silencers are made wherever possible.
- Proper lubrication and house keeping are maintained.
- The operator provided with necessary safety and protection equipment like ear plugs, ear muffs etc.

III. Water Environment

- The drawl of ground water shall be minimized and water control measures shall be undertaken.
- No trade effluent shall be discharged from the Plant.
- Cooling water is put into closed circuit to minimize the evaporation losses.
- The domestic sewages from the Cement Plant, Power Plant and Township shall be treated effectively in the Sewage Treatment Plants to meet the TNPCB Discharge Norms and the treated sewage shall be used for Green Belt.
- No percolation of treated water to the deep ground water table is done.
- Periodical monitoring for specific parameters shall be done regularly.
- CCCPL shall maintain the existing rain water harvesting structures effectively to supplement the water supply from the borewells.

IV. Land Environment

- It should be ensured that there is no industrial solid waste from the Plants.
- The fly ash and bottom ash from the Thermal Power Plant will be consumed in the Cement Plant fully.
- Solid wastes from STP Plant shall be used as manure for Green Belt.
- Waste Oil shall be collected and sold to the TNPCB authorised Agency for further treatment & disposal.
- The municipal wastes shall be collected, transported, treated in a landfill (composting) within the Plant vicinity to make use of it as manure for Green Belt.

V. Green Belt

- Green Belt shall be maintained effectively. Local species and fruit bearing trees may also be developed to have a thick canopy cover.
- The treated sewage shall be used fully for the Green Belt development.

15.0 EMP Budget: Existing EMP Operating Budget of Rs.1.50 crores/annum of shall be maintained for effective implementation.

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

17.0 EIA Consultant: Ensyscon Enviro Solutions, Chennai (Sl. No. 383 of AO List dated 07.12.2018)

Observations and recommendations of the Committee: -

18.0 After detailed deliberations, the committee recommended for environmental clearance for change in product-mix for grinding of granulated Blast Furnace Slag (GGBS) of 1.0 MTPA as Batch Operation within the EC quantity of 1.7 MTPA cement grinding. (i.e. Cement and Slag grinding will be 1.7 MTPA) under para 7(ii) of the EIA Notification, 2006 subject to following additional conditions:

- i. The emissions from cement grinding units shall be restricted to $\leq 30 \text{mg/Nm}^3$.
- ii. The cement grinding capacity shall be restricted to 4.5 MTPA inclusive of granulated slag.
- iii. Industrial vacuum cleaners shall be used to control the road dust within the plant and its vicinity.
- iv. All other terms and conditions mentioned in the earlier EC shall remain unchanged.

2.6 Addition of Kiln (Line-III) for 1.50 MTPA Clinker Production & Addition of Waste Heat Recovery Boilers (7 Nos.) for 27 MW Power Generation in RCL KSR Nagar Cement Plant of M/s Ramco Cements Ltd located at KumarasamyRajanagar Cement plant, Village Jayantipuram Jaggayapeta Mandal, District Krishna, Andhra Pradesh- Proposal No. IA/AP/IND/85032/2018; File No. J-11011/403/2006-IA.II(I)] – Terms of Reference.

1.0 The proponent has made online application vide proposal no. IA/AP/IND/85032/2018 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 Sl. No. 3(b) Cement Plants under category 'A' of the Schedule of EIA Notification, 2006. Therefore, the proposal is appraised at the Central Level.

Details submitted by the Project Proponent

2.0 M/s. The Ramco Cements Limited (RCL) had established its Kumarasamy Raja Nagar (KSR Nagar) Cement Plant in the Year 1986 and is periodically expanded with two Process Lines (Lines I & II). The Cement Plant now has the Production Capacity of 3.185 MTPA Clinker and 3.650 MTPA Cement of various grades (OPC, PPC, PSC, etc)

3.0 Part of Clinker from KSR Nagar Cement Plant is being transported to RCL Grinding Units at Visakhapatnam and Kolaghat which are being expanded to each 2.0 MTPA cement grinding capacity now. RCL is also establishing a Cement Grinding Unit of 0.90 MTPA capacity in the State of Odisha at Haridaspur (District Jajpur). The required Clinker Demand for the

Grinding Units, thus, increased many fold. Accordingly, RCL proposes to add a 3rd Kiln (Clinker Line only) in KSR Nagar Cement Plant as Line-III for 1.50 MTPA Clinker production.

4.0 Proposed Clinker production enhancement from existing 3.185 MTPA to 4.685 MTPA by the addition of 3rd Kiln of 1.5 MTPA capacity is based on Precalciner Technology with no change to existing Cement production capacity of 3.650 MTPA i.e. no change in Cement production on Expansion.

5.0 The proposal also includes the Addition of 7 Nos. Waste Heat Recovery Boilers for 27 MW (3x9 MW) Power generation so as to downsize the existing Captive Thermal Power Generation (2x18 MW+6 MW=) 42 MW to (1x18 MW+6 MW =) 24 MW (Turbine Capacity).

6.0 The project proponent submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on 10.11.2018 vide Online Application No. IA/AP/IND/85032/2018.

7.0 The existing project was accorded environmental clearance vide Lr.no. MoEF F.No. J-11011/403/2006-IA-II (I) dated 29.09.2016.

8.0 Consent for Operate was accorded by Andhra Pradesh State Pollution Control Board vide Lr. No. APPCB/VJA/VJA/488/HO/CFO/2017 dated 04.04.17 validity of CFO is up to 31.01.2022.

9.0 The proposed unit will be located within the existing plant premises at S.F. Nos. 235, 236, 238, 240, etc., Village: Jayanthipuram, Taluk: Jaggayapeta, District: Krishna, State Andhra Pradesh.

10.0 The land area acquired for the existing Cement Plant Complex is 329.00.0 Ha and no additional land is required for the proposed expansion as it is proposed within the Industrial Premises. Out of 329.00 Ha, 0 Ha is an agricultural land, 0 Ha is grazing land and 329.00 Ha is others (Industrial Land). No Government Land/Forest Land is involved. The entire land has been acquired for the project. Of the total area of 329.00 Ha, 172.745 Ha (52.50 %) land will be used for green belt development.

11.0 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. There are 5 Reserved Forests falling within the 10 km radius area from the boundary viz.:

- i. Jaggayapeta Extension RF (in the east to south; 0.2-10.5 km)
- ii. Budavada RF (in the west; 3.2-10.5 km)
- iii. Ballusupadu RF (in the west to WNW; 6-11 km)
- iv. Gandrayi RF (in the north-northwest; 8.5-11 km)
- v. Kuntimaddi RF in Venkatayapalem RF Range (Part; in SSE; 8 km onwards).

12.0 No Objection Certificate (NOC) for the Industry has been issued by the Divisional Forest Officer, Krishna Division, Vijayawada.

13.0 Total Project Cost is about Rs. 680.00 Crores for proposed Expansion in addition to the existing Rs.1,040.31 Crores. An EMP Budget of Rs.3.50 Crores is earmarked additionally for the Proposal with an Operating Cost of Rs.0.75 Crores per annum.

14.0 The proposed Expansion will give Direct Employment to additional 50 persons to the existing 388 persons in the Complex. Also, it will generate Indirect Employment to another 100 persons to existing 1,398 persons.

15.0 The targeted production capacity of the Clinker is 4.685 million TPA with no change in Cement Production of 3.65 million TPA. The Limestone for the plant would be supplied by Ramco Captive Mines in the Region viz. Jayanthipuram North Band & South Band Mines and Ravirala (Forest) Mine.

16.0 The ore transportation will be done through Road to the Crusher and from Crusher to the Cement Plant Conveyors. The proposed capacity for different products for new site area as below:

Name of Unit	No. of Units		Capacity of each Unit	Production Capacity
Clinker	Existing	Kiln-1	1.610 MTPA	4.685 MTPA
		Kiln-2	1.575 MTPA	
	Proposed	Kiln-3	1.500 MTPA	
Cement	Existing	Lines I & II	3.650 MTPA	3.650 MTPA
	Proposed	-	0	
Waste Heat Recovery Boilers	Existing		-	27 MW
	Proposed : 7 Nos.		(3x9=) 27 MW	
Captive Thermal Power Plant	Existing		2x18 MW 1x6 MW Total 42 MW (Turbine)	24 MW (Turbine Capacity) (by downsizing 1x18 MW)
	Proposed		-	
Standby DG Sets	Existing		4.0 MW	4.0 MW
	Proposed		-	

17.0 The electricity load of 13.5 MW will be met from the existing sources within the plant viz. CPPs, WHRBs/Grid.

18.0 Proposed raw material and fuel requirement for project are 6.57 MTPA Limestone and 0.63 MTPA Imported Coal. The requirement would be fulfilled by existing Captive Mines. Fuel consumption will be mainly for Ash Addition in Clinkerisation.

19.0 Water Consumption for the proposed project will be an additional 752 cu.m/day water for the Line-III (Equipment Cooling 240 cu.m/day & Domestic Use 12 cu.m/day) and WHRBs (Makeup water for Boilers, etc. 500 cu.m/day). The total Water Demand on Expansion will be

5,850 cu.m/day (due to downsize of 1x18 MW CPP) against the existing demand of 5,900 cu.m/day. The water demand will be within the permitted 7,000 cu.m/day from Mine Pits.

20.0 Domestic sewage to the tune of 10 cu.m/day will be generated on Expansion in addition to existing 660 cu.m/day and will be treated in the Combined STP of 700 cu.m/day capacity and used for Green Belt development.

21.0 Industrial wastewaters generation will be 990 cu.m/day which will be treated in existing Neutralisation Pit and treated wastewater of 500 cu.m/day will be reused for Equipment Cooling in the Cement Plant and balance 490 cu.m/day will be used for Green Belt and Dust Control Measures. Thus, 'Zero Effluent Discharge' is adopted.

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

23.0 EIA Consultant: Ensyscon Enviro Soutions, Chennai (Sl. No. 383 of AO List dated 07.12.2018)

Observations of the committee:

24.0 The committee observed that the instant proposal is for addition of Line-III in the existing cement plant. The committee did not agree for exemption of fresh public consultation, as requested by the project proponent during the course meeting, since the proposal is for addition of new clinker line.

Recommendations of the committee:

25.0 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 I read with additional ToRs at Annexure-2:**

- i. Public Hearing to be conducted by the concerned State Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- iv. The proponent will assess the potential for rain water harvesting in the project premises and submit an action plan.

2.7 Expansion of the existing clinkering capacity from 3.3 MTPA to 4.42 MTPA, Cement Manufacturing capacity from 5 MTPA to 5.8 MTPA along with 9.5 MW WHRS under Para 7(ii) of EIA Notification 2006 of M/s Bharathi Cement Corporation Private Limited located at Village Nallalingayapalli Kamalapuram mandal, Dist YSR Kadapa, Andhra Pradesh [Online Proposal No.

IA/AP/IND/84911/2018, F.No-J-11011/379/2008]- Expansion under para 7(ii) – Environmental Clearance.

1.0 M/s Bharathi Cement Corporation Private Limited has made online application vide proposal no. IA/AP/IND/84911/2018 dated 6th November, 2018 seeking environmental clearance for expansion of existing clinkering capacity from 3.3 MTPA to 4.42 MTPA, Cement Manufacturing capacity from 5 MTPA to 5.8 MTPA along with 9.5 MW WHRS under Para 7(ii) of EIA Notification 2006. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under category ‘A’ of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

Details submitted by the project proponent

2.0 M/s Bharathi Cement Corporation Pvt. Ltd, at- Nallalingayapalli, Kadapa-Dist, Andhra Pradesh was accorded EC for 3.3 MTPA Clinker Grinding, 5.0 MTPA Cement Grinding, 5.0 MTPA Lime stone Production and 2x35 MW Power Plant vide letter no J-11011/379/2008-IA.II(I) dated 10/12/2008.

3.0 M/s Bharathi Cement Corporation Pvt. Ltd proposed for enhancement of Clinkering capacity from 1.485 MTPA to 2.21 MTPA for line -1 and enhancement of Clinkering capacity from 1.815 MTPA to 2.210 MTPA for line -2 totaling clinkering capacity to 4.42 MTPA; enhancement of Cement Capacity from 5.0 MTPA to 5.8 MTPA and addition of 9.5 MW Waste Heat Recovery Power Plant. The details are as follows:

S I	Facilities	Capacity in MTPA as Approved in EC letter No J11011/379/2008- IA-II (I)	Present Configuration As per CFO	Expansion in EC configuration	Final Configuration	Remarks
1	Clinker Unit	3.3 MTPA	3.3 MTPA	1.12 MTPA	4.42 MTPA	Up gradation of Machinerie s for value addition
2	Cement addition Grinding	5.0 MTPA	5.0 MTPA	0.8 MTPA	5.8 MTPA	
3	CPP (FBC)Coal Fired	2x35 MW	2X35 MW	Nil	2X35 MW	No change
4	CPP (WHRS)	Nil	Nil	9.5MW	9.5MW	Additional 9.5 MW of Power from waste heat recovery system to cement

						plant
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4.0 Proposed modifications for increase in the production level to 5.8 MTPA on sustainable basis, Existing 6 stage preheater system shall be modified by the following:

- Existing calciner height shall be increased to 91 m from the existing level of 71.85 m, existing calciner volume is 2899 m³ after modification the volume shall be 4038 m³ so the retention time will increase to 40 %
- Existing Top Stage single cyclone of 9 m dia is replaced with two cyclones of dia 7.2 m. with inspection door /clean out holes/meal pipe expansion joints & flap valve and distribution box. → Existing down comer top portion shall be modified to suit the twin cyclone exit. The New down comer duct shall be till 140.0 m Lvl &
- Existing cyclone no 5 & 6 inlet shall be modified by increasing the height for better pressure drop across cyclone at increased capacity.

5.0 Proposed modifications in Clinker Cooler:

- Existing static grate plates shall be replaced with new design plates along with flow control valves on the same structure.
- A new module of area 30.0 Sq. m shall be added at discharge end. → New Clinker Roll crusher shall be installed on extended portion of Cooler.
- New Hyd. System with 3 Operating + 1 Stand by pump shall be installed for extended area. → New fan for Static Grate & new fans for extended modules shall be installed

6.0 As per the letter from Regional Office, Chennai to Bharathi Cement vide letter no EP/12.1/525/AP/1578 dt 4.10.18, the company has complied to all the conditions stipulated in EC.

7.0 The impact predicted due to expansion of the project is:

Pollution Load	SPM (TPA)	SO ₂ (TPA)	NO _x (TPA)
Existing Pollution Load	5.178	4.497	15.79
Expansion Pollution Load (predicted)	3.533	0.495	8.056
Total Pollution Load (predicted)	8.711	4.992	23.84

8.0 Maximum GLC obtained from Isopleth:

Pollution GLC	SPM (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
Existing GLC	0.056	0.032	0.025
Predicted GLC (predicted)	0.079	0.027	0.023
Total GLC after expansion (predicted)	0.135	0.059	0.048

9.0 Air Environment Management: Major pollutants emitted from Cement plant are Particulate matter, Cooler, Coal mills, Cement mills and crusher. Other sources of particulate matter are from ventilation systems of limestone weigh feeder, raw material storage silo, raw mill blending silo, raw coal hopper, clinker, clinker transport to cement mill and packing machines.

- BCCL has already installed 25 bag filters with ventilation system in the raw mill/kiln, cement mills, coal mills and material transfer points taken together and it has now proposed to increase the number of bags in each bag filter to absorb increased pollution load due to expansion so that emission to atmosphere will be as per CPCB norms. Similarly, it has been proposed to increase the number of plates in each ESP connected to coolers so as to absorb the additional pollution load.
- A WHRS system of 9.5 MW capacity will be introduced to control heat emission and utilize the power for operation of the plant.
- A good Housekeeping and Proper Maintenance is being practiced which will help in controlling pollution.

10.0 **Interlocking System:** BCCL has implemented interlocking system for all the pollution control equipment.

Location	Pollution Control Equipment	Interlocking System
Kiln	Bag House for Kiln and exhaust Gases	All devices and fan interlocked with raw mill and kiln
Kiln Feeding System	Bag Filter	Bag filter fan and purging air system are interlocked with kiln drive
Clinker Cooler	Electro Static Precipitator	Cooler Exhaust fan interlocked with drive
Coal Mill	Bag filter	Bag house fan interlocked with coal mill
Cement Mill	Bag filter	Bag house fans are interlocked

11.0 **Noise Management:** Major noise generating system are coal mill, Kiln, Raw mill, Cement mill, Packers of cement plant & turbine generator for power plant. The noise generated is confined to BCCL complex and is further reduced due to attenuation of green belt. The following noise control measures proposed to be undertaken in the cement plant.

- Provision for ear muffs to personnel working near high noise level sources.
- Vibration measurement of all rotating equipment at regular intervals.
- Automatic door enclosures for control room and laboratory
- Use of concrete & masonry walls and barriers keeping in view the benefits of stiffness weight and cavity construction for power plant.

- Regular lubrication of moving machineries

12.0 Water Management: BCCL is manufacturing cement by dry process technology. In the entire process water is used only for cooling cement mill, coal mill & raw mill. Cooling includes circulating water. Waste water generated from the power plant is about 64 KLD, which includes DM rinse, Boiler blow down and back wash from softening plant. This water will be reused in cement plant and dust suppression after primary treatment.

13.0 Rain Water Harvesting: BCCL has developed 4 number of Rain Water Harvesting structures with capacities of 4,800 m³, 70,000 m³, 1,00,000 m³ & 24,500 m³ totaling 199300 m³ per annum and assuming 20% evaporation loss the total water available for consumption is 159440 m³ per annum i.e 498 m³/day, which will reduce fresh water drawl from river. Rain water harvested will be consumed and raw water consumption will be minimized during lean season.

14.0 EMP Budget: The company has already spent Rs 110.89 crores on Environment Management as capital cost, and has spent Rs 1.5 crores on an average as annual recurring cost for the same:

Sl. No	Year	Recurring cost in Crore
1	2014	3.55
2	2015	0.070
3	2016	0.30
4	2017	0.059
5	2018	2.38

15.0 The cost for this enhancement of capacity will incur an additional cost of about Rs 105.00 Crore.

16.0 Proposed mitigation plan for dealing of additional pollution load. After expansion the pollution load will increase. In order to control fugitive dust, following measures will be implemented in the raw material handling area:

- Raw material storage area will be stored in shed under concrete covered to control fugitive dust.
- Water sprinkling system will be provided at raw material storage area for sprinkling water at regular intervals.
- Pneumatic conveying of cement to silo has been provided with bag filters and its capacity will be increased.
- Conveyor systems, screens and finished product area will have independent dust extraction units of adequate capacity.
- Industrial vacuum cleaner will be used to sweep roads at regular intervals.

MoM of 2nd meeting of the Re-constituted EAC (Industry-I) held during 10th to 12th December, 2018

- No. of bags will be increased in bag filters. The filter bag material will be changed to PTFE which has high efficiency and withstand higher temperature up to 2300°C increased so as to limit emission within CPCB norms
- No of plates in ESP will be increased so as to limit emission within CPCB norms.

17.0 GREEN BELT: Green belts are planned open spaces safeguarded from developmental activities Different segments for plantation are chosen, such as

- Road-side areas for Avenue Plantation with high canopy covers for absorption of Fugitive dust
- Around the Boundary wall areas for Tall tree Plantation as a Air pollution and Noise barrier
- Around various units in blank spaces for Area Plantation
- Around the water channels with shrubs and tall grasses for prevention of erosion
- Office and Canteen areas for land cover and beautification with shrubs and grass.
- Peripheral plantation of fruit bearing trees to add to the livelihood strength and food security purposes.
- Out of 198.28 Ha of land, 66.0 Ha is been covered under Green Belt Development. Further outside the Plant Premises and in close proximity massive Neem Tree Plantation has been carried out for separation of dust, reduction of Oxides of carbon and minimization of Green House Gas impact.

18.0 EIA Consultant: M/s. Visiontek Consultancy Services Pvt. Ltd.

Observations of the committee:

19.0 The instant proposal is for increase in the clinker capacity from 3.3 MTPA to 4.42 MTPA, Cement Manufacturing capacity from 5 MTPA to 5.8 MTPA and installation of new 9.5 MW WHRS. Since the proposal involves substantial increase in the production capacity, the committee opined that there shall be need for carrying out detailed EIA/EMP and conduct of public consultation. Therefore, the committee recommended for fresh ToRs.

Observations and Recommendations of the committee:

24.0 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 I read with additional ToRs at Annexure-2:**

- i. Public Hearing to be conducted by the concerned State Pollution Control Board.

- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- iv. The proponent will assess the potential for rain water harvesting in the project premises and submit an action plan.
- v. The PP shall ensure that no ground water shall be extracted.
- vi. The PP shall develop green belt in additional 20 ha of land.
- vii. PP shall monitor all the parameters prescribed for co-processing and also assess the environmental impacts.

2.8 Expansion of Ferro Alloys production from existing Ferro Silicon -15 TPD / Silico Manganese - 30 TPD /Feno Manganese- 40 TPD to Ferro Silicon -50 TPD / Silico Manganese - 90 TPD /Feno Manganese - 120 TPD by installation of additional 2 X 7.5 MVA at Plot No. 5 & 6 Industrial Park, Village Gollapuram, Mandal Hindupur, district Ananthapur in Andhra Pradesh by M/s Sri Ramakrishna Ferro Alloys (India) Pvt. Limited– [ProposalNo.IA/AP/IND/85397/2010; J-11011/208/2010-IA II (I)] – Terms of Reference.

1.0 The proponent has made online application vide proposal no. **IA/AP/IND/85397/2010** dated 14th November 2018 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 Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

Details submitted by the project proponent

2.0 M/s. Sri Ramakrishna Ferro Alloys (India) Private Limited proposed to go for Expansion of Ferro alloys plant (increase of production capacity of Ferro Silicon 4,900 TPA / Silico Manganese 12,600 TPA/ Ferro Manganese-16,100 TPA to Ferro Silicon 22,900 TPA / Silico Manganese 42,300 TPA/ Ferro Manganese 48,300 TPA). It is proposed to manufacture the above products through Submerged Arc Furnace route.

3.0 The existing plant was accorded Environment Clearance vide F.No.J-11011 /208 / 2010-IA II (I), Dated 23rd November, 2010. Renewal of Consent to Operate was accorded by Andhra Pradesh Pollution Control Board vide dated 26th April, 2016, validity upto 30th September, 2020.

4.0 The existing plant is located in Plot No. 5 & 6, APIIC Industrial Park, Gollapuram Village, Hindupur Mandal, Ananthapur District, Andhra Pradesh.

5.0 Existing plant is having 17.79 Acres (7.199 Ha.) of land. Proposed expansion will be taken up in the Existing plant. Of the total area, 6.0 Ac. (33.7%) of land will be developed with greenbelt. No Forest land is involved in the plant site.

6.0 No Reserve Forest exists within 10 Km. radius of the plant site. No National Park/Wild life Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserves are reported to be located in the core and buffer zone of the plant site.

7.0 Total cost for proposed expansion project is Rs. 25 Crores. Proposed employment generation from proposed expansion project will be 100 nos. direct employment and 100 nos. indirect employment.

8.0 The targeted production capacity of the total plant is 48,300 TPA. The Mn ore for the plant would be procured from MOIL, Nagpur/ Bellary & Quartz from Ananthapur District of Andhra Pradesh. The ore transportation will be done through by rail & road (through covered trucks). The proposed capacity for different products & capacities after proposed expansion project as below:

S.No.	Product	Plant Configuration & Production Capacity		
		Existing (1 x 6.0 MVA SEAF)	Proposed Expansion (2 x 7.5 MVA SEAF)	After Expansion (1 x 6.0 MVA & 2 x 7.5 MVA SEAF)
1	Ferro Silicon (FeSi)	4,900 TPA	18,000 TPA	22,900 TPA
	(or)			
	Silico Manganese (SiMn)	12,600 TPA	29,700 TPA	42,300 TPA
	(or)			
	Ferro Manganese (FeMn)	16,100 TPA	32,200 TPA	48,300 TPA

9.0 The total power requirement for the expansion project will be 20.3 MW, this will be met from Andhra Pradesh Southern Power Distribution Company Limited. Company has also proposed to install DG Set for emergency Backup supply.

