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

SUMMARY RECORD OF THE THIRTY SECOND (32ND) MEETING OF EXPERT APPRAISAL COMMITTEE HELD DURING 11TH TO 13TH JUNE 2018 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The thirty second meeting of the 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 **11th to 13th June 2018** in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

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

32.2 Confirmation of the minutes of the 31st Meeting

The minutes of 31st meeting held during **7th to 9th May, 2018** as circulated were confirmed with following corrections:

32.3. Expansion cum modification of existing Integrated Steel Plant for 0.85 MTPA with 184 MW CPP located at Jamuria Industrial Estate, Village Ikra, P.O Mondalpur, Tehsil Jamuria, District Bhurdhwan, West Bengal by **M/s Super Smelter Ltd.** [Online Proposal No. **IA/WB/IND/57744/2016;** MoEFCC File No. F. No-J-11011/86/2008-IA. II(I)] **– Environmental Clearance.**

1.0 **M/s Super Smelter Limited** made online application vide proposal no. **IA/WB/IND/57744/2016**, dated **17th January 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' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level as Category "A".

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

2.0 The proposed Modification cum Expansion project of M/s Super Smelters Limited is located in village-Ikra, PO-Mondalpur, Jamuria Industrial Estate, District-Burdwan(W) in the state of West Bengal was initially received in the ministry on 23rd July, 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 30th August, 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of environment and Forests and prescribed ToR to the project on 17th November, 2016.

3.0 The project of M/s Super Smelters Ltd, located in village-Ikra, Tehsil-Jamuria, District-Burdwan(W) is for modification cum expansion of its existing project to achieve 0.85 MTPA steel

for which EC had already been accorded. However, there will be additional sponge iron for sale. The existing project was accorded environmental clearance vide J-11011/86/2008-IA II(I), 1st August 2008. The status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide lr No-102-278/EPE/195, dated 17.01.2018. There are no non-compliances reported by Regional Officer. The proposed capacity for different products for expansion and modification are as below:

Plant / Equipment / Facility	**Existing Configuration**	**Proposed Configuration**	**Final configuration after expansion**	**Remarks if any**
I/O Beneficiation Plant	0	2 MTPA	2 MTPA	Used in pellet plant
Coal Washery	0.9 MTPA	-	0.9 MTPA	
Coke oven	0.5 MTPA	-	0.5 MTPA	
Pellet Plant	1 X 0.6 MTPA	1 X 0.6 MTPA	2 X 0.6 MTPA	DRI Kilns
Sinter plant	2X35 m2	1 x 60 m2 + 1 x 15 m2	1 x 60 m2 + 1 x 15 m2	Existing to be modified to proposed
Oxygen Plant	120 TPD	0	120TPD	
Lime Plant	1200 TPD	0	1200 TPD	
DRI Kilns	2x100 TPD +3 x300 TPD	2 x 500 TPD	2x100 TPD +3 x300 TPD +2 x 500 TPD	
MBF		1 x 380 m3 + 1 x 65 m3	1 x 380 m3 + 1 x 65 m3	
IF	2 X 25 T	4 X20 T +2 X25 T	4 X20 T+ 4 X 24 T	
SAF	2 x 9 + 4 x 9 MVA	-	2 x 9 + 4 x 9 MVA	
Rolling Mill	0.3 + 0.3 + 0.25 MTPA	-	0.3 + 0.3 + 0.25 MTPA	0.3 MTPA (MS), 0.3 MTPA (AS), 0.25 MTPA (SS)
CPP WHRB	22 MW	20, CO & BF gas -9 MW	51 MW	
CPP	2 x 62.5 MW	8 MW	133 MW	

4.0 The total land required for the project is 116.72 ha has been acquired for the project. No agricultural land, no grazing land, no forest land is involved. No river passes through the project area. 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 flat and reported to lie between 23^0 40'38.30" to 23^0 41'42.17" N Latitude and 87^0 5' 24.13" to 87^0 6' 14.90" E Longitude in survey of India topo sheet no F45D2 at an elevation of 39-40m AMSL. The ground water table reported to range between

4.0 and 5.0m below the land surface during post-monsoon season and 5.5 and 10.5m 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 about 3,000 ha m. Further, the stage of ground water development is reported to be 16% & 41% in core and buffer zone respectively and thereby these are designated as safe area.

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 website and local DFO reporting presence of no schedule-I fauna in the study area.

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. **Shown below**

8.0 The targeted production capacity of the total project is 0.85 MTPA steel. The Iron ore for the plant would be procured from Iron ore mines of Odisha and Jharkhand. The ore transportation will be done through rail and road fully covered. The details of raw material / fuel requirement are given below:

	Raw Material / Fuel	Quantity per Annum	Unit	Mode of Transport	Source (incase of Import, please specify country and Name of the port from which Raw Material / Fuel is received)	Distance of Source from Project Site (in Kilo meters) (In case of import, distance from the port from which the raw material / fuel is received	Type of Linkage (Linkage / Fuel Supply Agreement / e-auction /MoU / LOA / Captive / Open market / Others)
i	Iron ore micro fines	20,40,000	TPA	Rail	Barbil, Odisha	250 km	MOU
ii	Sized I/o fines	6,50,000	TPA	Rail	Barbil, Odisha	250 km	MOU
iii	Non-coking Coal	21,13,000	TPA	Rail	Raniganj, West Bengal	21 km	e-auction
iv	Imported Coal(coking)	715000	TPA	Ship	South Africa & Indonesia	Haldia Port - 209 km	MOU
v	Lime stone/Dolomite	2,40,000	TPA	Rail	Sundergarh, Odisha	360 km	MOU
vi	Mn ore	70,000	TPA	Road	Barbil, Odisha	219 km	MOU
vii	Chromite Ore	1,40,000	TPA	Road	Sukinda, Odisha	323 km	MOU
viii	Quartz	23500	TPA	Road	Jharkhand	95 km	MOU
ix	LDO / HFO	1500	KL	Road	Local Purchase	35 km	MOU

9.0 The water requirement of the project is estimated as 12,351 m^3/day and total is fresh water requirement which will be obtained from Ajay river through ADDA supply

10.0 The power requirement of the project on full load running is estimated to be about 175 MW, out of which 167 MW is own generation after power plant internal consumption of 17 MW. No external power drawl will be required; however, system will remain connected with grid.

11.0 Base line 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 data submitted indicated PM_{10} (58.4 µg/m^3 to 80.4 µg/m^3), $PM_{2.5}$ (27.4 µg/m^3 to 38.6 µg/m^3), SO_2 (20.9 to 33.6 µg/m^3), NOx (13.7 to 28.6 µg/m^3). The result of the modelling study indicates that the maximum increase of GLC for the proposed project is 1.37 µg/m^3 with respect to PM_{10} and 1.228 µg/m^3 with respect to $PM_{2.5}$ and 1.56 µg/m^3 with respect to SO_2.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 6.53 to 7.12. Total Hardness: 128 to 260 mg/l, chlorides: 61.2 to 88.92 mg/l, Fluoride: 0.28 to 0.42 mg/l. Heavy metals are within limit. Surface water samples were analysed from 8 locations. pH: 6.8 to 8.1. DO: 4.6 to 8.4 mg/l and BOD: 2 to 3mg/l.

13.0 Noise levels are in the range of 41.6 to 52.6 dB(A) for daytime and 30.2 to 49.3 dB(A) 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.

15.0 It has been reported that a total a total 21,10,921 TPA of waste will be generated due to the project, out of which 8,67,944 TPA will be used in the process and fly ash brick making and 2,27,720 TPA will be supplied to cement plants and balanced 10,15,257 TPA will be filled in Open Cast Pit of Eastern Coal Field Ltd. It has been envisaged that an area of 38.5 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. The details of solid waste generation and disposal is given below:

Sl	Item	Quantity per Annum	Unit	Mode of Disposal
1	BF slag	1,37,400	TPA	To be Granulated & sold to cement plant
2	BF (Dust + sludge)	11,450	TPA	To be recycled to BF and sinter plant to utilize residual C & Fe.
3	Iron ore tailings	7,51,190	TPA	To be Filled in Open Cast Pit (OCP) of Eastern Coalfields Limited (ECL)
4	Coal washery middling	3,42,000	TPA	To be used as Fuel along with Dolochar and Fresh Coal in FBC
5	Coal washery rejects	63,000	TPA	
6	CPP Fly ash from Coal Middling, Rejects, Dolochar & Fresh Coal	3,24,000	TPA	Brick, sale to cement plant
7	CPP Bottom ash	63,000	TPA	Cement plant, Land fill