10.0 Proposed raw material requirement for proposed expansion project are Mn Ore, Scrap, Quartz & Lam Coke, Requirement would be fulfilling by external purchase:

Raw Material	Quantity (TPA)	Sources	Mode of Transport
Ferro alloys unit			
Ferro Silicon (18000 TPA)			
Quartz	24128	Ananthapur	By Road (covered trucks)
LAM coke	2800	Imported (Chennai port)	By Road (covered trucks)

MS Scrap	5000	Ananthapur	By Road (covered trucks)
Electrode paste	1200	Bellary	By Road (covered trucks)
Silico Manganese (29,700 TPA)			
Manganese Ore	43205	MOIL, Nagpur/ Bellary	By Rail & Road (covered trucks)
Mn. Slag	24471	Ananthapur	By Road (covered trucks)
Quartz	10604	Ananthapur	By Road (covered trucks)
LAM coke	4296	Imported (Chennai port)	By Road (covered trucks)
Silico Manganese (32,200 TPA)			
Manganese Ore	46472	MOIL, Nagpur/ Bellary	By Rail & Road (covered trucks)
Lam Coke	26786	Imported (Chennai port)	By Road (covered trucks)
MS Scrap	1792	Ananthapur	By Road (covered trucks)
Electrode paste	5360	Bellary	By Road (covered trucks)

11.0 Water consumption for the proposed expansion project will be 52 KLD and will be supplied by APIIC. Domestic wastewater will be treated Septic tank followed by sub-surface dispersion trench and there will be no wastewater will be discharged outside the plant premises. Closed-circuit cooling system will be provided to SEAF unit.

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

13.0 EIA Consultant: Pioneer Enviro Laboratories & Consultants Pvt. Ltd., Hyderabad

Observations and recommendations of the committee:

14.0 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 I read with additional ToRs at Annexure-2:**

- i. Public Hearing to be conducted by the concerned State Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- iv. Fourth hole extraction for pollution control in submerged arc furnace.
- v. The PP shall ensure that no ground water shall be extracted.

- vi. The PP shall develop green belt in additional 10 ha of land.
- vii. The emissions shall be restricted to $\leq 30 \text{mg/Nm}^3$.
- viii. PP shall ensure 100% waste utilization.
- ix. Zero Liquid Discharge shall be adopted.

2.9 Manufacturing of 1200 TPM manganese oxide at survey No. 7/2, village Bahmani, Post Bokhedi, Dist.Nagpur, Maharashtra by M/s Shree Hanuman Minerals. – [Proposal No. IA/MH/IND/85548/2018; IA-J-11011/374/2018-IA-II(I)]- ToRs.

1.0 The proponent has made online application vide proposal no. **IA/MH/IND/85548/2018** dated 15th November, 2018 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 Sl. No. 3(a) Metallurgical industries (ferrous & nonferrous) under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

Details submitted by the Project Proponent

2.0 M/s. Shree Hanuman Minerals proposes to install a new manufacturing unit for Manganese Oxide. It is proposed to set up the plant for 14400 TPA Manganese Oxide.

3.0 The proposed unit will be located at Survey No. 7/2, At Village Bahmani, Post Borkhedi, District Nagpur, Maharashtra.

4.0 The land in possession for the proposed plant is 1.41 Ha. No forest land involved. The entire land has been acquired for the project. Of the total area 1.41 ha (33%) land will be developed as green belt.

5.0 No National Park, Wild Life Sanctuary, Biosphere Reserve, Tiger / Elephant Reserve, Wildlife Corridor etcare reported to be located in the core and buffer zone of the project.

6.0 Total project cost is approx. Rs. 3.0 Crore. Proposed employment generation from proposed project will be 10 - 20 nos. of direct employment and indirect employment.

7.0 The targeted production capacity is 14400 TPA Manganese Oxide.

8.0 The electricity load of 15 HP will be procured from State Electricity Board.

9.0 Proposed raw materials for project are Manganese Ore, Steam Coal. The requirement would be fulfilled by vendors as well as Open Market. Fuel consumption will be Steam Coal.

10.0 Water Consumption for the proposed project will be 3 KLD and waste water generation will be 1 KLD. About 0.8 KLD domestic waste water will be treated in Packaged Type STP and industrial waste water generated will be treated in settling tank and reused in process.

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

12.0 Name of the Consultant: Pollution and Ecology Control Services, Nagpur, Number in QCI List: 119

Observations of the Committee: -

15.0 The committee observed that the layout presented to the committee is devoid of any required information to understand the facilities proposed, Pre-feasibility report is not properly prepared. The committee advised to submit the revised pre-feasibility report incorporating project specific details and complete layout showing the roads, area for the installation of proposed facilities, parking area, storage area, green belt, etc.

Recommendations of the Committee: -

16.0 After detailed deliberations, the Committee recommended for returning the proposal in the present form.

2.10 Product diversification /change in product mix by converting 0.3MTPA hot liquid metal, out of 0.45 MTPA hot liquid metal from blast furnace to ductile iron spun pipe at village Navelim, Taluka Bicholim, District North Goa, Goa by M/s Vedanta Ltd [Proposal No. IA/GA/IND/53168/2016; File No. J-11011/946/2007-IA-II(I)] – amendment in ToR.

1.0 M/s Vedanta Limited has made online application vide proposal no. IA/GA/IND/53168/2016 dated 12th November, 2018 seeking amendments in ToR granted vide File No. J-11011/946/2007-IA-II(I) dated 10th August 2016.

Details submitted by the project proponent:

2.0 The following facilities exist in the plant:

- Three (3) Blast Furnaces BF#1, BF#2 & BF#3 altogether having Pig Iron production capacity of 0.832 MTPA;
- Battery-I and II having Met Coke Production Capacity of 0.620 MTPA; and
- Two number of Waste Heat Recovery Power Plant having generation capacity of 60 MW (2 x 30 MW).

3.0 M/s Vedanta Limited proposed for Blast Furnace (BF) Up-gradation; Ductile Iron Pipe Plant; and Ferro Silicon Plant. The details are as follows:

Blast Furnace (BF) Up-gradation: Since commissioning of BF#3 (450 m³) in 2012, Vedanta Limited is operating it successfully and have achieved best average production of around 1400 tonnes per day (monthly average). Off late, due to failure of stove coolers of BF proper, problem in and Sinter plant, production level has come down and repair works has become imperative. To tackle all maintenance concerns, Vedanta will take shut down of blast furnace and carry out

capital repair of BF#3 proper, stoves and sinter plant in 2019. During repair work, Vedanta is also contemplating to increase the hot metal production by capacity enhancement and up gradation of the BF#3. Vedanta Limited has conducted Technical Feasibility study by MECON for capacity enhancement from 0.45 MTPA to 0.54 MTPA and up-gradation of the existing 450 m³ Blast Furnace (BF#3), providing solution for problem in and possible modification/ up-gradation of existing Sinter Plant to enhance its current production level. The production capacity enhancement to 0.65 MTPA (6,50,000 TPA) through capacity enhancement of existing facility will be done parallelly during BF#3 capital repair. The proposed capacity enhancement will be completed within 3 months after obtaining EC from MoEF&CC. This production increase can be achieved by:

- i. Replacement of old cast iron stoves in bosh, belly and lower stack region & fixing of copper stoves for better heat utilization. This will increase the working volume, where the major reactions take place in blast furnace.
- ii. Increasing wind volume from 80 KNm³ /hr to 90 KNm³ /hr by replacing all existing tuyere's with new tuyere's of 120 mm diameter.
- iii. Increasing oxygen enrichment to 8 to 10% from the existing level of 3.1%.
- iv. Maintaining Hot Blast Temperature to 11000C by replacing Alumina checker bricks with silica checker bricks for 6 m to 7 m height in Hot Blast.
- v. Improving Fe% in Iron bearing material, currently Iron bearing material feed in blast furnace is having Fe% ~57-58% which will be increased to 61%.
- vi. By implementing above mentioned initiatives, production is expected to increase from current production level of 0.54 MTPA to 0.65 MTPA

Ductile Iron Pipe Plant: Vedanta proposes to set up a DI Pipe plant of capacity 0.30 MTPA which is expected to be completed within 18 months after obtaining EC from MoEF&CC. The proposed DI pipe plant is planned adjacent to BF#3 area in the Pig Iron Plant-II premises, having area is about 8.09 ha or (19.76 acres) including area for storage of finished products. Total water requirement will be 1,200 m³ /day and the source of water is from Bandhara dam, which is about 10 km away from the plant and connected with the pipeline. Make-up water will be drawn from Bandhara dam & stored in raw water sump. The permission to draw the water upto 6,000 m³ /day from Bandhara dam has already been granted by GWRD-Goa government. DI Pipe Plant will require about 12 MW of power to operate the Electric/induction furnaces, casting machines and other equipment. Required power will be sourced internally from Vedanta's 2x30 MW heat recovery power plant. The installation of 0.30 MTPA plant at one go then hot liquid metal from Blast Furnace#3 will be utilised as 90% raw material. Manufacturing of DI pipe is a continuous sequential process involving several sub-processes. The process starts with receipt of Pig Iron/hot metal/scrap, melting into induction/electric arc furnace, desulphurisation, scrap charging and super heating of molten metal in induction furnace.

Ferro Silicon Plant: For producing DI pipe grade hot metal, it is required to add Fe-Si in blast furnace output metal as raw material. For which annually ~4900T of Fe-Si is consumed. Since

power cost constituent is around 50% of the total cost of production of Fe-Si, it is economical to produce Ferro Silicon if the in-house power generated from the waste heat can be utilized. Fe-Si, for captive consumption definitely reduce COP of DI pipe production on account of own power availability. Considering this it is intend to set up a ~4950 TPA or about 0.005 MTPA Ferro Silicon Plant in 1.26 ha (3.11 acres) of existing premises of of Pig Iron Plant-II.

4.0 Total cost of the proposed project is Rs. 650 Crores. Out of which Rs. 550 Crores is allocated for cost for DI pipe plant, Rs. 70 Crores is allocated for BF and Rs. 30 Crores is allocated for Fe-Si.

5.0 Amendment in TOR for Ductile Iron Spun Pipe plant of 0.30 MTPA capacity, installation of Ferro Silicon Plant of 0.005 MTPA capacity and Capacity enhancement of Blast Furnace#3 from 0.54 MTPA to 0.65 MTPA capacity at Navelim village, Bicholim taluka, North Goa District, Goa

Observations of the Committee: -

14.0 The committee observed that two Terms of references were issued to the project proponent for the same premises for increase in production by change in the configuration of Blast Furnaces as here under:

- i) Product diversification/change in product mix by converting 0.3 MTPA hot liquid metal, out of 0.45 MTPA hotliquid metal from blast furnace to ductile iron pipes vide letter no. J-11011/946/2007-IA.II(I) dated 10th August, 2016; and
- ii) Enhancement in production capacity of pig iron (expansion) for existing blast furnaces from 292000 TPA to 350000 TPA by process optimization and efficiency improvement at village Navelim, Taluka Bicholim, District North Goa by M/s Vedanta Ltd vide ToR letter no. J-11011/211/2016-IA.II(I) dated 11th August, 2016

Recommendations of the Committee: -

15.0 After detailed deliberations, the Committee opined that the project proponent has applied as indicating two separate units. Therefore, the committee advised to make an integrated proposal for prescribing ToRs comprehensively.

16.0 In light of the above, the committee recommended for returning the proposal in the present form.

2.11 Steel Plant (sponge iron-1,12,500 TPA; MS billets -1,21,500 TPA; TMT Bars - 1,00,000 TPA and power plant -15 MW) by M/s Amoda Iron and Steel Ltd located at Sy.No.79/80, 81,83 & 172 Jayantipuram village, Jaggayyapet Mandal, Krishna District, Andhra Pradesh– [Proposal No. IA/AP/IND/21175/1910; File No: J-11011/502/2009 IAI(I)] – Extension of validity of EC.

1.0 M/s Amoda Iron and Steel Limited made an application vide online proposal no. IA/AP/IND/21175/1910 dated 13/10/2017 seeking extension of validity of environmental

clearance of mini Steel Plant project over an extent of 54.19 acres in Sy. No. 79/80, 81, 82, 83 & 172, at Jayanthipuram Village, Jaggayyapet Mandal, Krishna District, Andhra Pradesh State granted vide F.No.J-11011/502/2009-IA-II(I), dated 02/11/2010.

2.0 The proposal was considered in EAC meeting held during 24th meeting [Industry-I] held on 13th November 2017. The EAC noted that during the deliberations that the project proponent was not able to demonstrate physical progress on the ground. The committee felt that it was very crucial for taking decision to know what progress has been made on the ground. However, the PP sought more time for producing documentary and photographic evidence on the ground regarding the implementation of the expansion project for which the EC has been accorded in the year 2010.

Details submitted by the project proponent:

3.0 Following is the plant configuration and its present status for which Environmental Clearance was obtained:

S.No	Details	Capacity for which EC has been obtained on 2 nd November 2010	Detailed Implementation Status
1.	Sponge iron production with 175 TPD Kiln	52,500 TPA	<ul style="list-style-type: none"> • Detailed Engineering has been done. • Purchase order issued • Will be in operation by July 2020
2.	Production of Billets through 25 T of EAF	1,21,500 TPA	<ul style="list-style-type: none"> • Detailed Engineering has been done. • Purchase order issued. • Civil work in progress. • Will be in operation by September 2019
3.	Production of TMT bars through Rolling Mill	1,00,000 TPA	<ul style="list-style-type: none"> • Detailed Engineering has been done. • Purchase order issued. • Civil work in progress. • Will be in operation by September 2019
4.	Power Plant WHRB FBC	5 MW 10 MW	<ul style="list-style-type: none"> • Detailed engineering has been done • Purchase order issued • will be in operation by July 2020

Reasons for Seeking Extension

4.0 After obtaining the Environmental Clearance, could not implement the units due to severe recession in steel sector (sluggish market condition).

5.0 With the improvement in market condition, the company is will likely to implement the remaining unimplemented portion for which EC has been accorded by 1st November 2020.

Observations of the committee:

6.0 The Committee noted that the project proponent could not implement the project due to severe recession in steel sector (sluggish market condition).

Recommendations of the Committee:

7.0 After detailed deliberations, the Committee recommended for extension of validity of Environmental Clearance for a period of three years i.e., from 2/11/2017 to 1/11/2020 subject to environmental safeguards.

2.12 Clinker plant (2.7 MTPA) at Ametha, Expansion of Limestone Mines (from 5.445 MTPA to 9.495 MTPA) & captive power plant (from 50 MW to 85 MW), waste heat recovery boiler (10 MW) and new centralized coal processing plant with coal washery (0.405 MTPA) at Kymore Cement Works, Tehsil Vijayraghavgarh, DistKatni, Madhya Pradesh by M/s ACC Ltd [Proposal No. IA/MP/IND/80225/2011; File No. J-11011/175/2008-IA.II(I)]- Extension of validity of Environmental Clearance.

1.0 M/s ACC Limited has made an application vide online proposal IA/MP/IND/80225/2011 dated 26th September, 2018 seeking extension of validity of environmental clearance granted for Proposed New clinkerisation plant (2.7 MTPA) at Ametha, Expansion of Limestone Mines (from 5.445 MTPA to 9.495 MTPA) & Captive Power Plant (from 50 MW to 85 MW), Waste Heat Recovery Boiler (10 MW) and new centralized Coal processing plant with Coal washery (0.405 MTPA) at Kymore Cement works, Tehsil Vijayraghavgarh, District Katni, Madhya Pradesh by M/s ACC limited. EC granted: MoEF&CC vide its F.No. J-11011/175/2008-IA.II(I) dated 24th November, 2011

Details submitted by the project proponent

2.0 Reasons for delay in implementation of ametha greenfield project:

- After obtaining EC, the demand for Cement didn't go up as anticipated due to economic down turn and the profitability also has adversely impacted.
- Due to Sluggish demand from 2012 to 2016 large installed capacity was idle.
- Jamul expansion got preference due to slightly better market condition in eastern region compared to northern region, and also Jamul being the old cement plant with high specific energy consumption
- Company has incurred CAPEX of ~INR 2200 crores from the internal resources towards Jamul cement plant and Sindri grinding unit expansion from 2013 to 2017
- The ACC has incurred huge capex to implement projects to comply with new environment regulations (PM, SOx, NOx, ZLD, online reporting) introduced for cement plant in 2014 and for CPP in 2015
- Lafarge and Holcim merged in 2015 globally to become one of the largest cement company in the world which resulted sale of Lafarge India in 2017 as per the Govt of India regulations.

- The demand for ACC cement improved in northern region in 2017, which has helped us to accelerate execution of the Ametha project.

3.0 Project implementation Status:

- MOU with Government of Madhya Pradesh: MOU was signed with Government of Madhya Pradesh for establishment of Ametha Cement works.
- Status of Land acquisition: Total land required for Proposed Ametha Project i.e., 101.17 ha inside the existing mining lease area near Ametha. Till date ACC has purchased 95-97% of land required for the project. For balance 5 ha land, 3.92 ha land belongs to government and we have already made application to the Government for allotment. Balance 1.08 ha belongs to private land owners and we are under final stage of negotiation. “Thus the land required for the project is available with ACC”.
- NOC from gram panchayat: Obtained NOC from Ametha and Mehgaon Gram Panchayats for setting up project.
- Industrial Entrepreneurs Memorandum: Obtained IEM from the Ministry of Commerce & Industry for Ametha project.
- Approval for Railway Siding: M/s M R Technofin Consultants Private Limited, Mumbai was hired for carrying out the field survey and preparation of Field Survey Report (FSR) along with route diagram. This study was completed and the FSR submitted to Indian Railways for obtaining the relevant permits and to initiate the railway related work. Copy of the covering letter submitted to Indian Railways. PO on M/s M R Technofin Consultants Private Limited, Mumbai
- Shifting of MPPKVV HT & LT Lines from Lease Area: Offer reference no: 34452 dated 7th March 2018 was obtained from Madhya Pradesh Poorv Kshetra Vidyut Vitaran Co Ltd and activity being initiated in this regard after obtaining requisite permission from the State Electricity Board.
- Limestone Samples Testing for Deciding the Technology: Samples were sent on 6th April 2018 to (a) KHD Humbolt Wedag GMBH, Germany (b) Loesche GMBH Hansaaliee, Heerdterbuschstr (c) GEBR Pfeiffer SE, Kaiserslautern (d) FLSmidth, Chennai & (e) CBMI construction Co Ltd., Beijing.

4.0 ACC has request you to grant extension of validity of Environment Clearance for period of three years i.e., upto 23rd November 2021.

Observations of the committee:

5.0 The Committee noted that the project proponent could not implement the project due to economic down turn and sluggish market condition. The Committee also noted that the proposed cement plant will be located within the mine lease area. Permission from the Competent

Authority concerned for conversion of land usage from mining to industrial activity is yet to be obtained.

Recommendations of the Committee:

6.0 After detailed deliberations, the Committee recommended for extension of validity of Environmental Clearance for a period of three years i.e., from 24/11/2018 to 23/11/2021 subject to environmental safeguards.

2.13 Integrated Cement Plant of 6.0 MTPA and Captive Power Plant of 90 MW at Bankur Village, Chittapur Tehsil, Gulbarga District in Karnataka of M/s Jaypee Cement Corporation Limited (formerly M/s Zawar Cement Private Limited) [Proposal No. IA/KA/IND/82308/2011; MoEF File No. J-11011/541/2010-IA-II (I)] - Extension of validity of Environmental Clearance.

1.0 M/s Jaypee Cement Corporation Limited made an application vide online proposal no. **IA/KA/IND/82308/2011** seeking extension of validity of environmental clearance of Integrated Cement Plant of 6.0 MTPA and Captive Power Plant of 90 MW at Bankur Village, Chittapur Tehsil, Gulbarga District in Karnataka granted vide F.No.J-11011/541/2010-IA-II (I), dated 16/12/2011.

Details submitted by the project proponent:

2.0 Jaypee Cement Corporation Ltd. (JCCL), formerly known as Zawar Cement (P) Ltd. had proposed to set up an Integrated Cement Plant of 6.0 MTPA and Captive Power Plant of 90 MW at Bankur Village, Chittapur Tehsil, Gulbarga District in Karnataka. Project was accorded Environmental Clearance by the Ministry of Environment, Forests & Climate Change, New Delhi vide its reference No. J-11011/541/2010-IA-II (I) dated 16th December, 2011.

3.0 As per MoEF&CC's O.M. vide F.No. 22-27/2015-IA-III dated 12th April, 2016, the validity of Environmental Clearance is for 7 years from the date of issue of Environmental Clearance. Hence, the project has the validity of Environmental Clearance upto 15th December, 2018.

4.0 As part implementation, JCCL has established Cement Grinding Unit of 2.40 MTPA and Captive Power Plant of 60 MW upon receiving Environmental Clearance vide dated 16th December, 2011 followed by Consent to Establish from KSPCB vide ref. No. KSPCB/010/HPI/Jaypee Cement/2011-12/235 dt. 26th May, 2012 and Consent to Operate vide ref. No. PCB/HPI/010/2014-15/2032 dt. 24th March, 2015. The validity of current consent to operate is upto 30th June, 2021. The six monthly compliance reports to the conditions stipulated in Environmental Clearance are regularly submitted to Regional Office, MoEF&CC.

Salient feature of the project:

Table: Salient Feature of the Project

Sl. No.	Parameters	Description
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Sl. No.	Parameters	Description																	
1	Name of the project	Integrated Cement Plant of 6.0 MTPA and Captive Power Plant of 90 MW at Bankur Village, Chittapur Tehsil, Gulbarga District in Karnataka of Jaypee Cement Corporation Limited (formerly M/s Zawar Cement Private Limited)																	
2	Project Area	53 Ha. (Plant Area -38 Ha, Colony Area – 15 Ha.)																	
3	Location of the project	Cement Plant Area : Geographical co-ordinates A: 17 ⁰ 08' 32.15" N to 76 ⁰ 56' 49.80" E B: 17 ⁰ 08' 8.76" N to 76 ⁰ 56' 34.97" E C: 17 ⁰ 07' 57.64" N to 76 ⁰ 56' 41.63" E D: 17 ⁰ 08' 25.41" N to 76 ⁰ 57' 36.81" E The plant is under implementation within the boundary limits of Jaypee Cement Corporation Limited (JCCL) (formerly M/s Zawar Cement Private Limited)																	
4	<i>Process adopted</i>	Cement Plant - Dry process with six stage suspension pre-heater with pre-calciners CPP- CFBC boilers with Air Cooled Condensers																	
5	Water Requirement	Total water requirement is expected to be around 6000 m ³ /day in Phase I & Phase-II (including captive power plant) and colony. The Govt. of Karnataka vide letter dtd. 22.06.2010 granted permission for drawl of 15 Lakhs Gallon/day (6810 m ³ /day) of water from Kagina River.																	
6	Raw Material Requirement & Source	<table border="1"> <thead> <tr> <th>Material</th> <th>Quantity (MTPA)</th> <th>Source</th> </tr> </thead> <tbody> <tr> <td>Limestone</td> <td>6.8</td> <td>Captive Bankur Mine</td> </tr> <tr> <td>Fly ash</td> <td>2.0</td> <td>State Thermal Power Plant at Raichur & from CPP</td> </tr> <tr> <td>Gypsum</td> <td>0.3</td> <td>Rajasthan</td> </tr> <tr> <td rowspan="2">Coal</td> <td>Indian 1.4</td> <td>Singareni Collieries /Western Coal fields</td> </tr> <tr> <td>Imported 0.88</td> <td>MOU with M/s. Adani Enterprises Ltd. for supply of 1.4 MTPA Imported Coal from South Africa & Indonesia</td> </tr> </tbody> </table>	Material	Quantity (MTPA)	Source	Limestone	6.8	Captive Bankur Mine	Fly ash	2.0	State Thermal Power Plant at Raichur & from CPP	Gypsum	0.3	Rajasthan	Coal	Indian 1.4	Singareni Collieries /Western Coal fields	Imported 0.88	MOU with M/s. Adani Enterprises Ltd. for supply of 1.4 MTPA Imported Coal from South Africa & Indonesia
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Gypsum	0.3	Rajasthan																	
Coal	Indian 1.4	Singareni Collieries /Western Coal fields																	
	Imported 0.88	MOU with M/s. Adani Enterprises Ltd. for supply of 1.4 MTPA Imported Coal from South Africa & Indonesia																	
7	Power Requirement	The maximum estimated power demand for 6 MTPA cement plant is 79 MW. It is proposed to install a CPP of 90 MW (30+60 MW) in two phases. CPP of 60 MW has already installed & operational as a part implementation. For emergency requirement, it is proposed to take 20 MVA power from existing Shahabad Grid sub-station. Apart from the above, 10.5 MW DG power is also proposed to be installed, for black start of CPP.																	
8	Manpower	Construction : 3150 Operation- Phase-I : 500																	

Sl. No.	Parameters	Description
		Phase-II : 400
9	Ecological Sensitive Areas (National Parks, Wildlife sanctuaries)	Nil within 15-km radius
10	Reserved/Protected forests within 15-km radius	Nil within 15-km radius
11	Nearest water bodies	Nandana Halia (0.2-km, S) River Kagna (1.6-km, E) River Bhima (10.0-km, S)
12	Cost of the Project	Rs. 3,000 Crores

Major reasons for delay in implementation of project :

5.0 The main raw material i.e. limestone requirement for the proposed Cement Plant is planned to be met from proposed captive Bankur Limestone Mine having an area 328.34 Ha. with 6.20 MTPA capacity.