8	Fe-Mn slag	26,694	TPA	Used in Si-Mn production
9	Si-Mn Slag	27,320	TPA	To be sold to cement plant for production of alkali activated cement + civil work for PCC
10	Fe-Cr slag	54,067	TPA	Refractory material can be used in road construction after TCLP test.
11	IF slag	85,000	TPA	River sand substitute, land fill
12	Dolchar	1,00,800	TPA	Used in FBC for Power generation
13	Mill Accretion	1,25,000	TPA	Road Making & Land fill
14	Dust & Scrap	-		To be fully consumed in Plant

16.0 It has been reported that the Consent to operate from the WB State Pollution Control Board obtained vide Lr. No 205-as-co-s/11/0010, dated 04.08.2016, and valid up to 31.01.2019.

17.0 The Public hearing of the project was held on 30.06.2017 in Municipality Hall of Jamuria under the chairmanship of Sri Kaushik Mukherjee, W.B.C.S (Exe), Dy. Magistrate & Dy. Collector and O.C.J.M, Paschim Bardhhaman for production of 0.85 MTPA steel & 184 MW power Plant under modification cum expansion project of Super Smelters ltd. The issues raised during the hearing include measures taken to control air pollution; Measures taken for tree plantation both inside and outside the premises; contribute to local schools and roads; Providing job to local youth; measures taken towards "Swasthya mission" and "Nirmal Bangala Abhijan"; Bore well water not be used for plant; Health check-up camp to be organised in locality. The issues raised during the public hearing along with commitments, time bound action plan and budget allocation is given below:

Points raised by Public	Commitment of PP	Budget Allocated	Action plan with date
Control air pollution	On line stack monitoring and results being sent to CPCB regularly.	9150 lacs	Continuous
Green Belt	In last 3 to 4 years 8,000 saplings have been planted both within and outside premises.	180 lacs	Continuous
Management to contribute to local schools and roads	Necessary CSR programs will be conducted in future for benefit of local people.	For roads 200 lacs and for education 30 lacs	During Construction period
Provide job to local youth	Industry provides skilled training program, which can be availed by local people.	25 lacs to be spent on training head	During Construction period
measures taken for "Swasthya mission" & "Nirmal Bangala Abhijan"	Necessary CSR programs are being conducted for benefit of local people.	80lacs proposed for management of MSW	During Construction period
Bore well water not to be used for plant	Total requirement of water to be met from Ajay river & municipality supply, RWH measures are being adopted.		Continuous

Health check-up camp to be organised in locality	We are already providing health check-up facilities to our employees, we would look into providing health check-up facilities to locality also.	2 ambulances will be made available to serve local people costing 30 lacs.	Continuous

18.0 An amount of 700 Lakhs (0.25 %of Project cost) has been earmarked for Corporate Environment Responsibility based on public hearing issues.

Item	**IstYr (in lacs)**	**2nd Yr (in lacs)**	**3rd Yr (in lacs)**	**4th Yr (in lacs)**	**5th Yr (in lacs)**	**Total (in lakhs)**
Refreshers course to technical persons	-	-	12.5	12.5	-	25.0
Development of water shed and renovation of water bodies	60.0	60.0	60.0	60.0	60.0	300.0
Strengthening of approach roads	-	100	100	-	-	200.00
Adoptation of primary schools	6.0	6.0	6.0	6.0	6.0	30.00
Donation of Ambulance to Charitable Trusts	15.0	-	15.0	-	-	30.00
Swatch Bharat Mission	30.0	30.0	-	-	20.0	80.00
Training and Distribution of hybrid seeds and organic fertilizers	10.0	10.0	5.0	5.0	5.0	35.00
Total - 700 lakhs						

19.0 The capital cost of the project is Rs 2,800 Crores and capital cost for environment protection measures is proposed as Rs 10,890 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 481 Lakhs. The details of CER plan has been provided in the EMP in its page No 235. The employment generation from the modification cum expansion project is about 2,000. The details of capital and recurring cost of EMP is as given below:

EMP Measures	Capital cost in Rs lakhs	Annual operating cost in Rs Lakhs
Air pollution control	9,150	150
Waste water management	950	55
Solid waste management	150	35
Environmental monitoring	240	65
Occupational health	170	56
Safety & Disaster Management	50	35
Green Belt Development.	180	85
Total	10,890	481

20.0 Greenbelt will be developed in 38.5 ha which is about 33% of the total acquired area. A 100m wide green belt consisting of at least 3 tires around plant boundary will be developed as greenbelt and green cover as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no of 96,250 saplings will be planted and nurtured in 38.5 hectares in 5years.

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

Observations of the Committee

22.0 The committee observed that the reply to the terms prescribed were generic and not properly addressed in the EIA/EMP report and also observed number of non-compliances to the ToRs prescribed. The committee opined that the PP shall submit the revised EIA/EMP addressing the reply to all the Terms of Reference specific to the project.

Recommendations of the Committee:

23.0 Therefore, the committee recommended to return the proposal in the present form.

32.4. Proposed Integrated Steel Plant (0.7 MTPA) at Orvakal Mega Industrial Hub of APIIC, Government of A.P. at Guttapadu Village, Orvakal Mandal, Kurnool District, Andhra Pradesh by **M/s JAI RAJ ISPAT LTD (JRIL)** [Online proposal No. **IA/AP/IND/52609/2016**; MoEFCC File No. J-11011/110/2016-IA-II] – **Environmental Clearance**.

1.0 **M/s Jai Raj Ispat Ltd. (JRIL)** made online application vide proposal no. **IA/AP/IND/52609/2016**, dated **4th May 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' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level as Category "A".

2.0 The proposed 0.70 MTPA Integrated Steel Plant of M/s. Jai Raj Ispat Limited (JRIL) located in Guttapadu Village, Orvakal Tehsil, Kurnool District, Andhra Pradesh State was initially received online on 07.04.2016 vide Application no. IA/AP/IND/52609/2016. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 6th meeting of EAC May, 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-1101/110/2016-IA.II(I) dated 22.06.2016.

3.0 Subsequently, JRIL has filed application online on 13.01.2017 vide application no. IA/AP/IND/52609/2017 for amendment of TOR for increase the production capacity from 0.5 to 0.7 MTPA. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 15th meeting of EAC in February, 2017 for TOR amendment and accordingly the Ministry of Environment, Forest and Climate Change had issued TOR amendment for 0.7 MTPA Integrated steel plant vide J-11011/110/2016-IAII(I) dated 11.05.2017.

4.0 The project of M/s. Jai Raj Ispat Limited will be located in Guttapadu Village, Orvakal Tehsil, Kurnool District, Andhra Pradesh State for setting up of a new Integrated Steel Plant for production of 0.7 million tones per annum (million TPA). The proposed capacity for different products are as below:

Sl. No.	Description of plant	Daily Production Capacity (T)	Annual Production Capacity
PRODUCTS			
1	TMT Rebars	1666	5,50,000 T
2	Alloy Steel Bars	212	70,000 T
3	Pig Iron	60	20,000 T
4	Structural Steel	181	60,000 T
PRODUCTION UNITS			
5	Sinter Plant	2421	7,98,990 T Sinter
6	Blast Furnace	1730	5,96,750 T Hot Metal
7	Steel Melting Shop comprising: Oxygen Furnace - 1 Ladle Furnace - 1 Ladle Furnace - 2 Vacuum Degasser -1 CCM and Rolling mill for direct rolling of TMT Rebars CCM and Rolling Mill for rolling of Alloy Steel Bars	1687	5,56,700 T of Billets
6	Power Plant – 18 MW, (Using gases of Blast Furnace Gas and Oxygen Furnace)	18 MW	-
7	Air Separation Plant (Oxygen/Nitrogen/Argon)	320	105600 T
8	Lime Calcination Plant	300	99,000 T Lime

5.0 The project will be in an area of 400 acres allotted by APIIC in the Orvakal Mega Industrial Hub in Kurnool district of Andhra Pradesh (A.P). It may be mentioned that APIIC had allotted about Acres 370.39 cts to JRIL. Further the balance assigned land of Acs 46.57 cts is not with APIIC for which APIIC filed requisition proposals and land acquisition is under process. 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 plain and reported to lie between 15°40'42.30" to 15°38'58.27"N Latitude and 78° 7'59.77" - 78° 9'45.61"E Longitude in Survey of India topo sheet No. 57/I/2, at an elevation of 350 m above msl. The ground water table reported to range between 2-5 m 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. The ground water study estimates show that the area falls in the Safe Category with scope of further development of Resource Potential available.

7.0 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 nearest Reserved forest is Gani RF (dry deciduous forest) at 8.3 km in the SSE direction. The area also does not report to

form corridor for Schedule-I fauna.