6.0 The clinker manufacturing plant was not taken up for implementation even after placing orders for major Plant & Machinery due to delay in receiving Environmental Clearance for the Captive Bankur Limestone Mine, though the application was submitted simultaneously to MoEF&CC. Non-availability of limestone is the major cause of delay in implementation of Cement Plant.

7.0 Schedule of completion of un-implemented activities:

Time Period	Zero Date	30 Month from Zero Date	20 to 32 Months from Zero Date	18 to 36 Months from Zero Date
Activity	Upon grant of EC for captive LS Mine	Clinker Manufacturing Plant (Phase- I & II)	Captive Power Plant (Phase-II)	Cement Plant (Phase –II)

Observations and Recommendations of the Committee:

8.0 After detailed deliberations, the Committee recommended for extension of validity of Environmental Clearance for a period of three years i.e., from 17/12/2018 to 15/12/2021 subject to environmental safeguards.

2.14 Expansion of ferro alloys plant at sector B, Jindal Industrial Park, Punjipathra village, Gharghoda tehsil, RaigarhDist.Chattisgarh by M/s Tirumala Balaji Ferro Alloys Private Ltd [Proposal No. IA/CG/IND/58249/2016; MoEF File No. J-11011/213/2016-IA.II(I)]- Corrigendum to Environmental Clearance.

1.0 M/s Tirumala Balaji Ferro Alloys Private Ltd made an application vide online proposal no. IA/CG/IND/58249/2016 seeking corrigendum to the environmental clearance granted for the proposed expansion of ferro alloys plant at sector B, Jindal Industrial Park, Punjipathra village, Gharghoda tehsil, Raigarh Dist. Chattisgarh accorded vide Letter No. 11011/213/2016-IA.II(I) dated 11/09/2018.

Details submitted by the Project Proponent:

2.0 The project proponent has sought for the following factual corrections in the environmental clearance accorded vide Letter No. 11011/213/2016-IA.II(I) dated 11/09/2018.

As per E.C.	As per E.C. Order	Request for correction
Paragraph No. 18	We invite your kind attention to the Paragraph no. 18 , wherein it was mentioned that "The Public Hearing of the Project was held on 14th December, 2018 under the Chairmanship of Shri. R. Yadav (ADM Raigarh).	<ul style="list-style-type: none"> Public Hearing was held on 14th December, 2017. Under the Chairmanship of Smt.R. Yadav (ADM Raigarh). <p>A copy of Public Hearing Proceedings is enclosed.</p>
Specific Condition no. 3	"The project proponent shall implement recommendations of the Principal Chief Conservator of Forests (PCCF) on the Conservation Plan for PEACOCK with an amount Rs.30.00 Lakhs allocated in consultation will local forest department"	<p>However we would like to bring to your kind notice that we have received recommendations of PCCF for Conservation of ELEPHANTS.</p> <p>Hence the aforementioned Specific Condition no.3 can be as follows.</p> <p>"The project proponent shall implement recommendations of the Principal Chief Conservator of Forests (PCCF) on the Conservation Plan for ELEPHANTS with an amount Rs.30.00 Lakhs allocated in consultation will local forest department".</p> <p>A copy of recommendations of PCCF is enclosed.</p>

Observations of the Committee

3.0 The Committee observed that the corrigendum sought to the environmental clearance granted to them in 11/09/2018 are factual in nature.

Recommendations of the Committee

4.0 After detailed deliberations, the Committee recommended for the corrigendum to the environmental clearance dated 11/09/2018 as mentioned at para 2.0 above.

11thDecember, 2018 (Teesta)

2.15 Expansion of existing Ferro Alloy Plant by additional installation of 4 X 9 MVA capacity Sub Merged Arc Furnace for production of either or combination of High Carbon Ferro-Chrome (66,000 TPA), Ferro- Manganese (80,000 TPA) and Silico-Manganese (60,000 TPA) by M/s. Misrilall Mines Pvt. Ltd.(Ferro Alloys Division) at Village Pankapal, Tehsil Sukinda, District Jajpur in Odisha – [Proposal No. IA/OR/IND/84572/2016; F.No. J-11011/307/2011/IA-II(I)] – Environmental Clearance.

1.0 M/s. Misrilall Mines Pvt. Ltd. (Ferro Alloys Division) has made online application vide proposal no. IA/OR/IND/84572/2016 dated 16th November 2018 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(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The expansion proposal of existing Ferro Alloy Plant by additional installation of 4 X 9 MVA capacity Sub Merged Arc Furnace for production of either or combination of High Carbon Ferro-Chrome (73,500 TPA), Ferro- Manganese (80,000 TPA) and Silico- Manganese (60,000 TPA) of M/s Misrilall Mines Pvt. Limited, (Ferro Alloys Division) located in Village Pankapal, Tehsil Sukinda, District Jajpur, State Odisha was initially received in the Ministry on 30.05.2016 for obtaining ToR as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC (I)] during its 8th meeting held during June 27-28, 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forests and Climate Change had prescribed ToRs to the project on 25 October 2016 vide letter no. J-11011/307/2011-IA.II(I).

3.0 The project of M/s Misrilall Mines Pvt. Limited, Ferro Alloys Division located in Pankapal village, Sukinda Tehsil, Jajpur District, Odisha State is for setting up of an Expansion proposal with additional 4 X 9 MVA capacity Sub Merged Arc Furnace for enhancement of production from 7500 TPA HCFeCr to either or combination of 73,500 TPA of High Carbon Ferro Chrome, 80,000 TPA of Ferro Manganese & 60,000 TPA of Silico Manganese.

4.0 The existing 1 X 4.5 MVA SAF was constructed under EIA Notification 1994 and as the project cost was under Rs.100.00 Crores thus obtaining Environmental Clearance was not applicable. The Existing unit was established with CTE and operational with CTO from OSPCB. Thus the status of compliance of earlier EC is not applicable for the said proposal. Whereas the certified copy of the status of compliance of the conditions stipulated in the CTO has been obtained from Odisha State Pollution Control Board vide letter no. 1365/con-355 dtd.01.06.2018.

Overall compliance is satisfactory as reported by the Regional Officer, State Pollution Control Board, Kalinganagar, Jajpur, Odisha.

5.0 The proposed capacities for different products are as below:

Name of Unit	No of Units	Capacity of each Unit	Production Capacity
High Carbon Ferro Chrome	5	1 X 4.5 MVA and 4 X 9 MVA	73,500 TPA
Ferro Manganese			80,000 TPA
Sillico Manganese			60,000 TPA

6.0 The total land required for the project is 19.975 ha, and it is an Industrial land. There is no agricultural land, grazing land or Government land neither any forest land involved. The entire land has been acquired for the project. No river or stream passes through the project area except one seasonal nalla passing through the project site at NE side from north to south. The Brahmani River flowing from SW to SE at a distance of 3.3 kms in the south direction of the project site boundary. It has been reported that except one seasonal nalla which is left aside for public use no other water body of significance exist around the project thus, modification/diversion of natural drainage pattern at any stage does not arise.

7.0 The topography of the area is almost flat and reported to lies between 86.0100 to 86.9605 N Latitudes and 20.9195 to 20.9239 East Longitudes in Survey of India topo sheet No. F45L1 at an average elevation of 42.4 m AMSL. The ground water table reported to ranges between 1.41 and 3.36 meter below the land surface during post monsoon season and 4.46 and 9.47 meter below the land surface during pre monsoon season. Based on hydro-geological study, it has been reported that the stage of ground water development is 9.31 % in the study area (both core and buffer) and thereby these are designated as safe areas.

8.0 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. The list of flora and fauna provided through the deliberation reporting presence of no schedule – I fauna in the study area (Clause No. 4.4.5 from the Page No. 176 to Page No. 184 of EIA Report).

9.0 The production process of Ferro Alloys in this project is a reduction smelting process. The reactants in the proposed project consist of metallic ores chrome oxides, manganese oxides and silicon oxides respectively for production of HCFeCr and FeMn & SiMn and coke as the carbon-source reducing agent. Limestone/quartz/bauxite/dolomite is added as flux material. Apart from those mill scale also added in manganese operation. Carbon paste is filled in electrodes to facilitate electrical conduction to smelting zone. The basic principle which governs the smelting in SAF are $M_2O + C = 2M + CO$ and $CO + O_2 = CO_2$. The different stages involved are; Charging, Smelting, Tapping and Pouring. After tapping is completed the furnace is resealed by inserting a carbon paste plug into tap hole. During tapping, slag is skimmed from the surface of the molten metal and the metal is transferred to the ladles for pouring into moulds. Pure HCFeCr slag to the tune of 60% will be taken for exhausted mine pit filling and balance 40 % of the said slag is and will be taken to Metal Recovery Plant (MRP) for metal recovery. After

separation of metal from the slag it is stored and used for filling material in road construction. FeMn slag will be used in production of SiMn. And SiMn slag are and will be taken to slag storage yard for disposal to cement plant. Raw material for production of HC Ferro Chrome, Ferro Manganese and Sillico Manganese are Chrome Ore, Manganese Ore, Reducing Agents, Fluxes and Carbon Electrode Paste etc. The Plant would operate for about 350 days in a year. The total number of Manpower requirement will be about 752 (direct and indirect) to operate the proposed facilities. Solid waste generation is mainly slag.

10.0 The targeted production capacity of the project is either or combination of High Carbon Ferro Chrome 73,500 TPA including existing production of 7,500 TPA of HCFeCr, Ferro Manganese 80,000 TPA and Sillico Manganese 60,000 TPA. The ore (Chrome Ore) for the plant would be sourced from own captive Chromite Mines located in Sukinda and from external purchases for emergency in case lumpy ore from captive mine is not available. Manganese Ore would be sourced from the open market. The ore transportation will be done through road transportation with covered tarpaulin.

11.0 The water requirement of the project is estimated as 368 m³/day. The permission for drawl of ground water is obtained from Central Ground Water Authority, Govt. of India, New Delhi vide letter no. 21-4/866/OR/IND/2016-533 dated 08/03/2017.

12.0 The power requirement of the project including existing unit is estimated as 41.00 MW and it will be sourced from the state grid.

13.0 Baseline Environmental Studies were conducted during Post monsoon season 2016 i.e from October 2016 to December 2016. Ambient air quality monitoring has been carried out at 8 locations during October 2016 to December 2016 and the data submitted indicated: PM₁₀ (52.17 µg/m³ to 79.85 µg/m³), PM_{2.5} (21.42 µg/m³ to 49.67 µg/m³), SO₂ (4.21 µg/m³ to 17.43 µg/m³) and NO_x (10.26 µg/m³ to 29.78 µg/m³). The results of the modeling study indicated that the maximum increase of GLC for the proposed project is 13.8109 µg/m³) with respect to the PM₁₀.

14.0 Ground water quality has been monitored in 09 locations in the study area and analyzed. pH: 6.0 to 7.5, Total hardness: 45.0 mg/l to 204.0 mg/l, Chloride: 10.61 mg/l to 56.20 mg/l and Fluoride not detected. Heavy metals are within the limits. Surface water samples were analyzed from 12 locations. pH: 6.27 to 7.7, BOD: 1.0 mg/l to 7.0 mg/l and COD: 8.40 mg/l to 24.9 mg/l.

15.0 Noise levels are in the range of 44.4 dB(A) to 69.2 dB(A) for day time and 40.6 dB(A) to 60.6 dB(A) for night time.

16.0 It has been reported that there are no settlement in the core zone of the project. No issues of R & R are involved. It has been envisaged that no families to be re-habilitated, which will be provided compensation and preference in the employment.

17.0 It has been reported that a total of 88,200 TPA of High Carbon Ferro Chrome Slag, 56,000 TPA of Ferro Manganese Slag and 48,000 TPA of Sillico Manganese Slag will be generated due to the project. It is reported that 60 % of High Carbon Ferro Chrome Slag is pure slag which is to be taken to Captive Mines for back filling. Balance 40 % taken to MRP. Tailings of MRP used for foundry and Road construction after TCLP Test, 56,000 TPA of Ferro

Manganese Slag will be reused in Silico Manganese production as one of raw material and 48,000 TPA of Silico Manganese Slag will be disposed off for use in slag cement production in upcoming cement plant in the vicinity. It has been envisaged that an area of 6.591 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.

18.0 It has been reported that the Consent to Establish vide letter no.8610/Ind-II-NOC-5623 dated 10/05/2013 for the proposed project / Consent to Operate of the existing unit vide letter no. 180/CON-355 dated 29/01/2018 has been obtained from the State Pollution Control Board, Odisha and Consent is valid up to 31/03/2019.

19.0 As per the judgment order of Hon'ble High Court of Odisha, conduct of Public Hearing w.r.to the fresh ToR is not required for the said proposal as Public Hearing is already conducted for the said expansion proposal in 2014. The Public Hearing of the project was held on 02.07.2014 at Danagadi Bhawan under the chairmanship of Sj. Bharat Chandra Behera (Additional District Magistrate, Jajpur Road, Odisha) for production of either or combination of additional 66,000 TPA of HCFeCr, 80,000 TPA of FeMn and 60,000 TPA SiMn / setting of additional 4 X 9 MVA SAF plant, under the expansion proposal. The issues raised during Public Hearing are Dust suppression and water pollution control, Aforestation Programme, Local employment opportunity based on educational qualification, Captive consumption of Chromite ore by Misrilall Mines Pvt. Ltd., Provision of mineral stockyard at Managovindapur village, Provision of street light with solar panel and Peripheral developmental work. An amount of Rs.375.00 lakhs (5 % of Project cost) has been earmarked for Enterprise Social Commitment based on Public hearing issues. The details of issues raised during the PH and time bound action plan is given below:

SL.	ISSUES RAISED BY THE PUBLIC	COMMENTS OF APPLICANT	ACTION PLAN	BUDGET / FINANCIAL ALLOCATION
01	Dust suppression and water pollution control	<ol style="list-style-type: none"> The industry has provided dust suppression measures at all dust generating points. The unit also agreed to upgrade the air pollution control systems with new technology for control of dust pollution control system as and when required with the expansion programme. Dust suppression and water pollution control practices are already done in compliance with norms. The same will be continued in future with 	<ol style="list-style-type: none"> Dust Suppression System has already been provided in the existing plant. For expansion project it will come along with the project. Regarding water 	<ol style="list-style-type: none"> Air Pollution Control : Capital Cost : Rs.500.00 Lacs Recurring Cost : Rs. 50.00 Lacs per Annum. Water Pollution Control : Capital Cost : Rs.120.00 Lacs Recurring Cost : Rs. 12.00 Lacs

		the proposed expansion.	pollution control measures all existing type of measures will be continued for the expansion project.	per Annum.
02	Aforestation programme	Plantation has already done around the factory and outside the factory premises. The same will be continued in future with the proposed expansion.	It is a continuous ongoing activities	Capital Cost : Rs.30.00 Lacs Recurring Cost : Rs. 3.00 Lacs per Annum
03	Local employment opportunity based on educational qualification	The industry has committed towards local employment. Priority will be given for local employment and it will be continued.	In the existing plant employment is mostly from neighbouring village. Which is around 90 % .	No fixed budget. They are paid as per qualification and experience and also as per GOO Salary and Wages Rule.
04	Captive consumption of chromite ore by Misrilall Mines Pvt. Ltd.	After expansion programme, raw material will be consumed from own source.	It is the standard process.	----

20.0 Activity Wise Expenses Made for CER - CSR Expenses - Post Public Hearing is given below:

Sl. No	Issues raised by the Public	Expenses made as on date from 02/07/2014
1	Dust suppression and water pollution control	Rs.93.50 lacs
2	Aforestation Programme	Rs. 3.50 lacs
3	Local employment opportunity based on educational qualification	Existing plant 150 number of employment. All are local. Out of which 60 numbers are tribal. Against expansion proposal 20 numbers of local people already recruited. Another 100 numbers including contractual will be taken once expansion came.
4	Captive consumption of Chromite ore by Misrilall Mines Pvt. Ltd.	After expansion, raw material will be consumed from own sources.

5	Provision of mineral stockyard at Managovindapur village	We have applied to Govt. for permission.
6	Provision of street light with solar panel	We have applied to the concerned authority for permission.
7	Peripheral developmental work.	1. Road = Rs.40.00 lacs 2. Drinking Water facilities & Electrification = Rs.13.71 lacs 3. Community Centre = Rs.65.71 lacs 4. Public water tank = Rs.4.05 lacs 5. School building repairing = Rs.15.39 lacs 6. Village plantation= Rs.3.50 lacs 7. Medical assistance = Rs.4.46 lacs 8. Recreation (Tennis Court) = Rs. 3.00 Lacs 9. Donation = Rs.2.20 lacs Total : Rs.152.02 lacs
Total (1+2+7)		Rs.249.02 lacs

CSR Activities Specific for the FY 2014-19

Sl No	Name of the project	Location of the project	Estimated Cost (in Lac)	Actual Cost Incurred till date	Status of the project
1	Renovation of Badapingal village Tank & construction of stare case with over head shade	Bada pingal village of pingal G P	4.00	4.05	Completed
2	construction of bounary wall and gate of kaitha project primary school	Kaitha village of pingal GP	7.90	7.85	Completed
3	Costruction of Asanabahali community centre	Asanabahali village of Pankpal G P	4.31	4.08	Completed
4	Construction of Monoharpur community centre	Monoharpur village of Pankpal G P	2.42	2.11	Completed
5	construction of Nuasahi Mangala community centre	Nuasahi village of Pankpal G P	4.38	1.75	In Progress
6	Construction of Bhitaramanika community centre	Biitaramanik a village of Chandia G P	4.31	4.0	Completed
7	Village water Supply project with Borewell and Electrification at Baghabali village	Baghbali village of pingal GP	8.50	11.0	Completed

MoM of 2nd meeting of the Re-constituted EAC (Industry-I) held during 10th to 12th December, 2018

8	Construction of 2 numbers of Community centre at Nimapali	Nimapali Village of pingal G P .	9.44	4.43	One Completed and the other one in progress.
9	Construction of boundary wall of Jakhapura community centre.	Jakhapura village Jakhapura GP	5.00	3.00	Completed
10	Construction of boundary wall of Manatira community centre	Manatira village of manatira GP	5.00	3.00	Completed
11	Construction of boundary wall and Gate at NC High School, Jajpur Road	Jajpur Road, Jajpur	10.00	7.54	Completed
12	Supply of Patients Bed and other Assessories including Air Conditionner	Danagadi Madical Center	4.46	4.46	Completed
13	Construction of Nilamanideipur community centre	Nilamanideipur village of pankpal G P	4.85	4.85	Completed
14	Construction of pankpal community centre	Pankpal village of pankpal GP	8.00	3.75	Work on progress
15	Construction of community centre at Natimira	At Natimira, Chandia GP	3.00	1.50	Work on progress
16	Construction of kaitha Horijan sahi community centre	Kaitha Jajpur Rd	4.00	3.25	Work on progress
17	Installation of Two numbers of Borewell	Pingal, Pingal GP	0.90	0.90	Completed
18	Installation of Two numbers of Borewell	Jatarapal, Jajpur Rd	1.80	1.80	Completed
19	Development of Synthetic Tennis Lawn Court	At SP Office Jajpur Rd	3.00	3.00	Completed
20	Construction of community centre at Hatibari	Hatibari, Pingal GP	3.00	3.00	Completed
21	Construction of Routwadi village community centre	Routwadi village of Namapali GP	3.00	3.00	Completed
22	Construction of community center.	pingal, pingal G.P. Jajpur Rd	5.00	3.90	Work on progress

21.0 The capital cost of the project is Rs.75.00 Crores and the capital cost for environmental protection measures is proposed as Rs.850.00 lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs.85.15 lakhs. The detailed CSR Plan has been provided in EMP in its page number 390 – 394. The employment generation from the

proposed project/expansion is 752 numbers. The details of fund provision for EMP is given below:

Sl. No	Heads	Capital Cost (Rs. in Lacs)	Recurring Cost per annum (Rs. in Lacs)
1	Air Pollution Control	500.00	50.00
2	Water Pollution Control	120.00	12.00
3	Noise Pollution Control	Nil	0.15
4	Environment Monitoring and Management	175.00	17.5
5	Reclamation borrow/mined area	Not applicable	Not applicable
6	Occupational Health	5.00	0.5
7	Green Belt	30.00	3.00
8	Others (House Keeping & Remedial Activities)	20.00	2.00
Total		850.00	85.15

22.0 Greenbelt will be developed in 6.591 Ha which is about 33 % of the total acquired area. A 10-m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total number of 21,450 saplings will be planted and nurtured in 6.591 Hectares in three years.

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

24.0 EIA Consultat Organization:M/s. ERS(I) Private Limited, Bhubaneshwar.

Observations of the Committee: -

25.0 The committee observed that the project proponent has obtained an order from Hon'ble High Court of Orissa for consideration of public hearing conducted on 2nd July 2014 and the same was approved by the Competent Authority. The committee noted that the project proponent has taken up some of the activities under CER based on the issues raised during the public hearing. Therefore, the committee advised to submit expenditure made so far and the fund provision made for future. Accordingly, during the course of meeting, the project proponent submitted the revised details with respect to CER are as follows:

Sl. No	Activities	Expenses in Rs lacs	
		Expenses made as on 30 th November 2018	Expenses Proposed
1	Provision of street light with solar panel	-	30.00
2	Peripheral developmental work.		
	Road Drinking Water facilities & Electrification	148.02	30.00

	Community Centre Public water Tank School building repairing Medical assistance Recreation (Tennis Court) Environment Awareness Program		
	Total	148.02	60.00
3	Dust Suppression and Water Pollution Control	93.00	70.00
4	Rain Water Harvesting	8.00	20.00
	Total	101.00	90.00

Recommendations of the Committee: -

26.0 After detailed deliberations, the Committee recommended for grant of environmental clearance for the proposed expansion of existing Ferro Alloy Plant by additional installation of 4 X 9 MVA capacity Sub Merged Arc Furnace for production of either or combination of High Carbon Ferro-Chrome (66,000 TPA), Ferro- Manganese (80,000 TPA) and Silico- Manganese (60,000 TPA) under the provisions of EIA Notification, 2006 for the subject to following specific and general conditions:

A. Specific Conditions:

- i) The abstraction of ground water shall not be more than 372 m³/day.
- ii) The project proponent should ensure that there shall not be any modification in diversion of natural drain passing through the plant premises.
- iii) The project proponent shall conduct TCLP tests on a periodical interval for hexavalent chromium leaching.
- iv) The emissions from the plant shall be less than 50mg/Nm³.
- v) The project proponent shall earmark an additional land of 1.5 acres towards CER.
- vi) The project proponent shall establish rainwater recharge facility for harvesting the rainwater more than the total abstraction during one year.
- vii) The project proponent shall provide 4th hole abstraction system for control of air pollution of the furnace.
- viii) No dumping of the waste is allowed in the plant premises including the sludge from the jigging plant.
- ix) 100% fines generated in the plant shall be briquetted and used in the process.

B. General Conditions:

I. Statutory compliance:

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. The project proponent shall install system carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.
- vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- vii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

- viii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- ix. The project proponent shall use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- x. The project proponent shall provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc.
- xi. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- xii. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. Adhere to 'Zero Liquid Discharge'.
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.
- vii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- viii. The project proponent shall practice rainwater harvesting to maximum possible extent.

- ix. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures

- i. The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.
- ii. Practice hot charging of slabs and billets/blooms as far as possible.
- iii. Ensure installation of regenerative type burners on all reheating furnaces.
- iv. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
- v. Provide the project proponent for LED lights in their offices and residential areas.

VI. Waste management

- i. Used refractories shall be recycled as far as possible.
- ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces
- iii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
- iv. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

VII. Green Belt

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

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

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will report directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

- v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the plants shall be implemented.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

- x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

2.16 Proposed expansion of steel plant by increasing the production capacities of MS Billets / MS Ingots Production from 1,00,000 to 1,45,000 TPA, TMT Bars / Structural steel Production from 1,00,000 TPA to 3,00,000 TPA & Producer Gas plant (Gasifier) capacity from 6000 m³ /hr to 18,000 m³ /hr in the existing plant premises of M/s Hindupur Steel & Alloys Pvt. Limited situated at Plot No. 29, APIIC Gollapuram Industrial Park (Phase-3), Gollapuram (V), Hindupur (M), Anantapur (D), Andhra Pradesh –[Proposal No. IA/AP/IND/3712/2012; F.No. J-11011/250/2012-IA-II (I)] – Environmental Clearance.

1.0 The project proponet informed vide letter dated 1st December, 2018 that they were unable to attend the EAC presentation, as they are in the process of complying with certain observations of R.O., MoEF&CC, Chennai on the Earlier E.C. conditions. Therefore, they requested to defer the proposal and to consider our proposal after their further request.

2.0 The committee note the request and recommended to **return the proposal in the present form**. The committee also advised the PP to submit the application after fulfilling the compliance of earlier EC.

2.17 Proposed Capacity Enhancement by Increasing Pulp Production from 62,000 BD TPA to 90,000 BD TPA by upgrading the existing pulp mill without increasing the permitted paper production capacity of 1,00,000 TPA of M/s. Orient Paper and Industries Limited at Amlai, District Shahdol, Madhya Pradesh – [Proposal No. IA/MP/IND/49845/2016; F.No. J-11011/1142/2007-IA-II (I)] – Environmental Clearance.

1.0 M/s. Orient Paper and Industries Limited has made online application vide proposal no. IA/MP/IND/49845/2016 dated 10th November 2018 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. 5(i) Pulp and Paper Industry under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent:

2.0 The Proposed Capacity Enhancement by Increasing Pulp Production from 62,000 BD TPA to 90,000 BD TPA by upgrading the existing pulp mill without increasing the permitted paper production capacity of 1,00,000 TPA of M/s Orient Paper & Industries Ltd (OPIL) located in Village Amlai, Block Burhar, Sohagpur Tehsil, Shahdol District in the state of Madhya Pradesh was initially received in the Ministry on 26th March 2018 for obtaining EC under expansion under para 7 (ii) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during the 30th Expert Appraisal Committee meeting held on 9th to 10th April 2018 and after due diligence the committee decided to award ToR 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 17th April 2018 vide Letter No J-11011/1142/2007-IA.II (I)

3.0 The project of M/s. Orient Paper Mill Industries Ltd located in Village Amlai, Block Burhar, Sohagpur Tehsil, Shahdol District in the state of Madhya Pradesh is proposing for Capacity Enhancement by Increasing Pulp Production from 62,000 BD TPA to 90,000 BD TPA by upgrading the existing pulp mill without increasing the permitted paper production capacity of 1,00,000 TPA. The existing project was accorded environmental clearance vide Ir.no. F. No. J-11011/1142/2007-IA-II(I) dated 19th March 2008. Later on amendment of EC was obtained dated 18th August 2008; 2nd December 2010; and 17th October 2016. The Status of compliance of earlier EC was obtained from Regional Office, Bhopal vide Letter No. 5-210/2008(ENV)/1259, dated 23.03.2018. There are no non-compliances reported by Regional officer.

4.0 The overview of the proposed capacities as against the existing capacities are as below:

SL No.	Description	Units	Existing Installed Capacity	Existing Permitted Capacity	Post Project Scenario	Remarks
1	Products					

SL No.	Description	Units	Existing Installed Capacity	Existing Permitted Capacity	Post Project Scenario	Remarks
1.1	Paper (Writing, printing and color)	tpa	45,000	45,000	45,000	No change
1.2	Tissue Paper	tpa	55,000	55,000	55,000	No change
1.3	Total Paper Production	tpa	1,00,000	1,00,000	1,00,000	No change
2	Pulp Mill					
2.1	In house Pulp Mill	BD tpa	93,500	62,000	90,000	The existing chlorine based bleaching technology will be replaced with ECF bleaching. Upgradation/Augmentation of Black liquor Evaporation capacity
3	Steam Generation					
3.1	Stoker fired boilers	TPH	2x90	2x90	2x90	No Change
3.2	CFBC boiler	TPH	1x100	1x100	1x100	No Change
3.3	AFBC boiler	TPH	1x150	1x150	1x150	No Change
3.4	Recovery Boiler steam generation	TPH	70	60	70	Retrofitting the existing recovery boiler to meet the additional solids firing and to produce desired additional steam
3.5	Total Steam Generation	TPH	500	490	500	
4	Captive Power Generation					
4.1	TG#1	MW	30	30	30	No Change
4.2	TG#2	MW	25	25	25	No Change
4.3	Total Captive Power Plant Capacity	MW	55	55	55	No Change

4.0 No additional land is required as the proposed project includes only up-gradation of existing pulp mill and enhancement of the production of in-house pulp. The existing plant mill is having a total land of 1479 acres. The entire land has been already acquired for the project (Industrial Use). It has been reported that no water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the existing mill area is flat and reported to lies between 23.199251^o to 23.188036^o N Latitude and 81.589983^o to 81.596057^o E Longitude in Survey of India topo sheet No 66-E/12 at an elevation of 500 m AMSL. The ground water table reported to ranges between 1.66 m to 17.86 m below the land surface during the post-monsoon season and 1.66 m and 17.86

m below the land surface during the pre-monsoon season. Based on the hydro-geological study. Further, the stage of groundwater development is reported to be 6%. and Shahdol comes under safe category from groundwater development point of view.

6.0 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. No schedule I fauna in the study area were observed.

7.0 Process Description: Additional wood required for the proposed project will be in the order of 222 TPD as against the current consumption of about 483 TPD. The wood and bamboo will be processed in the existing chipper house with 3 numbers of chippers of adequate capacity and washed with treated wastewater. The processed wood will be then digested in the existing digesters using the white liquor (comprising of the digesting chemicals) from the re-causticizing unit at an elevated temperature using steam and hot water. Additional quantity of digesting chemicals of about 37 TPD will be required for producing additional 83 TPD pulp. In order to optimize the existing pulp mill manufacturing process, it is proposed to install balancing equipment and adoption of environmental friendly Elemental Chlorine Free (ECF) bleaching technology in the bleaching section of the pulp mill. The proposed project involves in increasing the production of Chlorine Dioxide to cater to the requirements of ECF bleaching. The existing ClO₂ plant shall be upgraded from 2.5 TPD to 7.5 TPD capacity. The dry solids will be processed in existing recovery boiler to produce 70 TPH steam as against current steam generation from recovery boiler of about 52 TPH. Retrofitting of existing Recovery Boiler will be undertaken to fire the additional Black Liquor solids generated.

8.0 Overall Material Balance of the Existing and Post Project Scenario is given below:

SI. No.	Parameter	Unit	Existing Operating Scenario	Post Project Scenario (Operating at full capacity)
1	Peak paper production	TPD	250	300
2	Pulp	BD TPD	182	265
3	Wood	TPD	483	705
4	Black Liquor Solids from pulp mill	TPD	328	477
5	Digesting chemicals	TPD	82	119
6	Elemental chlorine used in the plant for bleaching	TPD	11	0
7	Steam generation from power boilers	TPH	198	198
8	Steam generation from recovery boiler	TPH	52	70
9	Black liquor Solids firing in recovery boiler	TPD	328	477
10	Solids load on lime-kiln	TPD	65	75
11	Lime mud purging from	TPD	15	15

SI. No.	Parameter	Unit	Existing Operating Scenario	Post Project Scenario (Operating at full capacity)
	lime-kiln as solid waste			
12	Coal consumption in power plant	TPD	840	840
13	Power Demand (including auxiliary power)	MW	36	37

9.0 The targeted chemical wood pulp production capacity is 90,000 BD TPA. Steam generated from the firing of additional black liquor solids in the Solids Recovery boiler will meet the additional steam demand in the plant. Hence no additional coal consumption for the project is envisaged.

10.0 Specific fresh water consumption in pulp mill will be reduced from current level of 33 m³/t to 18 m³/t of pulp during post project scenario with the installation of ECF bleaching. Hence no increase in fresh water consumption is envisaged in the pulp mill area. The total fresh water consumption in the existing facility is about 20,250 m³/day whereas during the post project scenario the total fresh water consumption will be reduced to 17,225 m³/day. The facility has obtained water allocation permission from Water Resource Department, Madhya Pradesh is 12.46 M.Cum/ annum (36000 m³/day).

11.0 The power requirement of the project is estimated as 1 MW which will be sourced from the existing captive power plant. Since the facility is already permitted to generate 55MW power, no additional power generation units (boilers and steam turbines) will be installed under the proposed scheme.

12.0 Baseline Environmental Studies were conducted during Pre-monsoon season i.e. from 16th April 2018 to 17th July 2018. Ambient air quality monitoring has been carried out at 8 locations during 16th April 2018 to 17th July 2018 and the data submitted indicated: PM₁₀ (70.3 µg/m³ to 93.5 µg/m³, PM_{2.5} (35.1 to 54.0 µg/m³), SO₂ (5.9 to 17.6 µg/m³) and NO_x (19.6 to 47.3 µg/m³). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.65 µg/m³ with respect to the PM₁₀, 1.05 µg/m³ with respect to the SO₂ and 0.75 µg/m³ with respect to the NO_x.

13.0 Ground water quality has been monitored in eight (8) locations in the study area and analysed. pH 7.12 to 7.60. Total Hardness 118 mg/l to 275 mg/l, Chlorides 38.10 to 110.40 mg/l, Fluoride 0.42 mg/l to 0.75 mg/l. Heavy metals are within the limits. Surface water samples were analysed from two locations of River Sone. pH 7.21 to 7.36; DO 6.5 mg/l to 7.2 mg/l and BOD < 5 mg/l. COD from 10.56 mg/l to 15.34 mg/l.

14.0 Noise levels are in the range of 48.10 dB(A) to 58.75 dB(A) for daytime and 39.52 dB(A) to 50.10 dB(A) for night time.

15.0 No R&R is involved as no additional land is required for the project.

16.0 The additional lime sludge of 10 tpd will be reburnt in the existing lime kiln. The additional lime grit of 5 tpd will be used for Road making and filling of low lying area within the mill premises as per the existing practice. Addition wood dust of 6 tpd will be used as fuel in boilers as per existing practice. No increase in hazardous waste is envisaged. The existing facility has fully developed the green belt/plantation of 633 acres (43 %) in its premises to control the adverse impact of fugitive dust, noise.

17.0 The facility is granted Consent to Operate from MPPCB vide their Consent No. AW-48319 dated 14.05.2018, valid up to 30.04.2019 under Water (Prevention and Control of Pollution) Act 1974 and Air (Prevention and Control of Pollution) Act 1981 as amended.

18.0 The Public hearing of the project was held on 23.10.2018 at the project site OPM SikshanSansthan, Amlai under the chairmanship of Additional District Magistrate (ADM) for the proposed capacity enhancement by Increasing Pulp Production from 62,000 BD TPA to 90,000 BD TPA by upgrading the existing pulp mill without increasing the permitted paper production capacity of 1,00,000 TPA. The issues raised during public hearing are related to CSR activities. OPM assured that as per the existing practices such as providing drinking water facilities to local vicinity, arranging health camps etc various CSR activities will be undertaken under the CSR budget. Rs. 40 Lakhs has been embarked for the local community development within the vicinity of the project area for 5 years. The CER budget is arrived by considering 1% of the total project cost of Rs. 40 crore. The issues raised during Public Hearing held by Orient Paper on 23rd Oct'18 and commitment of Project Proponent (PP) along with time bound action plan and financial allocation:

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
1	<u>Smt. Phoolmati Sarpanch,</u> <u>Gram panchayat Bakho</u> Drinking water problem should be resolved in nearby villages. pollution problem should be resolved, local youth should get employment	OPM is the first industry that is providing drinking water to local vicinity by stainless steel tankers. Industry management has been arranging drinking water to nearby villages and assured that the same will be continued	Providing drinking water facilities- Ongoing	Time frame- Ongoing Budget- Rs 9.0 Lakhs / annum
2	<u>Shri Arun Vishwakarma,</u> <u>Former Dy. Sarpanch,</u> <u>Gram Panchayat,</u> <u>Bargawan</u> Industry has resolved pollution problem that local population was facing since last 15-20	About 40 lakhs is allocated for Corporate Environment Responsibility (CER) for project as per MoEF&CC guideline and the budget will be spent as per need based CSR assessment	Will be taken up as a part of need based CSR activity. Road development is an on-going process.	Rs. 40 Lakhs has been embarked for the local community development within the vicinity of the project area for 5 years.

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
	years. Drinking water and medical facilities has been improved by CSR budget. Road from factory to Amlai railway station is damaged, it should be repaired. An electric crematorium should be built			
3	<u>Shri Anil Kumar Varman,</u> <u>Dy. Sarpanch, Village,</u> <u>Bargawan</u> Small farmers of the locality should be promoted to adopt latest technology of agriculture and should be supported for eucalyptus plantation and training should be imparted, along with this proper arrangements should be made to buy their products.	OPM requires 2,00,000 TPA of wood out of which 75 % eucalyptus and 25 % bamboo is used. Therefore, the project promotes eucalyptus plantation and provides employment to farmers.	This initiative is already running under Captive# 2 plantation scheme to promote both social & farm forestry	On-going activity Plantation Budget is Rs 60 lacs /annum
4	<u>Shri Rakesh Singh</u> In past years many works related to environment protection, drinking water, education and medical facilities has been done by the management that should be further continued.	As addressed in SI. No 2	As addressed in SI. No 2	As addressed in SI. No 2
5	<u>Shri Virendra Mishra,</u> <u>Former Dy.</u> <u>SarpanchNebuha</u> Small farmers of the localityshould be promoted to adopt latest technology of agriculture and should be supported	As addressed in SI. No 3	As addressed in SI. No 3	As addressed in SI. No 3

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
	in plantation			
6	<p><u>Shri Afsar Khan, Village-Dhanpuri</u></p> <p>Industry has been complying zero discharge since 2017 that resulted in reduced pollution of river Sone, it should be continued effectively. Maximum plantation should be carried out. In technical presentation management has mentioned to spend Rs. 28 crore in environment protection, please elaborate it.</p>	<p>The total project cost is Rs. 40 crores out of which Rs. 28 crores is allocated for environmental pollution control including ESP up-gradation for the chemical recovery boiler and Rs. 12 Crores will be used for new equipment's.</p>	<p>EMP budget will be spent for ECF technology upgrades for improving the environmental performance of the mill and ESP upgrades of chemical recovery boiler to comply with the MPPCB limits</p>	<p>Time Frame: After the commencement of project. Budget: Rs. 28 crores is allocated for EMP</p>
7	<p><u>Shri Anil Vishwakarma, Village Bakho</u></p> <p>Industry is cutting forest and using the woods. Permanent type tree like peepal, banyan should be planted. Vicinity should be provided water by installing proper pipelines. Employment opportunities should be provided.</p>	<p>OPM has implemented social and farm forestry plantations of Eucalyptus, Poplar and Subabul in the nearby areas around the project site. Mill has also planted native species like Peepal, Neem, Arjun, Amaltas, Gulmohar, Kachnar, Sheesham etc. along the bank of River Sone.</p> <p>Wood is mainly sourced from our own farm forestry which is planted by the local farmers and is a major source of their livelihood.</p> <p>OPM is the first industry that is providing drinking</p>	<p>On-going activity</p>	<p>On-going activity</p>

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
		water to local vicinity by stainless steel tankers. 95 % of the total work force is local. In addition, indirect employment opportunities are also provided.		
8	<u>Shri Heeramani Dwivedi, Former Sarpanch Bakho</u> In past under CSR arrangements were made to promote educational and cultural facilities in locality that should be restarted	Under CSR budget, OPM provided facilities to nearby schools like furniture, toilets, drinking water tanks etc. Every year about Rs. 95 lakhs to 1 crores is spent on CSR activities and additional budget will be spent in the coming year.	Will be taken up as a part of need based CSR activity.	Rs. 40 Lakhs has been embarked for the local community development within the vicinity of the project area for 5 years.
9	<u>Shri Durga Prasad, village- Bakho</u> Industry management Has been making arrangements for education and medical facilities. Vicinity is developing villages adopted by the industry should be properly developed.	As addressed in SL. 8	As addressed in SL. 8	As addressed in SL. 8
10	<u>Shri Bhushan Dubey, OPM</u> Management has made technical rectifications for environment protection and pollution control that resulted into zero discharge in river Sone. Proper	The facility has adopted zero liquid discharge to Sone river The same will be continued as there will be reduction in wastewater generation after the project.	EMP budget will be spent for ECF technology upgrades for improving the environmental performance of the mill and ESP upgrades	Time Frame: After the commencement of project. Budget: Rs. 28 crores is allocated for EMP

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
	arrangements should be made during post project to control the pollution after project implementation.		of chemical recovery boiler to comply with the MPPCB limits	

19.0 Activities and budget provision for CER is given below:

S.No.	CER Activities	Financial Allocation in Lakhs					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	Education Promotion	1.6	1.6	1.6	1.6	1.6	8
2	Skill Development Programs	1.6	1.6	1.6	1.6	1.6	8
3	Health Promotion	1.6	1.6	1.6	1.6	1.6	8
4	Drinking Water Facility	0.8	0.8	0.8	0.8	0.8	4
5	Environment	2.4	2.4	2.4	2.4	2.4	12
	Total in Lakhs	8	8	8	8	8	40

20.0 The capital cost of the project is Rs 40 crores and the capital cost for environmental protection measures is proposed as Rs. 28 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 500 Lakhs. The detailed CSR plan has been provided in the EMP in its page No. 235 to 237. The facility will be providing employment to around 100 contract labours during the construction phase. The detailed EMP budget allocation is given below:

SL. No	Application	Capital Cost (Lakhs)	Operating Cost (Lakhs)	Remarks
1	Conversion of EC to ECF bleaching process	2450	1352	Adoption of Elemental Chlorine Free Bleaching Technology
2	Air pollution control systems	260	8.5	For chemical recovery boiler upgradation
3	Wastewater Treatment facilities	NA	425	Existing ETP is adequate. There will be reduction in wastewater generation
4	Environmental Monitoring Equipment	50	1.5	Installation of Online Monitoring system for chemical recovery boiler
5	Greenbelt development and plantation	40	25	Existing green belt- 633 acres (43%)
6	Rainwater Harvesting	NA	5	Four Reservoirs have already been constructed
7	Safety and Occupational Health	NA	35	Adequate facilities already available
8	Solid Waste Storage Shed	NA	5	Adequate facilities already available

SL. No	Application	Capital Cost (Lakhs)	Operating Cost (Lakhs)	Remarks
	Total Cost (Rs)	2800	1857	

21.0 Out of the total 1479 Acres of the entire facility, 633 Acres of the land has been developed under greenbelt and plantation. Dominant species planted in the facility are Eucalyptus, Casuarina equisetifolia, Leusianasp, Peltophorumpterocarpum, Azadiractaindica, Delonixregia, Mangiferaindica, Cocos nucifera, Ficus spp, Polyalthialongifolia, Palms and Bougainvilla have been planted.

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

23.0 Name of the Consultant: Cholamandalam MS Risk Services Limited. SI No in the QCI list: 26

Observations of the Committee: -

24.0 The project proponent has informed that the existing project is implementing the ZLD. The committee advised the project proponent to adhere to the ZLD in the proposed expansion also.

Recommendations of the committee:

25.0 After detailed deliberations, the Committee recommended for environmental clearance for the proposed capacity enhancement by increasing Pulp production from 62,000 BD TPA to 90,000 BD TPA by upgrading the existing pulp mill without increasing the permitted paper production capacity of 1,00,000 TPA under the provisions of EIA Notification, 2006 subject to following specific and general conditions:

A. Specific conditions:

- i) The project proponent shall take necessary steps for control of odour.
- ii) The project proponent shall establish a soil laboratory within 2 years for the farmers to advise on soil quality.
- iii) The PP shall adhere to Zero Liquid Discharge.

B. General Conditions:

I. Statutory compliance:

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

- ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and the systems be calibrated according to equipment supplier's specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vi. The project proponent shall install high volume, low concentration NCG collection & destruction system to mitigate all malodorous gases emitted.
- vii. Emissions shall be controlled from chemical recovery section through primary and secondary venturi scrubbers.
- viii. Pollution control system in the pulp and paper plant shall be provided as per the CREP Guidelines of CPCB.

- ix. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- x. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xi. In case of treatment process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.
- xii. The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1 kg/tonne of paper production
- xiii. Elemental Chlorine Free (ECF) technology shall be used and lime kiln shall be installed to manage lime sludge

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. The project proponent shall provide the ETP to meet the standards prescribed in vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time.
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- vii. Tyre washing facilities shall be provided at the entrance of the plant gate(s).

- viii. Ensure that there is no black liquor spillage in the area of pulp mill, no use of elemental chlorine for bleaching in mill, installation of hypo preparation plant.
- ix. Ensure that no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE in the Chemical recovery process directly to ETP
- x. The project proponent shall practice rainwater harvesting to maximum possible extent.
- xi. Water meters shall be provided at the inlet to all unit processes in the steel plants.
- xii. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures

- i. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- ii. Provide LED lights in their offices and residential areas.

VI. Waste management

- i. Deinking sludge and fine sludge from ETP shall be disposed through TSDF.
- ii. Black Liquor shall be separately processed for recovery of energy and chemical in a Chemical Recovery Process.
- iii. Sufficient number of colour coded waste collection bins shall be constructed at shop floors in each shop to systematically segregate and store waste materials generated at the shop floors (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.
- iv. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office. (in case of CPP)
- v. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016

VII. Green Belt

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

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- v. The proponent shall follow International Standards of safety for ClO₂ generation and storage system, and ozone plant, and certification on regular basis may be submitted. Provision for adequate safety for personnel in case of any accidental leakage should be in place

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- i. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- iv. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- v. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Pulp and Paper plants shall be implemented.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

2.18 Capacity Enhancement by Installation of four Induction Furnaces of 15 MT each in existing plant premises of M/s J.B. Rolling Mills Limited at Trilokpur Road Kala Amb, village Johran, Tehsil Nahan, Trilokpur Road, Kala Amb, Village Johran, Tehsil Nahan& District Sirmaur, Sirmaur, Himachal Pradesh – [Proposal No. IA/HP/IND/86898/2015; F.No. J11011/218/2015-IA(I)] – Environmental Clearance.

1.0 M/s J.B. Rolling Mills Limited has made online application vide proposal no. IA/HP/IND/86898/2015 dated 28th October 2018 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(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The application of M/s J.B. Rolling Mills Limited located in Trilokpur Road, Kala Amb, Village Johran, Tehsil Nahan, Dist. Sirmaur, Himachal Pradesh was initially received in the Ministry on 28th October 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 1st meeting on 18th to 20th November, 2015 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 3rd December 2015 vide F.No. J-11011/218/2015-IA-II(I).

3.0 The project of M/s J.B. Rolling Mills Limited located in Trilokpur Road Kala Amb, village Johran, Tehsil Nahan and Dist. Sirmaur. Himachal Pradesh State is for Expansion of total production capacity by addition of four Induction Furnaces each of 15 MT and augmentation of integrating melting from 28,800 MTPA to 2,34,000 MTPA and from 45,000 MTPA to 3,36,000 MTPA of rolled products (M.S. Bar). The office Memorandum issued by Ministry of Environment and Forests, Government of India dated 24th December 2013, states that the non toxic secondary metallurgical processing industries involving operation of furnaces only, such as induction and electric arc furnaces, submerged arc furnaces and cupola with capacity <30,000 MTPA doesn't come under the purview of EIA. Hence, EC compliance was not required from Regional Office, MoEF&CC.

4.0 The total land required for the project is 5.96 ha. No forest land involved. The entire land has been acquired for the project. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is mainly plain and reported to lies between 30^o31'7.63'' to 30^o31'2.17'' N Latitude and 77^o12'1.98'' to 77^o11'49.35'' E Longitude in Survey of India topo sheet No. H43L2, H43L3 at an elevation of 350 m AMSL. The ground water table reported to ranges between 3.76 to 43.98 meter below the land surface during the post-monsoon season and 2.98 to 37.35 meter below the land surface during the pre-monsoon season.

6.0 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. No Schedule-I species is found in the 10 km radius of the project site.

7.0 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process.

8.0 The targeted production capacity of the Billets/Ingots is 780 TPD and MS rolled product is 1120 TPD. MS Scrap, Ferro Alloys & MS Billets will be used as basic raw material to manufacture TMT Bar, Garter & Angels. Raw materials will be purchased from open market and transported to site through trucks.

9.0 The total fresh water requirement of the project is estimated as 28 m³/day, which will be sourced from the DIC (Industries Department, and Govt. of Himachal Pradesh). Permission is granted by Industrial Area Development Agency, Kala-Amb, Distt- Sirmaur (HP) vide letter No.1102 dated 01/11/2018.

10.0 The power requirement of the project is estimated to be 19475 KW; the permission has been obtained from the Himachal Pradesh State Electricity Board (HPSEB).

11.0 Baseline Environmental Studies were conducted during Pre-Monsoon season i.e. from Dec, 2015 to Feb., 2016. Ambient air quality monitoring has been carried out at 10 locations during 1st December to 29th February 2016 and the data submitted indicated: PM10 (58.10µg/m³ to 88.70µg/m³), PM2.5 (22.50 to 48.90 µg/m³), SO₂ (4.10 to 19.90 µg/m³) and NO_x (15.10 to 29.80 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is just 2.35287µg/m³ with respect to the PM10.

12.0 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 7.15 to 8.55, Total Hardness: 21 to 612 mg/l, Chlorides: 10 to 120 mg/l, Fluoride: 0 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 8 locations. pH: 7.52 to 8.2; DO: 10.2 to 10.8 mg/l and BOD: 0.7 to 3.4 mg/l, COD: 4 to 4.5 mg/l.

13.0 Noise levels are in the range of 47.52 to 65.27 dB(A) for day time and 42.18 to 54.85 dB(A) for night time.

14.0 No R&R is involved. It has been envisaged that no families to be rehabilitated.

15.0 It has been reported that a total of 87 MTPD of Slag, 46 MTPD of Mill Scale and 3 MTPD of APCD waste will be generated due to the project, out of which mill scale waste will be sold to the market, slag will send to paver industry for interlock block making after metal extraction and APCD waste will be send to TSDF site for proper disposal. Zinc metal recovery from APCD dust is under consideration for implementation. It has been envisaged that an area of 2.0 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.

16.0 It has been reported that the Consent to Operate from the Himachal Pradesh State Pollution Control Board obtained vide Certificate No. HSPCB/PCB-ID10243/7219-19 dated 21/09/2018 and consent is valid up to 31/03/2021.

17.0 The Public hearing of the project was held on 18.06.2018 at Project site under the chairmanship of District Collector, Sirmaur District for production of 780 TPD of Billets/Ingots and 1120 TPD of MS rolled products (TMT Bar, Girders & Angels etc). The issues raised during public hearing are employment, pollution control and Providing Health Facility. The issues

raised during public hearing and response of the project proponent with action plan are tabulated below:

Issues Raised	Commitment	Time Frame	Budgetary provision
Problem in the growth is plant due to impacts of Air Pollution.	The Project proponent assured that they will install the air pollution control devices like Spark Arrestor, Pulsejet Bag Filter & I.D. Fan based on latest technology with adequate stack height and there will be no impact on the plants.	12 months	Rs 1.5 Crores will be spent on Air Pollution Control equipment and an amount of Rs. 30 lakhs Will be spent annual for the same towards EMP.
They asked for the provide employment for the local peoples	Company committed to provide 132 nos. of employment in the expansion project and preference will be given to Local Villagers. Vocational Training Center for providing training to youths on self-employment	8 months	Rs. 14 lakhs allotted under CER budget
The villagers requested the company to provide the Ambulance service to the local peoples.	The project proponent assured that they provide the company's ambulance to local peoples during emergency.	----	Rs. 23 Lakhs allotted by PP for Healthcare under CER Budget.
Company shall planted more trees to control the pollution.	The Project proponent assured that they will plant the trees in the area to control the pollution.	12 months	Rs. 15 Lakhs of Greenbelt development allotted under EMP budget.

18.0 An amount of Rs. 1.14 Crores (1% of Project cost) has been earmarked for Corporate Enterprises Responsibility based on public hearing issues. The details of CER proposed are as follows:

S. No.	Description	Amount to be spent			
		2019-20	2020-21	2021-22	2022-23
		Rs.in Lakhs	Rs.in Lakhs	Rs.in Lakhs	Rs.in Lakhs
1.	Promoting Education (providing infrastructure like construction of additional class rooms, furniture, smart class facilities, support to special children education /therapy etc. in nearby village)	6	5	5	4
2.	Health Care	7	6	5	5

	(Performing free Cataract surgeries, Infrastructure support to area Govt. Hospitals like providing bed and equipment for treatment etc.)				
3.	Skill Development and Livelihood (conducting skill development/ vocational training programmes for unemployed youth /women of surrounding villages)	4	4	3	3
4.	Sanitation & Drinking Water supply (supply of drinking water, construction/ installation of community toilets, support for solid waste management in the communities etc.)	5	4	3	3
5.	Environment care (taking up avenue plantation, Plantation in communities, providing solar power/ lights, rain water harvesting etc)	5	4	3	3
6.	Rural Development (laying roads, construction of drains, community halls ,other infrastructure for development of surrounding villages)	8	7	6	6
Sub Total		35	30	25	24
Total		Rs. 114			

19.0 The capital cost of the project is Rs 12091 Lakh and the capital cost for environmental protection measures is proposed as Rs 235 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 70 Lakhs. The detailed CER plan has been provided in the EIA report in its page No. 177 in chapter 8. The employment generation from the proposed project / expansion is 132. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental management is as follows:

S.No.	Particulars	Capital Cost (in lacs)	Recurring Cost per annum (in lacs)
1.	Air Pollution Control Devices (Bag Filters, online continuous emission monitoring system etc.)	150	30
2.	Water Pollution Control Measures	40	10
3.	Noise Pollution Control Measures	20	05
4.	Environment Monitoring and Management	-	10
5.	Occupational Health	-	06
6.	Green Belt Development	15	05
7.	Rain Water Harvesting	10	04
Total		235	70

20.0 Greenbelt will be developed in 2.00 Ha which is about 33.56 % of the total acquired area. A 40m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2000 trees per hectare. Total no. of 4000 saplings will be planted and nurtured in 2.0 hectares in 5 years.

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

22.0 EIA Consultant: Shivalik Solid Waste Management Limited, Zirakpur, Punjab 140604; Certificate No. NABET/EIA/1619/RA 0040; Sr. No. 137, Rev. 71, November 12, 2018

Observations of the Committee: -

23.0 The committee observed that the EIA/EMP submitted by the project proponent is generic in nature; no quantitative; and project specific details were envisaged in the report. The Committee also observed non-compliance to several Terms of References prescribed for the project and the baseline data submitted is also showing unreliable values.

Recommendations of the Committee: -

24.0 In view of the above, the Committee advised the project proponent to submit revised EIA/EMP incorporating quantitative and project specific details and also addressing the suitable replies to the Terms of References prescribed after validating baseline data by collecting one-month data afresh. The proposal is deferred for additional information.

1.19 Expansion of existing steel unit of M.S. Ingots/ Billets from 70 TPD to 180 TPD by M/s. Jagriti Steel Private Limited at Sy. No. 563 & 566, Veerlapally Village, Kothur Mandal, Rangareddy District (Mahoonnagar District), Telangana [Proposal No. IA/TG/IND/85758/2018; F.No. IA-J-11011/376/2018-IA-II(I)] – Terms of Reference.

1.0 M/s. Jagriti Steel Private Limited made an application vide online proposal no. IA/TG/IND/85758/2018 dated 22nd November 2018 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 Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “B” EIA Notification; 2006. Due to non-existence of the SEIAA at present in the state of telangana, the proposal is appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. Jagriti Steel Private Limited proposed for expansion of existing steel unit of M.S. Ingots/ Billets from 70 TPD to 180 TPD for Steel and Steel products based on Induction furnace technology.

3.0 The Consent to Operate was accorded by Telangana State pollution Control Board vide Ir.No. 192-RO-HYD/TSPCB/ZOH/CFO/2017 validity of CtO is up to 31st July 2022.

4.0 The proposed unit will be located at Veerlapally Village, Kothur Mandal, Rangareddy District (formerly Mahboobnagar district) in the state of Telangana.

5.0 The land area acquired for the proposed plant is 7 Acres. It is anon-agricultural land. No forestland is involved. The entire land has been acquired for the project. Of the total area 2 Acres land will be used for green belt development.

6.0 There is no National Park within 15 KM radius from the project site. There are no National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

7.0 Total project cost is approx. 3 Crore rupees. Around 30 members will be directly employed and around 50 will be indirectly employed due to the project expansion.

8.0 The targeted production capacity of the 180 TPD i.e., 63000 TPA. The raw material used is Iron scrap, sponge iron, pig iron and fluxes. The mode of transport for raw materials and finished products is by road. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each unit	Production Capacity
Induction Furnace	2 crucibles: 1 Standby and 1 Operational	9 TPH	180 TPD

9.0 The electricity load of 5 MW will be procured from TSSPDCL (Telangana State Power Supplying Agency) through HT line existing near the Plant.

10.0 Proposed raw material requirements for project are Sponge Iron: Approximately 150 Tons/Day; Pig Iron: Approximately 45 Tons/Day; Steel Scrap: Approximately 20 Tons/Day.

11.0 Water Consumption: The water will be supplied by gram panchayat. Water requirement for the project is approximately 20 KLD. Water may be used for cooling the Coils of furnace and general consumption. Water is recycled for cooling of the furnaces regularly. Drinking water is supplied to the industry by various marketing agencies. For sewerage system water is supplied by the gram panchayat.

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

Observations of the committee:

13.0 The project proponent has made application under item 5(k) of schedule of EIA Notification, 2006 regarding Induction Furnaces/cupula furnaces 5TPH or more. The item 5(k) of schedule of EIA Notification, 2006 regarding Induction Furnaces/cupula furnaces 5TPH or more has been merged in the Item 3(a) and entries regarding item 59k) were omitted by the ministry vide amendment in the EIA Notification, 2006 vide S.O. 3067 dated 1st December,

2009. Therefore, the committee opined to consider the proposal under item 3(a) as per the provisions of EIA Notification, 2006 read with subsequent amendment vide SO 3067 dated 01.12.2009. The project proponent has requested for exemption of public hearing as the proposed expansion is located in notified industrial area and expansion is proposed in the existing plant premises. The Committee opined that the conduct of public hearing is mandatory requirement as per the Office Memorandum issued by this Ministry in April, 2018 even if the project is located within the notified industrial area.

Recommendations of the Committee: -

14.0 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 I read with additional ToRs at Annexure-2:**

- i. Public Hearing to be conducted by the Telangana State Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- iv. The project proponent shall plan for bag filters in place of existing scrubbers.
- v. The PP shall submit the compliance of the conditions of CTO certified by the regional officer of SPCB along with the EIA/EMP.

2.20 Greenfield Steel Plant (Pellet Plant- 600000 TPA, DRI plant 420000 TPA, Billet Making using Induction Furnaces-400000 TPA, Automotive Components Manufacturing Facility-120000 TPA using Billets, Ferroalloy Plant-52000 TPA, and Captive Power Plant- 34 MW using WHRB and AFBC) by M/s Pushp Steels & Mining Pvt Ltd at Borai Industrial Growth Centre, Rasmara, District Durg, Chhattisgarh [Proposal No. IA/CG/IND/85734/2018; F.No. IA-J-11011/393/2018-IA-II(I)] – Terms of Reference.

1.0 The proponent has made online application vide proposal no. IA/CG/IND/85734/2018 dated 16th November, 2018 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(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006 and appraised at the Central level.

Details submitted by the Project Proponent

2.0 M/s Pushp Steels & Mining Pvt. Ltd. proposed to install a new Pellet Plant - 600000 TPA, DRI plant 420000 TPA, Billet Making using Induction Furnaces-400000 TPA, Automotive Components Manufacturing Facility-120000 TPA using Billets, Ferroalloy Plant-52000 TPA,

and Captive Power Plant- 34 MW using WHRB and AFBC. It is proposed to set up the plant for manufacturing Iron Ore Pellets, Sponge Iron (DRI), Steel Billets, Automotive Components, Ferro Manganese, Silico Manganese and Ferro Silicon and Electricity based on conventional DRI-Induction Furnace technology.

3.0 The proposed unit will be located at Borai Industrial Growth Centre, village Rasmara, Taluka and District Durg, Chhattisgarh.

4.0 The land area acquired for the proposed plant is 11.421 hectares out of which 100% land is industrial category land. No forestland is involved. The entire land has been acquired for the project. Of the total area 3.8 ha (33 %) land will be used for green belt development.

5.0 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 migratory corridor for Schedule-I fauna.

6.0 Total project cost is Rs.480 Crores. Proposed employment generation from proposed project will be 500 direct employment and 500 indirect employment.

7.0 The targeted production capacity of the Steel Plant is 0.4 Million Tons Per Annum (Billets).The ore for the plant would be procured from Captive Iron Ore mines located in Hahaladdi, Bhanupratappur Dist Kanker, CG and also purchased from Private iron ore mines of Odhisa, Chhattisgarh and Balaghat (MP).The ore transportation will be done through Rail and Road (Railway siding is available at Rasmara, 1 km away from the project site). The proposed capacity for different products for new site area is shown below:

Name of Unit	No of Unit	Capacity of Each Unit	Total Production Capacity
Pellet Plant	1	600000 TPA	600000 TPA
DRI Plant	2	350 TPD	420000 TPA
	1	500 TPD	
Induction Furnace	4	15 tons	400000 TPA
	3	12 tons	
Ferroalloy Plant	3	9 MVA	52000 TPA
Press Machines (for automotive components making)	1	125 tons	120000 TPA
	1	60 tons	
	1	40 tons	
	2	25 tons	
Captive Power Plant	2	14 MW (WHRB)	34 MW
	1	10 MW (WHRB)	
	1	10 MW (AFBC)	

Note: Utilities: DM Plant, Air Compressor, AC & Ventilation, Laboratory and Water System shall be also established inside the project

8.0 The electricity load of 34 MW will be procured from the CPP. (Shortfall, if any will be taken from Grid). Company has also proposed to install 2x500 KVA DG Set(for emergency use).

9.0 Proposed raw material and fuel requirement for project are iron ore, manganese ore, coal, quartzite, dolomite, limestone, carbon paste, MS scrap. The requirement would be fulfilled from captive iron ore mines, as well as through direct purchase from private mines located in Odhisa, CG&MP. Fuel consumption will be mainly for Power Plant and DG sets.

10.0 Water consumption for the proposed project will be 5000 m3/day and waste water generation will be 345 m3/day. Domestic waste water (30 m3/day) will be treated in STP and industrial wastewater will be treated in ETP and reused for gardening and dust suppression. (100% recycled / reused)

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

12.0 Name of the EIA Consultant: Grass Roots Research & Creation India Pvt Ltd., Serial No in NABET List: 80 (Rev 71, dated 12-11-2018)

Observations and recommendations of the Committee:

13.0 After detailed deliberations, the committee noted that the total production capacity calculated by the project proponent based on the configuration of the units are not proper and advised to submit the revised production capacities. Accordingly, the project proponent has submitted revised production capacities during the course of meetings which are given below:

Name of Unit	No of Unit	Capacity of Each Unit	Total Production Capacity
Pellet Plant	1	600000 TPA	600,000 TPA
DRI Plant	2	350 TPD	400,000 TPA
	1	500 TPD	
Induction Furnace	4	15 tons	320,000 TPA
	3	12 tons	
Ferroalloy Plant	3	9 MVA	52,000 TPA
Press Machines (for automotive components making)	1	125 tons	120,000 TPA
	1	60 tons	
	1	40 tons	
	2	25 tons	
Captive Power Plant	2	8 MW (WHRB)	34 MW
	1	10 MW (WHRB)	
	1	8 MW (AFBC)	

Recommendations of the Committee:

14.0 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 I read with additional ToRs at Annexure-2:**

- i. Public Hearing to be conducted by the State Pollution Control Board.

- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

2.21 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 approved 600 TPD to 1000 TPD 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 Private Limited at Village Mahuda, P.O. Rukni, P.S: Para, District: Purulia in West Bengal [Proposal No. IA/CG/IND/85734/2018; F.No. J-11011/758/2009-IA.II(I)] – Terms of Reference.

1.0 M/s Bravo Sponge Iron Private Limited made an application vide online proposal no. IA/CG/IND/85734/2018 dated 16th November, 2018 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 Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006. The proposal of expansion is submitted and appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s Bravo Sponge Iron Pvt. Ltd. proposed to expand the existing manufacturing unit by installation of Pellet Plant with Grinding Facility (2x0.85 MTPA), Sponge Iron Plant with 1x350 TPD DRI Kiln, 3x25 T Induction Furnaces, Capacity revision of Rolling Mill from approved 600 TPD to 1000 TPD, 7 MW capacity WHRB based Captive Power Plant along with Producer Gas Plant (12x4000 Nm³/hr).

3.0 It is proposed to set up the plant for production of Sponge Iron, liquid steel, 1000 TPD TMT Bars and 7 MW power from WHRB based Captive Power Plant along with Producer Gas (12x4000 Nm³/hr).

4.0 The proposed unit is located at Village Mahuda, P.O. Rukni, P.S: Para, District: Purulia in West Bengal. The geographical co-ordinates are Latitude 23°32'48.67"N to 23°33'9.42"N & Longitude - 86°32'32.55"E to 86°32'59.22"E with Above Mean Sea Level (AMSL) of 190 m.

5.0 The proposed project will be installed on the available land of total 78.37 acres (31.73 hectares) within the existing plant premises. No forest land involved. The entire land has been acquired for the project.

6.0 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.

7.0 Total project cost is approx. Rs. 475 Crores. Manpower, to the tune of 1000 persons will be required for the plant operations.

8.0 The targeted production capacity of the proposed Pellet Plant with Grinding Facility is 1.7 MTPA Pellets, Sponge Iron Plant with 1x350TPD DRI Kiln, 3x25 T Induction Furnaces, Capacity revision of Rolling Mill from approved 600 TPD to 1000 TPD, 7 MW capacity WHRB based Captive Power Plant along with Producer Gas Plant (12x4000 Nm³/hr). The ore transportation will be done through Rail. The existing as well as proposed capacity for different products are as below:

S L	UNIT	UNITS AS PER STATE CLEARANCE	UNITS AS PER EC FROM MoEF & CC DATE 18.04.2017	TOTAL UNITS	UNITS UNDER OPERATION	BALANCE UNITS AS PER EC		PROPOSED UNITS	FINAL CONFIGURATION
				(STATE + MoEF & CC CLEARANCE)		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 EC dated 24.03.2008)	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)
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

S L	UNIT	UNITS AS PER STATE CLEARA NCE	UNITS AS PER EC	TOTAL UNITS	UNITS UNDER OPERA TION	BALANCE UNITS AS PER EC		PROPO SED UNITS	FINAL CONFIGUR ATION
			FROM MoEF &CC DATE 18.04.2 017	(STATE + MoEF&C C CLEARA NCE)		UNDER IMPLEME NTION	TO BE IMPLEME NTED		
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	Produc er Gas Plant	-	-	-	-	-	-	12 x 4000 Nm3/hr	48,000 Nm3/hr

9.0 The estimated power requirement of the total project will be 67.5 MW (Existing: 12.5 MW + Unit under / to be Implemented: 13.8 MW + Proposed: 41.2 MW). The power requirement will be met from Existing & Proposed captive power plant and from DVC.

10.0 Proposed raw material and fuel requirement for major products of the project are as follows.

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					

Raw Material	Existing Units + Units under Implementation	Proposed Plant	TOTAL	Mode of transport	Source
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	Birmitrapur, Orissa.
Coal	-	68320	68320	Rail/Road	West Bengal & through e-auction.
Producer Plant					
Coal	-	118800	118800	Rail/Road	West Bengal & through e-auction.
Note: The Raw Material requirement is based on assumption.					

11.0 Daily Make up Water requirement for the total project is 2284 cum/day (Existing: 491 cum/day + Unit under / to be Implemented:377 cum/day Proposed: 1416 cum/day). The source of Water is DVC Supply (Agreement with DVC is already done). Domestic wastewater will be treated in Sewage Treatment Plant (STP) and industrial waste water generated will be treated in water treatment facility and reused completely.

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

13.0 EIA Consultant: Envirotech East Pvt. Ltd., NABET Accreditation as per QCI NABET list of 12th November, 2018: Sl. No. 54, Page No.: 54, Sector No. 8, Metallurgical Industries (Ferrous & Non-ferrous) - both Primary & Secondary, Category-A

Observations of the Committee:-

14.0 The committee observed that the project proponent has obtained environmental clearance for the expansion of Sponge Iron Plant, SMS, Rolling mill and CPP on 18th April, 2017. However, the the expansion is not completed and units are under implantation and now the

proponet has proposed for further expansion by for addition Pellet Plant, Sponge Iron Plant, SMS, Rolling mill, WHRB and Producer gas plant.

Recommendations of the Committee: -

15.0 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 I read with additional ToRs at Annexure-2:**

- i. The PP shall plan for rainwater harvesting equal to the amount of drawl from the ground.
- ii. Public Hearing to be conducted by the concerned State Pollution Control Board.
- iii. The issues raised during public hearing and commitment of the project proponet on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iv. The project proponet should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- v. The PP shall submit certified compliance report of earlier EC conditions from the regional office of the ministry along with the EIA/EMP report.
- vi. The PP shall consider all the proposed units at present and units under implementation for impact prediction and measures shall be proposed accordingly.

2.22 Integrated Steel Plant of M/s. Shri Bajrang Power and Steel Limited at Village – Borjhara, Urla - Guma Road, Urla Industrial Area,Raipur (C.G.)[Proposal No. IA/CG/IND/67789/2017; F.No.IA-J-11011/531/2007-IA-II(I)] – Amendment in Terms of Reference.

1.0 M/s.Shri Bajrang Power and Steel Limitedmade an application vide online proposal no. IA/CG/IND/67789/2017, dated 7th September, 2018 seeking amendment in the Terms of Reference granted vide letter no.IA-J-11011/531/2007-IA-II(I) dated 20th October, 2017 for the abobe mentioned project.

2.0 The proposal was considered in the 1st meeting of Re-consituted Expert Appraisal Committee (Industry-I) held during 26th to 28th November, 2018. The project proponet vide e-mail dated 24th November, 2018 informed that the authorized person is not available and requested to defer the project for next EAC meeting.

3.0 Accordigly, the proposal was considered in the present meeting. However, the PP did not attend the meeting. Therefore, the committee recommended for **returning the proposal in the present form.**

2.23 Expansion of existing plant [Billets – 472 TPD; Structural TMT Bars – 1000 TPD] by installation of sponge iron (1000 TPD), Pellet plant (1500 TPD), MS Ingots/Billets (1000 TPD), structural TMT bar (1000 TPD) along with power generation (50 MW) of M/s OM Sairam Steels & Alloys Pvt Ltd. [Online proposal No.

IA/MH/IND/62864/2015; MoEFCC File No. F. No. J-11011/57/2015-IA-II(I) – Amendment in Environmental Clearance for change in configuration of furnace.

1.0 M/s. OM Sairam Steel & Alloys Pvt. Ltd. (OSSAPL) made an application vide online proposal No. IA/MH/IND/62864/2015 dated 9th October, 2018 seeking amendment in the environmental clearance granted for the aforesaid project vide F. No. J-11011/57/2015-IA-III(I) dated 22/01/2018.

Details submitted by the project proponent:

2.0 M/s. OM Sairam Steel & Alloys Pvt. Ltd. (OSSAPL) is medium scale secondary metallurgical industry located at MIDC Plot no. F-1, 2, 3, 8,9,10, ADD. MIDC Phase – II and Gut No. 46 & 63, Daregaon, Tehsil and District Jalna, Maharashtra State, over an area of 6.5 Ha.

3.0 The project has obtained the Environmental Clearance from Environment Department of Govt. of Maharashtra for manufacturing of TMT Bars (1000 TPD) vide EC No. SEAC-2009/CR-200/TC-2 dated 29.12.2010

3.0 Subsequently granted Environmental Clearance from MoEF&CC for manufacturing of MS Ingots (from 128 TPD to 528 TPD) and Heavy Metal alloy (70 TPD) vide No. J-11011/883/007-IA II dated 30.10.2008.

4.0 Again obtained Environmental Clearance for the production of 1000TPD billets, sponge iron 1000 TPD and Captive Power plant 50MW vide F. No. J-11011/57/2015-IA-II(I) dated 22nd Jan 2018. The details of facilities for which EC was granted is given below:

EC Granted in 2008	EC Expansion granted in 2018	Total Furnace Configuration Granted	Production
1X25T & 1X30T	3X30T	1X25T, 4X30T	1000TPD

5.0 During the implementation of the project, project proponent conducted detailed engineering for the rated production and decided to seek amendment to Environmental Clearance granted for the change in furnace configuration as below without change in final production capacity.

EC Expansion granted in 2018	Revised configuration sought for	Production
1X25T, 4X30T	1X40T & 3X30T	1000TPD

6.0 Requested for amendment in Environmental Clearance for the change in furnace configuration without increase in the Total production capacity of the project.

Observations of the committee:

7.0 The committee noted that the instant proposal is for establishment of higher configuration units in place of small units. The committee opined that the higher configuration units will have less specific pollution load, power and water consumption.

Recommendations of the committee:

8.0 In light of the above, the committee recommended for amendment in environmental clearance for change in the configuration of Furnace from 1X25 TPD + 1X30 TPD to 1X40 TPD + 3X30 TPD without increase in the total production capacity of 1000 TPD.

2.24 Expansion of Integrated Steel Plant along with Captive Power Plant by M/s. Shakambhari Ispat & Power Limited [Online Proposal No. IA/WB/IND/48189/2014; MoEF&CC F. No. J-11011/201/2013-IA.II(I)] – Amendment in Environmental Clearance.

1.0 M/s. Shakambhari Ispat & Power Limited has made an application vide online proposal no. IA/JH/IND/57731/2010 seeking amendment in the environmental clearance and subsequently vide letter dated 7th December, 2018 requested to withdraw the proposal cited above.

2.0 In view of the above, the Committee recommended for **returning the proposal in the present form.**

2.25 Expansion of Integrated Steel Plant Project along with Captive Power Plant (7 MW) and Coal Washery (40 TPH Jig) located at Village Palgam, Kaushalgarh, Chowka-Kandra Road, P.O. Ghatdulmi, Tehsil Chandil, District Saraikela Kharsawan, Jharkhand by M/s Divine Alloys & Power Company Limited [Online Proposal No. IA/JH/IND/57731/2010; MoEFCC File No. J-11011/492/2010-IA-II(I)] - Corrigendum to EC.

1.0 M/s. Divine Alloys & Power Co. Limited has made an application vide online proposal no. IA/JH/IND/57731/2010 seeking corrigendum in the environmental clearance granted for the above mentioned project. Subsequently the project proponent has submitted request for withdrawal of corrigendum application.

2.0 Therefore, the committee advised to **return the proposal in the present form.**

12th December, 2018 (Teesta)

2.26 Proposed Capacity enhancement from 1,20,000 TPA to 2,07,360 TPA Billets / Rolled Products by replacement of existing 4x8 Tons Induction Furnaces with 4x12 Tons Induction Furnaces and modification of Rolling Mill by M/s BMA Stainless Limited at Village Debipur, PO Kalyaneshwari, Distt Pashim Bardhaman, West Bengal – [Proposal No. IA/WB/IND/58221/2016; MoEF&CCF.No. J-11011/192/2013-IA-II (I)] – Environmental Clearance – Reconsideration based on reply to ADS.

1.0 M/s BMA Stainless Limited has made online application vide proposal no. IA/WB/IND/58221/2016 dated 22nd December 2017 along with the copies of EIA/EMP seeking Environmental Clearance under the provisions of the EIA Notification, 2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of EIA Notification, 2006 and the proposal is appraised at Central level.

Details of the project as per the submissions of project proponent:

2.0 The proposal of M/s BMA Stainless Limited for capacity expansion from 1,20,000 to 2,07,360 TPA rolled products by replacement of existing 4 nos. of 8 Ton capacity Induction Furnaces by 4 nos. of 12 Ton Induction Furnaces and modification of the existing Rolling Mill (increasing the speed of rollers), located in Village-Debipur, P.O.-Kalyaneshwari, District – Burdwan, State-West Bengal was initially received in the Ministry on 08th August 2016 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 10th meeting held on 29th August 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 17th November 2016 vide Lr. No. J-11011/192/2013-IA.II (I).

3.0 The project of M/s. BMA Stainless Limited located in Debipur Village, Kalyaneshwari P.O., Burdwan District, West Bengal State is for capacity expansion by replacement of existing 4 nos. of 8 Ton capacity Induction Furnaces to 4 nos. of 12 Tons Induction Furnaces and increasing the speed of existing Rolling Mill through modernization is for enhancement of production of Billed / TMT Bars from 0.12 to 0.207360 million tonnes per annum (million TPA). The existing project was accorded environmental clearance vide lr.no. J-11011/192/2013-IA II (I) dated 29th September 2014. The Status of compliance of earlier EC was obtained from Regional office of MoEFCC Bhubaneshwar vide Lr. No. 102-507/EPE/452 dated 17-10-17. There are certain non-compliances reported by Regional officer. The proposed capacity for different products for new site area as below:

Plant	Existing		Proposed		Total (after the proposed expansion)	
	Unit	Capacity	Unit	Capacity	Unit	Capacity
Induction Furnace	4x8 Tons	1,20,000 TPA	4x12 Tons (replacement of existing IFs)	4x12 Tons	4x12Tons	2,07,360 TPA
Continuous Casting (CCM)	2 Strand, 4/7 m radius	1,20,000 TPA	-	87,360 TPA	2 Strand, 4/7 m radius	2,07,360 TPA
Producer Gas plant	1	27,00,000 Nm ³ /month	-	-	-	27,00,000 Nm ³ /month
Rolling Mill	1	1,20,000 TPA	Modernization	87,360 TPA	-	2,07,360 TPA

4.0 Out of total 17.1 Acres, 5.7 Acres of area is already developed as green belt for the existing project. No additional land is required for the proposed expansion project. No forestland involved. The entire land has been acquired for the project. The Baraka river is at a distance of 1.3 Km in west direction from the project area. It has been reported that no water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is flat and reported to lie between 23°46'59.63"N to 23°46'57.16"N Latitude and 86°49'55.42"E to 86°50'5.43"E Longitude in Survey of India topo sheet Nos. 73 I/9, 73 I/10, 73 I/13/73 I/14 at an elevation of 128 m AMSL. The ground water table reported to range between 0.22 to 11.63m below the land surface during the post-monsoon season and 0.74 to 19.95m below the land surface during the pre-monsoon season.

6.0 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 a corridor for Schedule-I fauna. The authenticated list of flora and fauna in the study area is incorporated in EIA.

7.0 The existing 1,20,000 TPA Plant is having 4x8 MT Induction Furnace and 6/7 radius, 2 strand CCM, 20 TPH Rolling Mill with auxiliaries. The raw material like Sponge Iron, Pig Iron & Ferro-Alloys are being melted in Induction Furnace and the refined liquid metal is cast into billets through continuous casting machine. Billets are rolled into rolled products in Rolling Mill. Reheating Furnace has been provided to reheat the billets, if required for rolling. Producer gas is used as fuel in the Reheating Furnace. The present proposal is for replacement of existing 4x8 Tons Induction Furnaces with 4x12 Tons Furnaces and increasing the output (speed) of existing Rolling Mill through modernization. Downstream facilities like Continuous Casting Machine, Rolling Mill, Producer Gas plant doesn't require any change/modification as they have adequate capacity to meet the proposed production. In Rolling Mill motors with the Rollers shall be replaced with high speed motors to meet the annual production of 2,07,360 Tons of rolled product.

8.0 The targeted production capacity of the Billet/Rolled Product is 2,07,360 TPA.

9.0 The water requirement of the project is estimated as 212 m³/day (including 10 m³/day for domestic use). The requirement will be met from DVC, Borewell and Rain Water harvesting pond. Permission for the same has been obtained from the concerned authority. The permission for drawl of surface water is obtained from Central Water Commission-DVVR Unit vide Lr. No. MD/DVRR/W-6-116/2008/602-608 dated 11th September 2008 and Ground water from Ground Water Resource Development Authority, Burdwan vide permit no. P022024012520000001TSE dated 7.2.17.

10.0 The power requirement of the project is estimated as 30 MW [Existing: 20 MW & Additional: 10 MW]. The power to the plant shall be brought from the Damodar Valley Corporation substation located near the plant.

11.0 Baseline Environmental Studies were conducted during Post monsoon season i.e. from 1st October to 31st December, 2016. Ambient air quality monitoring has been carried out at 8 locations during October to December, 2017 and the data submitted indicated: PM₁₀ (53.3 µg/m³ to 95.3 µg/m³), PM_{2.5} (30.50 µg/m³ to 55.40 µg/m³), SO₂ (6.60 µg/m³ to 14.70 µg/m³) and NO_x (14.20 µg/m³ to 34.50 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 0.298 µg/m³ with respect to the PM₁₀, 0.576 µg/m³ with respect to the SO₂ and 0.810 µg/m³ with respect to the NO_x.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 6.86 to 8.13, Total Hardness: 210 to 326.53 mg/l, Chlorides: 63.04 to 112.06 mg/l, Fluoride: 0.59 to 0.89mg/l. Heavy metals are within the limits. Surface water samples were analysed from 3 locations. pH: 7.80 to 7.91; DO: 6.8 to 7.8 mg/l and BOD: 5.00 to 5.80 mg/l. COD from 14.75 to 18.22 mg/l.

13.0 Noise levels are in the range of 50.75 Leq dB(A) to 62.30 Leq dB(A) for daytime and 40.45 Leq dB(A) to 57.40 Leq dB(A) for night time.

14.0 No R&R is involved.

15.0 It has been reported that a total of 18,434 tons of waste will be generated due to the project, out of which 17,812 tons will be used in road/area/land development and 622 tons will be Recycled in the process. It has been envisaged that an area of 2.30 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.

16.0 It has been reported that the Consent to Operate from the West Bengal Pollution Control Board obtained vide Lr. No. C0107785302-WPBA/Red(Bwn)/cast(521)/06 dated 17.03.2017 and consent is valid up to 30.04.2022.

17.0 The Public hearing of the project was held on 21.07.2017 at Nandanik Hall of SalanpurPanchayet Samity P.O- Salanpur, District- Paschim Bardhaman, West Bengal under the chairmanship of Sri Kaushik Mukherjee W.B.C.S. (Exe.), Dy. Magistrate and Dy. Collector, and O.C., Judicial Munshi Khana for production of 2,07,360 TPA of Billet/Rolled Product from the existing production of 1,20,000 TPA. The issues raised during public hearing, *inter alia*, are Employment to the local people; Renovation of Toilets in local schools; Development of roads; Medical / Ambulance facility for nearby villages; Implementation of effective pollution control measures.

18.0 An amount of 20 Lakhs (2.5% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues. The details of ESC proposed are as follows:

Sl. No.	Enterprise Social Commitment Activities	Budget (Rs. Lakhs)					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	Health Facility	1	1	1	1	1	5
2	Infrastructural Development	0.7	0.7	0.7	0.7	0.7	3.5
3	Educational Facility	0.7	0.7	0.7	0.7	0.7	3.5
4	Afforestation Programs	0.6	0.6	0.6	0.6	0.6	3.0
5	Community Welfare Activities	0.4	0.4	0.4	0.4	0.4	2.0
6	Community Water Conservation	0.3	0.3	0.3	0.3	0.3	1.5
7	Community Capacity Building	0.3	0.3	0.3	0.3	0.3	1.5
Total		20 Lakhs					

19.0 The capital cost of the project is Rs. 8.00 Crores and the capital cost for environmental protection measures is proposed as Rs. 64 Lakhs. The annual recurring cost towards the

environmental protection measures is proposed as Rs. 10.40 Lakhs. The employment generation from the proposed project / expansion is 30 (direct). The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S.No.	Environmental Protection Measures	Capital Cost Rs. In lakhs	Recurring Cost Rs. In Lakhs / Yr.
1	Air Pollution Control Measures	50.00	6.00
2	Water Pollution Control Measures	3.00	1.00
3.	Noise Pollution Control Measures	1.00	0.10
4	Greenbelt Development	5.00	2.00
5	Rain Water Harvesting	3.50	0.30
6	Occupational health and safety	1.50	1.00
TOTAL		64.00	10.40

20.0 Greenbelt will be developed in 2.30 Ha which is about 33% of the total acquired area. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 7000 saplings will be planted and nurtured in 2.30 hectares in 5 years.

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

22.0 The proponent has made presentation along with EIA Consultant M/s. Vardan Environet, Gurgaon, Haryana.

23.0 The committee observed that the EIA/EMP submitted is not as per the generic structure specified in EIA Notification, 2006. The details of existing facilities, resources, control system and proposed expansion are not clearly defined. It is also observed that no interpretation of baseline data, expenditure on pollution control equipment, inadequate HIRA, corporate environmental policy did not address the reporting mechanism of reporting non-compliances.

24.0 The proposal was considered in the 28th meeting of EAC (Industry – 1) held during 05th – 6th February 2018. After detailed deliberations, the committee advised to submit revised EIA report incorporating the following additional information.

1. Revised water balance and rainwater harvesting scheme
2. Revised material balance
3. Revised greenbelt development plan to complete 2.3 ha as per the earlier Environmental Clearance
4. Complete details of raw material, source, mode of transport and distance from source
5. Scheme for 100% utilization of solid waste including hazardous waste generated from producer gas plant.
6. Revised table of issues raised during PH, commitment of PP, time bound action plan along with fund provision.

7. Revised ESC programme based on the issues emerged during PH and social impact assessment. The activity shall be for asset creation and capacity building in CAPEX mode.
8. Power supply arrangement details
9. Closure report on non-compliances reported by Regional Officer on earlier EC conditions from Regional officer of MoEFCC.
10. Hazardous waste generated in the existing and proposed expansion shall be clearly addressed.
11. The revised project and site-specific HIRA
12. Corporate Environmental Policy addressing the reporting mechanism of non-compliances to the board of directors directly.

25.0 Reply to the observations was submitted by PP on 22.06.2018 and the point-wise reply of the observations is as follows:

Sl	Observation	Reply
1.	Revised water balance and rainwater harvesting scheme.	Revised water balance given in the EIA Report in Chapter 2 in Figure 2.9 at Page No. 35. Revised rainwater harvesting scheme is given in Chapter 4 in Para No. 4.13 at Page No. 142.
2.	Revised material balance	Revised material balance given in EIA Report in Chapter 2 in Figure 2.6 at Page No. 33.
3.	Revised greenbelt development plan to complete 2.3 ha. as per the earlier Environmental Clearance.	An undertaking/commitment is given by PP on 02.04.2018 to complete the greenbelt development area of 2.3 ha. in six months' time. Greenbelt development plan is given in EIA report in Chapter 4 in Para No.4.12 and undertaking is enclosed as Annexure XI at page No. 335.
4.	Complete details of raw material, source, mode of transport and distance from source.	Complete details of raw material, source, mode of transport and distance from source are given in EIA report in chapter 2 in Para No. 2.7.2, table No. 2.3 at page No. 31.
5.	Scheme for 100% utilization of solid waste including hazardous waste generated from producer gas plant.	Scheme for 100 % utilization / disposal of Solid waste including hazardous waste generated from producer gas plant is given in the EIA Report in Chapter 4 at ParaNo.-4.8, Table 4.8 at Page No. 131.
6.	Revised table of issues raised during PH, commitment of PP, time bound action plan along with fund provision.	Action Plan of the issues raised during Public Hearing with commitment of PP and time bound action plan along with fund provision is enclosed in the EIA Report in chapter 7 in Table No. 7.2 at page no. 173.
7.	Revised ESC programme based on the issues emerged during PH and social impact assessment. The activity shall be for asset creation and	Revised CER programme as per MoEF&CC O.M. dated 01.05.2018 is given in EIA Report in Chapter 7 at ParaNo.7.4 at Page No. 176-177.

Sl	Observation	Reply
	capacity building in CAPEX mode.	
8.	Power supply arrangement details	In this regards, the power assurance obtained from DVC vide letter no. Coml/CD/17-18/ Kalyaneswari/BMA/601 dated 12.02.2018, for enhancement of power, is enclosed as Annexure V at page No. 249.
9.	Closure report on non-compliances reported by Regional Officer on earlier EC conditions from Regional officer of MoEFCC	Closure report on non-compliances with the conditions of the existing Environmental Clearance, earlier reported by Regional Officer, MoEF&CC, has been obtained and enclosed as Annexure XVII at Page No. 359 in the EIA Report.
10.	Hazardous waste generated in the existing and proposed expansion shall be clearly addressed.	No hazardous waste was/shall be generated from the process except the 'Used Oil'. Approximate quantity of 'Used Oil' generated from the proposed expansion will be approx. 35 KL per year and 'Used Oil' will be sold to the register recycler.
11.	The revised project and site-specific HIRA	Site specific HIRA is included in the EIA Report in Chapter 7 at table no. 7.5 at page no. 185.
12.	Corporate Environmental Policy addressing the reporting mechanism of non-compliances to the board of directors directly.	Revised Corporate Environmental Policy is enclosed in the EIA Report as Annexure XIII at Page No. 337.

26.0 The project was considered in the 33rd meeting of EAC (Industry – 1) held on 09th – 11th July 2018, item no. 32.26. After detailed deliberation, the Committee is not satisfied with the reply submitted and ADS by No. 3, 6 and 12 and advised the project proponent to comply with the ADS conditions including completion of green belt. Therefore, the project is deferred.

27.0 Reply to the observations was submitted to MoEF&CC on 30.08.2018. The point-wise reply of the observations is as follows:

No.	Observation	Reply
1	Revised greenbelt development plan to complete 2.3 ha. as per the earlier Environmental Clearance.	Plantation has been done in 2.3 Ha. where in 4000 Nos. of Sapling have been planted inside the plant area and another 1700 are under process. With this 33% area is covered under the plantation as per the existing EC. This is in addition to the 2000 trees planted earlier.
2	Revised table of issues raised during PH, commitment of PP, time bound action plan along with fund provision	Action Plan of the issues raised during Public Hearing with commitment of PP and time bound action plan along with fund provision is revised.
3	Corporate Environmental Policy addressing the	Corporate Environmental Policy along with Board Resolution is revised.

No.	Observation	Reply
	reporting mechanism of non-compliances to the board of directors directly.	

Observations of the committee:

28.0 The Committee noted that the public hearing was chaired by Deputy Collector, who is below the rank of Additional District Magistrate. As per the the provisions of EIA Notification, 2006, the Public Hearing shall be chaired by the authority not below the rank of ADM. However, the Additional Chief Secretary, West Bengal has requested the Ministry to consider the public hearing conducted under the Chairmanship of Deputy Collector for grant of environmental clearance for 8 projects in the PashimBardhaman district including this proposal in view of special circumstances prevailing in the district. The same has been approved by the Competent Authority of the ministry. Therefore, the committee considered the public hearing in the instant proposal.

Recommendations of the committee:

29.0 After detailed deliberation, the Committee recommended for environmental clearance under the provisions of EIA Notification, 2006 for the proposed capacity enhancement from 1,20,000 TPA to 2,07,360 TPA Billets / Rolled Products by replacement of existing 4x8 Tons Induction Furnaces with 4x12 Tons Induction Furnaces and modification of Rolling Mill subject to following specific and general conditions:

A. Specific conditions –

- i) The particular emission from the bag houses shall be less than 30 mg/Nm³.
- ii) The project proponent shall plan for 100% utilization of waste generated in the process.

B. General Conditions:

I. Statutory compliance:

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the West Bengal State Pollution Control Board.
- ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.
- vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- vii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- viii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- ix. The project proponent shall use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- x. The project proponent shall provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc.
- xi. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

- xii. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

- i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. Adhere to 'Zero Liquid Discharge'.
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.
- vii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- viii. The project proponent shall practice rainwater harvesting to maximum possible extent.
- ix. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures

- i. The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.
- ii. Practice hot charging of slabs and billets/blooms as far as possible.
- iii. Ensure installation of regenerative type burners on all reheating furnaces.
- iv. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
- v. Provide the project proponent for LED lights in their offices and residential areas.

VI. Waste management

- i. Used refractories shall be recycled as far as possible.
- ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces
- iii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
- iv. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

VII. Green Belt

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

VIII. Public hearing and Human health issues

- v. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- vi. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- vii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile

STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

- viii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholder's / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the plants shall be implemented.

X. Miscellaneous

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

- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- xvii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- xviii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- viii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- ix. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- x. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xi. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

- xii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

2.27 Proposed 6 MTPA Integrated Steel Plant along with captive power generation of 893 MW of M/s. Uttam Galva Ferrous Limited at villages Kudatini, Veniveerapura, Yerangaligi and Kolagalu Taluk, District Bellary, Karnataka [Proposal No.IA/KA/IND/22038/2014; MoEF&CCF.No. J-11011/80/2014-IA-II (I)] – Environmental Clearance.

1.0 **M/s. Uttam Galva Ferrous Limited** made an application vide online proposal no. **IA/KA/IND/22038/2014** dated 20th January, 2017 along with the copies of EIA/EMP seeking Environmental Clearance under the provisions of the EIA Notification, 2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent:

2.0 The 6 MTPA Integrated Steel Plant of M/s Uttam Galva Ferrous Limited located in villages Kuduthini, Veniveerapura, Yerangaligi and Kolagallu, Tehsil & District: Bellary in the State of Karnataka was initially received in the Ministry for obtaining Terms of Reference (ToR) as per EIA Notification, 2006 vide letter No. UGFL/MoEF/2014/001, dated 10.01.2014. The project was appraised by the Expert Appraisal Committee (Industry) during its 19th meeting held during 28-30th May, 2014 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment and Forests had prescribed ToRs to the project on 17th July 2014.

3.0 The project of M/s Uttam Galva Ferrous Limited located in Kuduthini, Veniveerapura, Yerangaligi and Kolagallu, Villages, Bellary Tehsil & District in the State of Karnataka is for setting up of a new Integrated steel plant for production of 6 million tonnes per annum (MTPA) . Since the project is green field obtaining RO clearance is Not Solicited. The proposed capacity for different products for new site area as below:

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Coke oven and byproduct plant	2.740 MTPA
Beneficiation & Pellet plant	4.000 MTPA
Sinter plant	8.532 MTPA
Blast Furnace	6.464 MTPA
Basic Oxygen Furnace (BOF)	6.000 MTPA
Continuous Casting Machine (CCM)	5.880 MTPA
Rolling Mill (RM)	5.615 MTPA
Captive Power Plant (WHR / Coal based)	893 MW
Oxygen Plant	4000 TPD
Lime Plant	0.524 MTPA
Dolo Plant	0.150 MTPA
CDQ (Additional power)	40 MW

4.0 The total land required for the project is 2014 Ha (4978 acres), out of which 200 Ha falls under agricultural area, grazing area is 123 Ha and 1691 Ha represents waste and barren land area. No forest land involved. The entire land has been acquired for the project. No river passes through the project area. The entire land is under procession of UGFL and there is no natural nala in the project site. However, there are three natural nalas flowing adjacent the plant site from south to north. An irrigation canal (Tungabhadra High Level Canal) runs adjacent to plant boundary.

5.0 The topography of the area is mostly flat and sloping towards north and lies between 15o11' 04.61" N to 15o13'24.88"N Latitude and 76o49'29.6"E to 76o 46'18.3" E Longitude in Survey of India toposheet No D43E11, D43E12, D43E15 & D43E16 at an elevation of about 460 m to 475m above MSL. During post-monsoon season the ground water table reported in the range of 1.22 – 17.61 m BGL (average 3.47m) and it is reported 1.72 – 19.48 m BGL (average 4.77m) during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the exploratory bore wells drilled in the district ranges from 96 to 200.00m bgl. The yield ranges from <1.0 to 8.2 lps. The specific capacity ranges from 2.0 to 250 m³/d/m/dd. The recuperation is reported in the range of 1.2 to 30.61m. The radius of influence of pumped out water is limited to 20 meter. As per CGWB over exploitation is not reported in this district and nor the ground water is reported in critical stage .

6.0 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. The authenticated list of flora and fauna provided through the forest department reporting no schedule-I fauna in the study area.. The authenticated list of flora and fauna in the study area are provided in Table 03 - 32, Page 142 & Table 03 – 33 Page 143 of EIA/EMP report

7.0 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process. The production of liquid steel will be 6 MTPA. In view of larger capacity, it has been contemplated to follow conventional BF (Blast Furnace) - BOF (Basic Oxygen Furnace) - CC (Continuous Casting) and RM (Rolling Mill) route. However, finished products will be different as per the market demand. The plate

mill, structural mill and section mill will be commissioned to produce plates, structural products and different sections.

8.0 The targeted production capacity of the 6 million TPA. The ore for the plant would be mostly procured from iron ore from Bellary / Hospet/ Chitradurga sector and coal & coke from Australia, USA, Canada, China, Indonesia, Venezuela etc. The ore transportation will be done through rail/road and Coal/ coke will be imported and transported to the plant through railway.

9.0 The water requirement of the project is estimated to be about 12930 m³/hr. Government of Karnataka (GoK) has granted permission to draw 4 TMC (12930 m³/hr) of surface water from downstream of river Tungabhadra near Nadvi / Rudrapadam , which is about 45 Kms away from the plant. The raw water required for the project will be met by constructing intake well of suitable capacity.

10.0 The total power requirement for the project is estimated at 650 MW and will be drawn from the KPTCL 400 kV substation located 5 Kms at Kudutini village,

11.0 Baseline environmental studies were conducted during Winter Season. From December 2014 To February 2015. Ambient air quality monitoring has been carried out at 8 locations during Dec 2014 to Feb 2015. The range of measured pollutants in the ambient air for PM10 (33.12 to 73.81 µg/m³), PM2.5 (16.59 to 42.84 µg/m³), SOx (1.68 to 11.49 µg/m³) and NOx (3.29 to 26.12 µg/m³) are observed to be well within the standard limit.

12.0 Ground water quality has been monitored in eight locations in the study area and analysed. pH: 7.45 to 7.98, Total Hardness: 282 to 682 mg/l, Chlorides: 57 to 233. mg/l, Fluoride: 0.48 to 0.91 mg/l. Heavy metals are within the limits. Surface water samples were analysed from eight locations. pH: 7.13 to 8.12; DO: 5.3 to 6.7 mg/l and BOD: 2.0 to 2.8 mg/l. Since, it is a green field project the presence of COD is not reported in surface water.

13.0 Noise levels are in the range of 52.3 to 57.8 dBA for daytime and 51.3 to 55.4 dBA for night time.

14.0 It has been reported that there are no people in the core zone of the project. No R&R is involved. The land was acquired by Karnataka Industrial Area Development Board (KIADB) and handed over to UGFL.

15.0 It has been reported that a total 6302 of TPA of solid waste (Slime from iron ore Beneficiation plant, Dust from waste gas & DE systems, BF slag, BF sludge & flue dust, BOF slag, BOF sludge, Limestone & burnt lime fines, Mill scale, Fly ash, Bottom ash, Refractory debris) will be generated due to the project, out of which 6300 tpy will be used as slag sold to cement plants, sinter feed, construction material, for road making and land fill, cement/brick making. It has been envisaged that an area of approx. 656 ha covered under afforestation and green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

16.0 The Consent to establish / Consent to operate from the State Pollution Control Board will be obtained after obtaining EC from MoEF&CC.

17.0 The Public hearing of the project was held on 4th August.2016 for setting up of 6 MTPA Integrated steel at Kuduthini was conducted by the Additional Deputy Commissioner, Bellary in presence of Environmental officer KSPCB. The issues raised during public hearing are mainly concerned with disparity in compensation packages for acquiring land, cumulative effects of pollution due to various industries in the area.

18.0 The capital cost of the project is Rs. 36,000 Crores and the capital cost for environmental protection measures is proposed as Rs 291 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 37 Crores. The detailed CSR plan has been provided in the EMP in its page No. 243 to 250. The temporary and permanent employment generation from the proposed project will be about 6427 during construction and operation of the plant.

19.0 Greenbelt will be developed 656 Ha which about 33% of the total acquired area is. 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, New Delhi guidelines. Local and native species will be planted with a density of 1600 trees per Hectare. Since it is a green field project sapling plantation is yet to be started

20.0 The proponent has mentioned that there is no court case to the project or related activity.

21.0 EIA Consultant: M/s Mecon Limited

Observations of the committee:

22.0 The Committee observed that the Terms of Reference (ToR) was issued by the Ministry on 17th July 2014; baseline data was collected by the project proponent during December 2014 to February 2015; the public hearing was conducted by the project proponent on 4th August 2016; the project proponent has submitted the application for environmental clearance on 20th January 2017. The proposal was considered twice in the earlier EAC meetings i.e. in March 2017 and May 2017. However, the project proponent did not attend the meeting and informed the Ministry that they are unable to take up the project due to the financial crisis in the Company. After one and a half years, the project proponent requested to relist the proposal.

23.0 The committee after detailed deliberation upon, opined that the validity of Terms of Reference and baseline data has been expired since. The Committee also felt that the baseline scenario in the area proposed for the project might have changed comparing to the period of data collection.

Recommendations of the committee:

24.0 In light of the above, the Committee recommended for rejection of the instant proposal and advised the project proponent to obtain fresh Terms of Reference.

2.28 Proposed enhancement of sponge iron production by utilizing low ash high grade coal & iron ore pellets and to increase the no. of operating days of the plant without any modifications to the existing plant and machinery by M/s. Nirospat Private

Limited at 14A Heavy Industrial Area, Bhilai, Chhattisgarh - [Proposal No. IA/CG/IND/87243/2018; MoEF&CCF.No. IA-J-11011/401/2018-IA.II(I)] – Environmental Clearance under para 7(ii) of EIA Notification, 2006.

1.0 M/s. Nirospat Private Limited has made an application vide online proposal no. IA/CG/IND/87243/2018 dated 1st December, 2018 seeking environmental clearance for the proposed enhancement of sponge iron production by utilizing low ash high grade coal & iron ore pellets and to increase the no. of operating days of the plant without any modifications to the existing plant and machinery at 14A Heavy Industrial Area, Bhilai, Chhattisgarh. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent:

2.0 M/s. Nirospat Pvt. Ltd. Steel Plant at 14 A to C and 15 [p], Heavy Industrial area, Village Hathkhoj, Tehsil Bhilai, District Raipur, Chhattisgarh with 1x 300 TPD & 1x 25 TPD DRI Kilns producing 97,500 TPA of Sponge Iron & 8 MW of Power Generation through Waste Heat Recovery. Following is the chronology of permissions obtained from Chhattisgarh Environment Conservation Board (CECB) pertaining to the aforementioned project:

- Consent to Establish (CTE) obtained from Chhattisgarh Environment Conservation Board (CECB) for establishment of 1x25 TPD DRI kiln vide order No. 2489/TS/W/PNB/ Durg dated 12/07/2001.
- 1st Consent to Operate (CTO) obtained from Chhattisgarh Environment Conservation Board (CECB) for 1x25 TPD DRI kiln vide order No. 2489/TS/ W/PNB/ Durg, dated 12/07/2001
- Consent to Establish obtained from Chhattisgarh Environment Conservation Board (CECB) for establishment of 1x300 TPD DRI kiln vide order No. 752/TS/CECB/2006 dated 15-02-2006.
- 1st Consent to Operate (CTO) obtained from Chhattisgarh Environment Conservation Board (CECB) for 1x300 TPD DRI kiln vide order No. 5293/TS/ CECB/ 2010 Raipur Dated 21.12.2010
- Consent to Establish (CTE) obtained from Chhattisgarh Environment Conservation Board (CECB) for establishment of 8 MW Waste Heat Recovery Power generation vide order No. 1970/TS/CECB/2010 dated 02-07-2010
- 1st CTO has been obtained from CECB for 8 MW Waste Heat Recovery Power generation vide order No. 865/TS/CECB/2013 Raipur, dated 17/05/2013
- Combined CTO has been granted by CECB for 1x25 TPD, 1x300 TPD DRI Kilns along with 8 MW Waste Heat Recovery power generation vide order No. 3910/TS/CECB/2016 dated 07-10-2016 and is valid till 31-05-2019.

- EC issued by the SEIAA vide No 791/SEIAA/CG/EC/ROLLING/Durg/1696 Naya Raipur dated 10-08-2016 for expansion of existing Induction furnace unit with CCM from 30,000 TPA to 90,000 TPA & a Rolling Mill of 90,000 TPA, producer gas –8750 Nm³/hr.
- CTE granted by CEGB vide No. 6580/TS/CEGB/2017 Naya Raipur dated 21-03-2017 for expansion of existing Induction furnace unit with CCM from 30,000 TPA to 90,000 TPA & a Rolling Mill of 90,000 TPA, producer gas – 8750 Nm³/hr.

3.0 Regional Office of MOEF&CC, Nagpur has issued Certified compliance report on earlier EC conditions vide dated 31-07-2017. There were certain observations/partial compliances in the certified compliance report and accordingly PP have submitted a letter to the Regional office of MOEF&CC vide dated 01-10-2018 requesting for issue of closure report on Non-compliances/partial compliances as per report dated 31-07-2017. Closure report has been issued by the Regional office of MOEF&CC vide F. NO. 5-792/2018(ENV)/4456 dated 10th October, 2018.

4.0 Now, it was proposed increase the production of sponge iron from 325 TPD to 400 TPD by utilizing low ash high grade coal & iron ore pellets and to increase the no. of operating days of the plant without any modifications to the existing plant and machinery.

5.0 No change in the plant machinery. Brook Accretion cutting Machine will be provided and which will reduce the plant shutdown period from 65 days to 20 days. Hence the plant can operate for 345 days per annum.

6.0 The following are the salient features of the present proposal of capacity enhancement:

- Existing plant is in operation for 300 days per annum. 15 days shut down period is required to remove the accretion slag. There will be 4 such shutdowns in a year and another 5 days for general maintenance. Thereby the plant has to be shutdown for 65 days per annum.
- Now we propose to use Brook Accretion Cutting machine. This system of de-accretion will reduce the plant shutdown from 15 days to 5 days. Considering 4 shutdowns per annum, the total number of days on which plant is shutdown will reduce to 20 days. Hence the plant can operate for 345 days per annum with this Brook Accretion Cutting machine.
- The present enhancement in sponge iron capacity will be achieved only by utilising Iron ore pellets (instead of lump ore) & higher grade indigenous coal (without any modifications to the existing plant & machinery
- The present proposal will be taken up in the existing plant premises only. No additional land will be involved.
- Now it is proposed to use indigenous coal of higher grade “B” & “C” with low ash content instead of high ash coal of ‘E’ & ‘F’ grades (present practice). This significantly reduces air emissions by 30%.

- Total quantity of raw materials requirement for production of 400 TPD is lesser than that of present production of 325 TPD.
- The air emissions will reduce by around 23% after the present proposal due to usage of low ash higher grade indigenous coal & I/o Pellets.
- Specific water consumption is reduced.
- Less specific consumption of coal as compared to ore.
- Better quality of sponge iron with less fines.
- There will be no increase in wastewater generation due to the present proposal. Existing zero liquid effluent discharge system will be maintained after capacity enhancement also.
- Due to usage of higher grade coal with low ash content, the solid waste dolochar generation will reduce significantly by around 30%. Similarly ESP dust also will reduce significantly due to usage of Pellets and higher grade indigenous coal. Hence there will not be any waste disposal problem after the present proposal.
- After the present proposal the dolochar infact is reducing by 30%. Hence there will not be any dolochar disposal problem after the present proposal.
- The following table shows the raw material requirement for 325 TPD & 380 TPD.

Raw material	Existing Plant (325 TPD sponge)	After present proposal (400 TPD)
Iron ore	552.5 TPD (@1.7T/T)	Nil
Iron Ore Pellets	Nil	580 TPD (@1.45 T/T)
Coal	487.5 TPD	396.2 TPD
Dolomite	13 TPD	16.7 TPD
TOTAL	1053 TPD	992.9 TPD

- Raw material requirement after present proposal is reducing by 5.6%.
- Reduction in specific power consumption.

7.0 The following are the comparison of environmental parameters

Environmental parameter	As per CTE/EC	Due to present proposal	Remarks
Land requirement	20 Acres	20 Acres (No additional land)	No change
Total water requirement	105 KLD	105 KLD	No change
Wastewater	Closed circuit cooling system adopted for cooling water	Closed circuit cooling system adopted for cooling water	No change

	Sanitary waste treated in septic tank followed by subsurface dispersion.	Sanitary waste treated in septic tank followed by subsurface dispersion.	
Dolochar	Dolochar is given to power plant	30% reduction in Dolochar generation and given to power plants.	30% reduction in Dolcohar generation.
Particulate emission load	7.8 Kg/hr	6.0 Kg/hr	23% reduction in particulate emission
Greenbelt	33%	38% (5% will be increased)	5% increase in greenbelt
Solar power generation	Not existing	Will be generated for common areas, lights along road sides	
Energy conservation	Not existing	All lights will be converted to LED	Energy conservation through provision of LED lights.

Observations of the committee:

8.0 The Committee noted that the project proponent has established DRI plant before 2006 and operating with the consent from SPCB. Subsequently, carried an expansion operation of billet plant from 30,000 TPA to 90,000 TPA and rolling mill of 90,000 TPA as Category “B” project and obtained environmental clearance from the SEIAA on 10.8.2016. The committee noted that the No public hearing was conducted during the process of earlier EC as the project is located in the industrial area and exempted from public hearing as per the provisions in EIA Notification applicable at that time. Now, the project proponent has made an application for expansion of sponge iron plant from 325 TPD to 400 TPD under Clause 7(ii) of EIA Notification. The Committee is of the view that the project proponent has adopted piecemeal approach and obtained environmental clearance for expansion from SEIAA as a Category ‘B’ Project. As per the OM dated 28th April, 2018, public hearing is not exempted for projects related to metallurgical industries even if located in the industrial area.

Recommendations of the committee:

In light of the above, the committee is opined that the instant proposal for increase in the production shall required preparation of EIA/EMP and public consultation for consideration. Therefore, the instant proposal is recommended for rejection and advised the project proponent to make application for seeking fresh Terms of Reference.

2.29 Proposed manufacturing of Manganese oxide and Ferro Alloys [Manganese Oxide powder: 1200 TPA; Ferro Manganese M.C./L.C: 120 TPA; Ferro Chrome L.C.:120 TPA; Ferro Titanium: 120 TPA; Ferro Vanadium: 120 TPA; Ferro Molybdenum: 200 TPA; and Aluminum Ingots120 TPA] by Shree Pawan Metal & Minerals at Plot No. C-3 MIDC Industrial Area, Deori, Gondia, Maharashtra [Proposal No. IA/MH/IND/85717/2018; MoEF&CCF.No. IA-J-11011/378/2018-IA-II(I)] – Terms of Reference.

1.0 M/s. Shree Pawan Metal & Minerals made an application vide online proposal no. IA/MH/IND/85717/2018 dated 16th November 2018 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 Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” EIA Notification; 2006. The proposal is appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. Shree Pawan Metal & Minerals proposes to install a new manufacturing unit for Manganese Oxide and Ferro Alloys (Thermite Process).

3.0 The proposed unit will be located at Plot No. C-3 MIDC Industrial Area, Deori, District Gondia Maharashtra.

4.0 The land in possession for the proposed plant is 0.54 Ha. No forest land involved. The entire land has been acquired for the project. Of the total area 0.54 ha (33%) land will be developed as green belt.

5.0 The existing boundary of Navegaon Wildlife Sanctuary is 7.6 kms and proposed boundary of Eco Sensitive Zone of Navegaon Wildlife Sanctuary is 0.2 kms.

6.0 Total project cost is approx Rs. 2.16 Crore. Proposed employment generation from proposed project will be 30 - 40 nos. of direct employment and indirect employment.

7.0 The targeted production capacity is 1200 MTPA Manganese Oxide, 120 MTPA Ferro Manganese M.C./L.C OR, 120 MTPA Ferro Chrome L.C. OR, 120 MTPA Ferro Titanium OR, 120 MTPA Ferro Vanadium OR, 200 MTPA Ferro Molybdenum and 120 MTPA Aluminum Ingots.

8.0 The electricity load of 160 HP will be procured from State Electricity Board.

9.0 Proposed raw materials for project are Manganese Ore, Steam Coal. The requirement would be fulfilled by vendors as well as Open Market. Fuel consumption will be Steam Coal.

10.0 Water Consumption for the proposed project will be 9 KLD and waste water generation will be 5 KLD. About 1.6 KLD domestic waste water will be treated in Packaged Type STP and industrial waste water generated will be treated in settling tank.

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

12.0 Consultant Name: Pollution and Ecology Control Services, Nagpur, Number in QCI List: 119

Observations of the committee

13.0 The committee observed that the layout presented to the committee is devoid of any required information to understand the facilities proposed, PFR not as per the guidelines of the ministry. Further, the location of the project with respect to the National parks and proposed/notified eco-sensitive zones was not clear. The committee advised to submit the revised pre-feasibility report incorporating project specific details and complete layout showing the roads, area for the installation of proposed facilities, parking area, storage area, green belt, etc., and location of the project with respect to the National parks and proposed/notified eco-sensitive zones clearly showing the distance.

Recommendations of the committee:

14.0 In light of the above, the committee recommended for returning the proposal in the present form.

2.30 Proposed manufacturing of Manganese Oxide and Ferro Alloys [1Manganese Oxide powder: 1200 M.T. per annum, 2. Ferro Manganese M.C./L.C:120 M.T. per annum OR 3. Ferro Titanium: 120 M.T. per annum OR 4. Ferro Vanadium: 120 M.T. per annum OR 5. Ferro Molybdenum: 120 M.T. per annum] by M/s. Janakiji Minerals at Plot No. A-2 M.I.D.C. Area Goregaon, Tahsil-Goregaon, District-Gondia, Maharashtra [Proposal No. IA/MH/IND/85630/2018; MoEF&CCF.No. IA-J-11011/377/2018-IA-II(I)] – Terms of Reference.

1.0 **M/s. Janakiji Minerals** made an application vide online proposal no. **IA/MH/IND/85630/2018** dated 16th November 2018 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 Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006. The proposal is appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. Jankiji Minerals proposes to install a new manufacturing unit for Manganese Oxide and Ferro Alloys (Thermite Process). It is proposed to set up the plant for Manganese Oxide and Ferro Alloys.

3.0 The proposed unit will be located at Plot No. A-2 MIDC Industrial Area Goregaon, Tahsil-Goregaon, District Gondia, Maharashtra.

- 4.0 The land in possession for the proposed plant is 0.36Ha. No forestland involved. The entire land has been acquired for the project. Of the total area 0.36ha (33%) land will be developed as green belt.
- 5.0 The existing boundary of Nagzira Wildlife Sanctuary is 10 kms and proposed boundary of Eco Sensitive Zone of Nagzira Wildlife Sanctuary is 2.9 kms.
- 6.0 Total project cost is approx Rs. 1.55 Crore. Proposed employment generation from proposed project will be 30 - 40 nos. of direct employment and indirect employment.
- 7.0 The targeted production capacity is 1200MTPA Manganese Oxide, 120 MTPA Ferro Manganese M.C./L.C OR, 120 MTPA Ferro Titanium OR, 120 MTPA Ferro Vanadium OR, 120 MTPA Ferro Molybdenum.
- 8.0 The electricity load of 160 HP will be procured from State Electricity Board.
- 9.0 Proposed raw materials for project are Manganese Ore, Steam Coal. The requirement would be fulfilled by vendors as well as Open Market. Fuel consumption will be Steam Coal.
- 10.0 Water Consumption for the proposed project will be 9 KLD and waste water generation will be 5 KLD. About 1.6 KLD domestic waste water will be treated in Packaged Type STP and industrial waste water generated will be treated in settling tank.
- 11.0 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 12.0 Consultant Name: Pollution and Ecology Control Services, Nagpur, Number in QCI List: 119

Observations of the committee

13.0 The committee observed that the layout presented to the committee is devoid of any required information to understand the facilities proposed, PFR not as per the guidelines of the ministry. Further, the location of the project with respect to the National parks and proposed/notified eco-sensitive zones was not clear. The committee advised to submit the revised pre-feasibility report incorporating project specific details and complete layout showing the roads, area for the installation of proposed facilities, parking area, storage area, green belt, etc., and location of the project with respect to the National parks and proposed/notified eco-sensitive zones clearing showing the distance.

Recommendations of the committee:

14.0 In light of the above, the committee recommended for returning the proposal in the present form.

2.31 Proposed Unit- Bangur Cement Unit, Capacity Phase - I: Clinker - 4.5 Million TPA, Cement - 4.0 Million TPA & WHRS - 37.5 MWH and Phase - II: Cement - 4.0 Million TPA by M/s. Shree Cement Ltd., at Villages: Bhivgarh, Jawangarh and Ras

- II, Tehsil: Jaitaran, District: Pali (Rajasthan) [Proposal No. IA/RJ/IND/87273/2018; MoEF&CCF.No. IA-J-11011/398/2018-IA.II(D)] – Terms of Reference.

1.0 M/s. Shree Cement Limited made an application vide online proposal no. IA/RJ/IND/87273/2018 dated 1st December, 2018 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 Sl. No. 3(b) Cement Plants under Category “A” EIA Notification; 2006. The proposal is appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. Shree Cement Limited (Unit: Bangur Cement Unit) has proposed Integrated Cement Project with Capacity Phase - I: Clinker - 4.5 Million TPA, Cement - 4.0 Million TPA & WHRS - 37.5 MWH and Phase - II: Cement - 4.0 Million TPA at Villages: Bhivgarh, Jawangarh and Ras - II, Tehsil: Jaitaran, District: Pali (Rajasthan).

3.0 M/s. Shree Cement Limited (Unit: Bangur Cement Unit) has proposed Cement Project with Capacity Phase - I: Clinker - 4.5 Million TPA, Cement - 4.0 Million TPA & WHRS - 37.5 MWH and Phase - II: Cement - 4.0 Million TPA at Villages: Bhivgarh, Jawangarh and Ras - II, Tehsil: Jaitaran, District: Pali (Rajasthan).

4.0 The proposed unit will be located at Villages: Bhivgarh, Jawangarh and Ras - II, Tehsil: Jaitaran, District: Pali, State: Rajasthan.

5.0 The land area purchase/acquired for the proposed plant is 31.47 ha; out of which 21.25 ha is industrial converted and rest 10.22 ha is agricultural land. No forest land is involved. The entire land has been purchased/acquired for the project. Out of the total area, 10.38 ha (33%) will be used for green belt & plantation development.

6.0 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.

7.0 Total project cost is INR 1310 Crores rupees (Phase-I: Rs. 990 crore and Phase-II: 320 crore). Proposed employment generation from proposed project will be 230 direct employments and 900 indirect employments.

8.0 The targeted production capacity Phase - I: Clinker - 4.5 Million TPA, Cement - 4.0 Million TPA & WHRS - 37.5 MWH and Phase - II: Cement - 4.0 Million TPA. The limestone transportation will be done via covered conveyor belt and Mineral Gypsum & Laterite will be transported by Road & Rail. The proposed capacity for different products for new site area is as below:

Units	Proposed Capacity
Phase - I	
Clinker (Million TPA)	4.5

Cement (Million TPA)	4.0
WHRS (MW)	37.5
Phase - II	
Cement (Million TPA)	4.0

9.0 The electricity load of 55.2 MW will be sourced from existing Captive Power Plant of Shree Cement Ltd. and proposed WHRS.

10.0 The raw materials required for the proposed project are limestone; which will be sourced from Nimbeti captive limestone mines; laterite from Bhilwara & Chhitorgarh (Raj.); lead zinc slag from Chittorgarh (Raj) and other nearby sources.; mineral gypsum from Bikaner, Nagaur (Raj) & other sources, imported gypsum from other countries and synthetic gypsum from SCL Units; fly ash will be sourced from STPS, Suratgarh; KTPS Kota; Chabra and other power plants and other nearby sources. Feed stock will be Indian & imported coal and Indian & imported petcock, sourced from Reliance, IOCL, Essar & other Petrochemical Refineries, USA, Swiss, Saudi Arabia etc.

11.0 Water Consumption for the proposed project will be 630 KLD which will be sourced from ground water (125 KLD) and mine pit (505 KLD) and no waste water will be discharged from the cement plant. Domestic waste water (40 KLD) will be treated in STP and treated water will be used for greenbelt development / plantation. No industrial waste water will be generated.

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

13.0 Consultant Name: J.M. EnviroNet Pvt. Ltd, S.No. in QCI List - “91” (as updated on 12th Nov., 2018)

Observations of the committee

14.0 The committee observed that the instant proposal is establishment of the 8.5 MTPA capacity cement plant adjacent to the existing 15 MTPA cement plant of the same group. The proposed plant boundary and existing plant boundary is only **divided** by the railway line and contiguous to each other. The committee opined that the instant proposal involves substantial increase in the production capacity, which requires to be deliberated in detail after due verification in the filed with respect to the impact on the traffic and other environmental features. The committee also desired to submit the details of lime stone reserves of the sourcing mine in order to ensure the sustenance of the supply of the raw material and confining to the proposed mode of transport.

Recommendations of the committee:

15.0 In light of the above, the committee recommended for site visit by the sub-committee of EAC before prescribing the Terms of Reference.

2.32 Existing Low Ash Metallurgical Coke - 84640MT/Annum and Proposed Capacity of Silico Manganese Alloy (Ferro Alloy)- 44640MT/Annum ha by M/s. Saurashtra

Fuels Limited at Survey No. 164, 165, 166/1,166/2, 167,168, 170, 171, 172, 219/2, 269 Part, 37/1, 38, 39, 40/2, 44, 45, 42, 43, 50 Baraya – Patri Road, Village: Lakhapar, Taluka: Mundra, Dist: Kutch. [Proposal No. IA/GJ/IND/87299/2018; MoEF&CCF.No. IA-J-11011/399/2018-IA.II(I)] – Terms of Reference.

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The proposal may be considered subject to satisfactory explanation of the reasons of absence by the applicant

2.33 Mineral beneficiation of M/s. Vedanta Washery and Logistic Solutions Private Limited located at village Kunkuni, Tehsil Kharsia, District Raigarh Chhattisgarh (1.2 MTPA iron ore and iron ore fines beneficiation unit) - [Online Proposal No. IA/CG/MIN/25101/2014; MoEF&CC F. No. J-11015/346/2014-IA.II(M)] – Validity extension of Terms of Reference.

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The proposal may be considered subject to satisfactory explanation of the reasons of absence by the applicant

2.34 Proposed Expansion of existing Steel Plant by installation of Sponge Iron Plant with 2x200 TPD DRI Kilns, 4x15 T Induction Furnaces, 400 TPD Rolling Mill & 8 MW capacity WHRB based Captive Power Plant located at Jamuria, MouzaIkra, Jamuria Industrial Estate, Dist. Burdwan, West Bengal by M/s Calstar Sponge Limited – [Online Proposal No. IA/WB/IND/77147/2018; MoEF&CCF.No. J-11011/655/2009-IA.II(I)] –Terms of Reference Reconsideration.

1.0 M/sCalstar Sponge Limitedmade application vide online proposalno.IA/WB/IND/77147/2018dated 30thAugust 2018 along with the application in prescribedformat (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIAsstudy as per the EIA Notification, 2006 for the project mentioned above. The proposed projectactivity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category“ A ” EIA Notification; 2006 and appraised at the Central Level.

Details submitted by the project proponent:

2.0 M/s Calstar Sponge Ltd. proposes to expand existing manufacturing unit by installationof Sponge Iron Plant with 2x200 TPD DRI Kilns, 4x15 T Induction Furnaces, 400 TPD RollingMill & 8 MW capacity WHRB based Captive Power Plant. It is proposed to set up the plant forproduction of 1,20,000 TPA Sponge Iron, 1,80,000 TPA liquid steel (1,76,500 TPA Billets),1,20,000 TPA (400 TPD) TMT Bars and 8 MW power from WHRB based Captive Power Plant.

3.0 The existing project was accorded environmental clearance by State Level Environment Impact Assessment Authority (SEIAA), West Bengal vide Memo. No. EN/2098/T-II-1/045/2009 dated 7th August, 2009 and Environmental Clearance from State Level Environment Impact Assessment Authority (SEIAA), West Bengal vide Memo. No. EN/332/T-II-1/045/2009 dated 3rd February, 2010 and Environmental Clearance from Ministry of Environment & Forests,

Govt. of India vide F. No. J-11011 / 655 / 2009- IA II (I) dated 20.05.2011. Consent to Operate was accorded by West Bengal State Pollution Control Board vide Memo No. 895-WPBA/Red(Bwn)/Cont(595)/08(Part-II) dated 07.07.2017 having validity upto 30.11.2017. This CTO was renewed vide Memo. No. 1974/WPBA/Red (Bwn)/ Cont (595)/08 (Part-II) dated 30.11.2017. Validity of CTO is up to 31.07.2022.

4.0 The proposed unit is located at J.L. No. – 38, Jamuria, Mouza – Ikra, Jamuria Industrial Estate, P.S. – Jamuria, Dist. Paschim Burdwan, West Bengal.

5.0 The proposed expansion project will be installed within the existing plant premises occupying total land area of 7.81 hectares (19.29 acres). No forest land involved. The entire land has been acquired for the project.

6.0 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.

7.0 Total project cost is approx. Rs. 90 Crores. Proposed employment generation from proposed project will be 220 in total in the operational phase.

8.0 The targeted production capacity of the proposed Sponge Iron Plant with 2x200 TPD DRI Kilns is 1,20,000 TPA Sponge Iron, 4x15 T Induction Furnaces (with matching LRF & CCM) - 1,80,000 TPA liquid steel (1,76,500 TPA Billets), Rolling Mill – 1,20,000 TPA (400 TPD) TMT Bars and 8 MW capacity WHRB based Captive Power Plant. The ore transportation will be done through Rail & Road. The existing as well as proposed capacity for different products are as below:

Unit	Existing Unit under Operation as per NOC dated 21.02.2007	Units under implementation / to be Implemented		Proposed Units Capacity	Total Units Capacity	Product
		As per EC obtained from SEIAA, West Bengal dated 07.08.2009 & 03.02.2010	As per EC obtained from MoEF&CC, New Delhi dated 20.05.2011			
Sponge Iron Plant	2x100 TPD (72,000 TPA)	-	2x100 TPD (60,000 TPA) (Under Construction)	2x200 TPD (1,20,000 TPA)	4x100 TPD + 2x200 TPD (2,52,000 TPA)	Sponge Iron

Unit	Existing Unit under Operation as per NOC dated 21.02.2007	Units under implementation / to be Implemented		Proposed Units Capacity	Total Units Capacity	Product
		As per EC obtained from SEIAA, West Bengal dated 07.08.2009 & 03.02.2010	As per EC obtained from MoEF&CC, New Delhi dated 20.05.2011			
SMS Induction Furnaces (with matching LRF & CCM)	-	1x8 T (24,000 TPA)	-	4x15 T (1,80,000 TPA)	1x8 T + 4x15 T (2,04,000 TPA)	Liquid Steel
Rolling Mill	-	240 TPD (72,000 TPA)	-	400 TPD (1,20,000 TPA)	640 TPD (1,92,000 TPA)	Rods, Bars, Light Structural
Ferro Alloy Plant	-	-	2 x 9 MVA Submerged Arc Furnaces (30,000 TPA)	-	2 x 9 MVA Submerged Arc Furnaces (30,000 TPA)	Ferro Manganese & Silico Manganese
Captive Power Plant	-	9 MW (4 MW WHRB based & 5 MW AFBC based)	8 MW (4 MW WHRB based & 4 MW AFBC based)	8 MW (WHRB based)	25 MW (16 MW WHRB based & 9 MW AFBC based)	Power

9.0 The electricity load of 31.5 MW which will be met from the proposed Captive Power Plant and the rest would be sourced from the State grid.

10.0 Proposed raw material and fuel requirement for major products of the project are as follows:

Sl. No.	Raw Materials	Annual Requirement (In TPA)	Source
SPONGE IRON PLANT (2x200 TPD)			
1.	Iron Ore	2,30,000	Orissa
2.	Imported Coal	1,87,200	South Africa
3.	Lime Stone	4,608	Market
INDUCTION FURNACES (4x15 T)			
1.	Sponge Iron	1,60,000	In House DRI Plant
2.	Scraps	26,000	In House Plant & Market
3.	Pig Iron	30,000	Market
4.	Ferro Alloys	1550	In House Plant

11.0 Water Consumption for the proposed project will be 225 kld (Industrial daily make-up water – 215 KLD, domestic water – 10 KLD). Domestic waste water will be treated in septic tank-soak pit system and industrial waste water generated will be treated in water treatment facility and reused completely.

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

13.0 Consultant Details: Envirotech East Pvt. Ltd., NABET Accreditation as per QCI NABET list of 5th September, 2018: Sl. No. 54, Page No.: 53, Sector No. 8, Metallurgical Industries (Ferrous & Non-ferrous) - both Primary & Secondary, Category-A

14.0 The proposal was considered in the 36th meeting of Expert Appraisal Committee held during 9th – 10th October, 2018. The Committee noted that M/s Calstar Sponge Limited has revised the proposed unit configurations of induction furnaces which are different from the online application submitted to the Ministry. The Committee also noted that existing 2x100 TPD sponge iron units have been installed based on the NOC dated 21/02/2007 and no prior environmental clearance have been obtained from the Competent Authority concerned.

15.0 After detailed deliberations, the Committee deferred the consideration of the proposal and asked the project proponent to submit revised unit configuration details of induction furnaces along with revised Form-I and pre-feasibility report.

16.0 Accordingly, the PP submitted reply to ADS.

Observations of the committee:

17.0 The proposal was discussed in detail by the Committee. To start with, the Committee deliberated upon the issue related to past environmental clearances and NOCs obtained by the project proponent. It was found out that the project proponent had initially made an application for NOC to the State Pollution Control Board on 10.5.2006 and, consequently, the NOC was granted to them on 21.2.2007. However, in the meantime, the EIA Notification, 2006 was

notified by MOEF on 14.9.2006 and a subsequent circular was issued on 21.11.2006. As per the circular dated 21.11.2006, the project proponent require to obtain the environmental clearances from relevant authority by 30th June 2007 as per the categorization of project mentioned in the EIA Notification. In the present case, this project proponent obtained the environmental clearance from the SEIAA as it was a Category 'B' project, on 7.8.2009 and 3.2.2010. Thus, the project proponent failed to obtain the environmental clearance before the stipulated date of 30th June 2007. However, the project proponent applied for environmental clearance on 3rd June 2009 and obtained clearances on 7.8.2009 and 3.2.2010.

18.0 Thus the project proponent did not apply timely for seeking environmental clearance as per the circular dated 21st November 2006. In this context, the following issues also emerged for consideration:

- i) The project proponent did apply to the authority for seeking environmental clearance although they applied late.
- ii) The regulatory authority has taken into cognizance the existing operations and have actually granted environmental clearance to them on 7.8.2009 and 3.2.2010 covering all the existing units including 2x100 TPD DRA kiln and 1x8 ton induction furnace. It is assumed that while granting this environmental clearance, the SEIAA must have taken cognizance of the MOEF circular dated 21.11.2006.
- iii) The project proponent made an application of MOEF for further expansion on 9th September 2010. The MOEF after following the due process, issued the environmental clearance on 20.5.2011. Thus, environmental clearance has taken into cognizance of the earlier existing units and the NOCs issued by State Authorities in West Bengal.

19.0 In view of the above, it is notice that the project proponent has been approaching various Regulatory Authorities for environmental clearances from time to time as well indicating that the project proponent had intended to obtain environmental clearances and therefore, the Committee after deliberations as above, arrived at the view to recommend that the Ministry may consider to issuance of ToRs along with following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at **Annexure I read with additional ToRs at Annexure-2:**

- i) The project proponent shall plan 100% utilization of solid waste and the action plan shall be submitted alongwith EIA/EMP report.
- ii) The project proponent shall envisage 100 hot charging and the details shall furnish alongwith the EIA/EMP report.
- iii) The project proponent shall also ensure that no reheating furnace shall be proposed as a standby.
- iv) The project proponent shall explore the possibility of optimizing the configuration of induction furnaces proposed.

- v) The project proponent shall design the pollution control equipment to achieve the particulate emission less than 30mg/Nm³.
- vi) The project proponent shall plan for extraction from surface sources but not from the ground water extraction.
- vii) Public Hearing to be conducted by the concerned State Pollution Control Board.
- viii) The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- ix) Detailed Road traffic study for inside and outside the plant shall be conducted and furnished in the EIA/EMP report
- x) Certificate compliance of earlier ECs from the Regional officer of the MoEF&CC shall be submitted along with EIA/EMP

2.35 Proposed expansion of Integrated Steel Plant for ultimate production of 1.8 MTPA pellets, 0.85 MTPA Sinter, 0.3 MTPA Coke, 36000 Nm³/hour producer gas, 0.89 MTPA sponge iron, 0.6 MTPA hot metal / pig iron, 1.41 MTPA billets, 1.0 MTPA long steel products, 0.1 MTPA, DI pipe, 1.2 MTPA cement grinding unit and 136 MW captive power plant, 0.1 MTPA Ferro Alloys at Village Jamuria, P.O. Bahadurpur, District Burdwan, West Bengal by M/s ShyamSel and Power Ltd – [Online Proposal No. IA/WB/IND/80835/2018; MoEF&CC F. No. J-11011/887/2007-IA.II(I)] – Amendment in Terms of Reference.

1.0 M/s ShyamSel and Power Limited made an application vide online proposal No. **IA/WB/IND/80835/2018** dated 17/11/2018 seeking amendments in standard Terms of reference granted to the above mentioned project vide letter no. J-11011/887/2007-IA.II(I) dated 1/11/2018 for exemption from conduct of fresh public hearing.

Details submitted by the project proponent:

2.0 The Chronology of the events are as follows:

S.N	Particulars	Details
1.	Submission of fresh TOR Application to MoEF&CC, New Delhi	5 th October, 2013
2.	TOR Presentation in the 14 th EAC Meeting	19 th December, 2013
3.	Issuance of ToR Letter by MoEF&CC (J-11011/327/2013-IA.II (I))	17 th February, 2014
4.	Public Hearing conducted	14 th October, 2015
5.	Extension of validity of ToR for 1 year upto 16-02-2018	MoEF&CC Letter dated 28 th April, 2017
6	Online EC Application with Final EIA Report	7 th September, 2017

MoM of 2nd meeting of the Re-constituted EAC (Industry-I) held during 10th to 12th December, 2018

S.N	Particulars	Details
7	Technical Presentation for EC (1 st Time) in the 24 TH EAC Meeting	14 th November, 2017
9.	Again Online EC Application with revised Final EIA Report, based on queries raised by EAC Members in the 24 th EAC Meeting	23 rd June, 2018
10.	Technical Presentation for EC (2nd Time) in the 33rd EAC Meeting. The proposal was rejected as “The configuration and facilities envisaged in the Terms of Reference and facilities for which EC sought were not matching”.	10th July, 2018
11.	Amendment of Environmental Clearance 2nd Time. Recommendations of the Committee: The aforesaid proposal of M/s Shyam SEL Ltd does not qualify for amendment in environmental clearance and project proponent should seek fresh TOR.	18th September, 2018
12.	Submission of fresh online TOR Application in MoEF&CC website.	29th September, 2018
13.	Standard TOR issued by MoEF&CC. Requirement of Public Consultation is mentioned in the Standard TOR.	1st November, 2018
14.	Accordingly, online submission of Application for amendment of standard TOR with the request to consider Earlier Public Consultation held on 14-10-2015, other TOR conditions remaining same.	17th November, 2018

3.0 The details of units for which ToR was granted on 1.11.2018:

Sl. No.	Name of Unit	Total Production Capacity	Remarks
1	Pellet Plant	0.6 + 1.2 = 1.8 MTPA (Iron Ore Pellets)	No Amendment Required
2	Sinter Plant	0.85 MTPA (Sinter)	
3	Coke Oven	0.3 MTPA (Coke)	
4	Producer Gas Plant	36000 Nm ³ /Hour	
5	DRI Plant	0.4248 + 0.462 = 0.89 MTPA (Sponge Iron)	
6	Blast Furnace	0.6 MTPA (Hot metal / Pig Iron)	
7	SMS	0.6066 + 0.5082 = 1.11 MTPA (Steel)	
8	Rolling Mill	0.3 + 0.7 = 1.0 MTPA (Long Products)	
9	Ductile Iron Pipe Plant	0.1 MTPA (DI Pipe)	
10	Cement Grinding Unit	1.2 MTPA (Cement)	

Sl. No.	Name of Unit	Total Production Capacity	Remarks
11	Captive Power Plant	(48 WHRB + 43 CFBC + 45 WHRB = 136 MW)	
12	Ferro Alloy Plant	0.1 MTPA (Ferroalloys)	

4.0 Comparison of the project scenario w.r.t to the Public consultation is given below:

Sl	Name of Unit	Total Capacity in TOR dt 1-11-2018	Already Considered in previous EIA Reports and Public Hearings	Remarks
1	Pellet Plant	1.8 MTPA	1.8 MTPA	No Change
2	Sinter Plant	0.85 MTPA	0.80 MTPA	Slight increase
3	Coke Oven	0.3 MTPA	0.25 MTPA	Slight Increase by 0.05 MTPA
4	Producer Gas Plant	36000 Nm ³ /Hour	75000 Nm ³ /Hour	Significant Decrease
5	DRI Plant	0.89 MTPA	0.4248 MTPA	Increase by 0.4652 MTPA
6	Blast Furnace	0.6 MTPA	0.87 MTPA	Significant Decrease by 0.27 MTPA
7	SMS	1.11 MTPA	1.04 MTPA	Slight Increase by 0.07 MTPA
8	Rolling Mill	1.0 MTPA	0.35 MTPA	Increase by 0.65 MTPA (no RHF, direct charging)
9	Ductile Iron Pipe Plant	0.1 MTPA	0.1 MTPA	No Change
10	Cement Grinding Unit	1.2 MTPA	1.2 MTPA	No change
11	Captive Power Plant	136 MW 93 MW-WHRB 43 MW-FBC	500 MW 75 MW-WHRB 425 MW-FBC	Significant Decrease, 382 MW coal based power plant
12	Ferro Alloy Plant	0.1 MTPA	0.1 MTPA	No Change

5.0 JUSTIFICATION FOR CONSIDERATION OF EARLIER PUBLIC CONSULTATION HELD ON 14-10-2015:

- Capacity of coal based power plant reduced from 425 MW to 43 MW (decreased by 382 MW). Accordingly, coal consumption gets reduced by approx 2.16 MTPA.
- Capacity of Blast Furnace reduced. DRI plant added. Coal consumption is increased from 0.48 to 0.5544 MTPA.
- Overall coal consumption shall be reduced resulting in reduced pollution load (of PM, SO₂, NO_x, CO, CO₂& Fly ash - Details of the impacts shall be provided in EIA Report).
- Rolling Mill based on direct charging of hot Billets. No Reheating Furnace.
- Capacity of Producer Gas Plant reduced (resulting in reduced coal consumption and low pollution load)
- DRI dolochar shall be 100% consumed in the Power Plant. Other iron bearing dust and mill scales shall be consumed in Sinter Plant
- No change in land area. ZLD concept to be followed.

Observations of the Committee:

6.0 During detailed deliberations, the committee noted the following;

- I. As presented by the Project Proponent, the revised configuration would lead to reduction in pollution load, energy requirement, water consumption, quantity of raw material and overall project cost (as compared to the configuration on the basis of which an EIA was prepared earlier and presented before the public and the committee.)
- II. The appraisal of ToR accorded vide letter no. J-11011/327/2013-IA.II (I) dated 17/02/2014 for grant of environmental clearance was considered by the Expert Appraisal Committee in its meeting held during 14/11/2017 and 10/07/2018 wherein, the Committee rejected the proposal on the ground that configuration and facilities envisaged in the Terms of Reference and facilities for which EC sought were not matching.
- III. M/s. Shyam Sel and Power Limited vide online proposal no. IA/WB/IND/6700/2008 dated 24/08/2018 sought amendment in the (i) environmental clearance accorded by Ministry vide letter no. J-11011/887/2007-IA.II(I) dated 18/03/2009 & 19/06/2018; and (ii) environmental clearance accorded by SEIAA – West Bengal vide letter no. EN/702/T-II-I/141/2007 dated 26/03/2008. This proposal was considered in the 35th meeting of Expert Appraisal Committee [EAC] (Industry-I) held on 18-19th September, 2018 wherein the Committee recommended that the instant proposal does not qualify for amendment in environmental clearance and project proponent should seek fresh ToR.
- IV. M/s. Shyam Sel and Power Limited submitted fresh ToR application on 1/11/2018. Subsequently, standard Terms of reference was granted to the above mentioned project vide letter no. J-11011/887/2007-IA.II(I) dated 1/11/2018 with Public Consultation.

- V. Now, the PP had applied for seeking amendment in ToRs for exemption from Public Hearing on the ground that (i) previous Public Hearing was held on 14.10.2015 (3years and 2months ago) with respect to the ToR accorded vide letter no. J-11011/327/2013-IA.II (I) dated 17/02/2014 and also on the ground that the (ii) pollution load etc.,is now getting reduced as mentioned in para 1 above mainly due to reduction in the capacity of power plant 500 MW to 136 MW and reduction in the capacity in producer gas plant 75000 Nm³ / hr to 36000 Nm³/hr.
- VI. The PP also committed during the presentations that despite reduction in project cost, the financial provision of CER (Rs36.75 Crore)as committed during the public consultation held on 14/10/2015 would be retained at the same level.

Recommendations of the committee:

7.0 The above mentioned issues were deliberated upon by the committee; the committee arrived at the opinion that as per the extant rules and provisions in vogue the committee did not recommend for the exemption of the Public Hearing.

ANNEXURE –I

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 (Quantative) 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.

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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

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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.

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.

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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.

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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.

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INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE

1. Details of proposed layout clearly demarcating various units within the plant.
2. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
3. Details on design and manufacturing process for all the units.
4. 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.
5. Details on requirement of raw materials, its source and storage at the plant.
6. 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).
7. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
8. Details on toxic content (TCLP), composition and end use of chrome slag. Details on the recovery of the Ferro chrome from the slag and its proper disposal.

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METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)

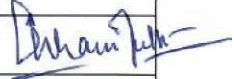


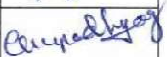
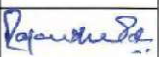




1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Emission from sulphuric acid plant and sulphur muck management.
3. Details on installation of Continuous Emission Monitoring System with 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, within 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 OF EAC (I) IN 2nd MEETING OF EAC (INDUSTRY-I)
HELD ON 10th to 12th December, 2018

S. No	Name and Address	Position	Attendance			Signature
			10 th	11 th	12 th	
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P	P	
Members						
2.	Dr. Tapliyal Representative of Central Pulp and Paper Research Institute	Member	A	P	P	
3.	Dr. Siddarth Singh, Representative of Indian Meteorological Department	Member	A	P	A	
4.	Dr. G. Bhaskar Raju	Member	P	P	A	
5.	Dr. Jagdish Kishwan, IFS (Retd.)	Member	P	P	P	
6.	Dr. G.V. Subramanyam	Member	P	P	P	
7.	Shri Ashok Upadhyaya	Member	A	P	P	
8.	Shri R.P. Sharma	Member	P	P	P	
9.	Shri Sanjay Deshmukh	Member	P	P	A	
10.	Prof. S.K. Singh	Member	P	P	P	
11.	Dr. R. Gopichandran	Member	P	P	P	
12.	Shri Jagannath Rao Avasarala	Member	P	P	P	
13	Shri J.S. Kamyotra	Member	P	P	P	
14.	Shri Sharath Kumar Pallerla, Scientist 'F' / Director, MoEF&CC	Member Secretary	P	P	P	
15.	Shri Sundar Ramanathan, Scientist 'D', MoEF&CC	Joint Director	P	P	P	
16.	Shri RajasekharRatti, Scientist 'C', MoEF&CC	Dy. Director	P	P	P	