8.0 The project is based on All Hot Charge Route with 'Sinter Plant ➔ Blast Furnace ➔ De-sulphurization ➔ Oxygen Furnace (EOF/OBV/BOF) ➔ Ladle Refining Furnace ➔ Endless Continuous Casting and Rolling facility' as the manufacturing route. Manufacturing process comprises inter alia including Sinter Plant to produce inputs for Blast Furnace; Blast Furnace (BF) with 75% Sinter, Iron Ore Lumps, Coke and Fluxes to produce Hot Metal; Refining of Hot Metal (HM) from BF in an Oxygen Furnace (EOF/OBV/BOF) to produce Liquid Steel; Further refining of Liquid Steel in a Ladle Refining Furnace (LRF); Casting of Refined Steel to Billets in a suitable Caster (CCM); and Rolling of Hot Billets directly from the Caster(CCM) to TMT Rebars.

9.0 The targeted production capacity of the proposed project is 0.7 million TPA. The ore for the plant would be procured from Mines in Karnataka, Odhisa, Chhattisgarh, Andhra Pradesh and Imports. The ore transportation will be done through By Road / By Rail in future/By ship upto port. Raw material requirement is as given below:

Raw Materials	**Quantity (TPA)**	
Iron Ore fines (0-10mm)	6,39,192	By Road / By Rail in future/ By ship up to port.
Iron Ore Lump (10-40mm)	3,05,613	By Road / By Rail in future
Low Ash Mettalargical (LAM) Coke	2,72,869	By Road / By Rail in future/By ship up to port
Coke Breeze	51,935	By Road / By Rail in future/ By ship up to port.
Pulverised coal (PCI)	72,765	By Road / By Rail in future/ By ship up to port
Lime Stone Dolomite	2,16,679	By Road, By ship up to port.
Ferro Alloys	7,505	By Road / By ship up to port.
Scrap	83,825	By Road / By ship up to port.
Direct Reduced Iron (DRI)	31,110	By Road / (By Rail in future)

10.0 Total fresh water requirement is estimated at 9600 m^3/day and the same will be supplied by APIIC. APIIC has planned to lift water from the Srisailam foreshore (at Muchumarri village) to Meedivemula Reservoir. Water requirement of Orvakal Mega Industrial Hub will be sourced from Meedivemula Reservoir.

11.0 The power requirement of the project is estimated as 54.45 MW which will be sourced from APCPDCL Grid & 18 MW Captive power plant.

12.0 Baseline Environmental Studies were conducted during Post monsoon season 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 (50.5 µg/m^3 to 60.6 µg/m^3), PM2.5 (25.6 to 28.1 µg/m^3), SO_2 (11.8 to 15.3 µg/m^3) and NO_x (12.3 to 16.1 µg/m^3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 9.12 µg/m^3 with respect to the PM10, 8.12 µg/m^3 with respect to the SO_2 and

6.13 µg/m^3 with respect to the NO_x.

13.0 Ground water quality has been monitored in nine locations in the study area and analysed. pH: 6.78 to 7.36, Total Hardness: 262 to 546 mg/l, Chlorides: 50 to 294 mg/l, Fluoride: 0.9 to 1.2 mg/l. Heavy metals are within the limits. Surface water sample was analysed in one location. pH: 8.04; Total Hardness 99mg/l, Chlorides: 33 mg/l, Fluoride: 0.6 mg/l. Heavy metals are within the limits.

14.0 Noise levels are in the range of 51.7 to 54.4 dBA for daytime and 41.6 to 44.8 dBA for nighttime.

15.0 It has been reported that there are no people in the core zone of the project. No R&R is involved.

16.0 It has been reported that the following waste will be generated due to the project.

Item	**Description**	**Quantity TPY**	**Facility for Control/ Utilization**
Sinter Plant & RMHS			
Sinter Fines (-5mm)	Return after screening (15%)	92,610	Charged back in blend mix for sinter production
Bag filter dust	RMHS bag filters (0.5kg/T)	310	Charged back in blend mix
Blast Furnace			
Primary gas cleaning dust	Dust Catcher & GCP (15kg/THM)	6,247	Used in Sinter Plant
Bag Filter Dust	Cast House & stock house Bag Filters	210	Bag Filter dust to be used in Sinter Plant
Granulated Slag	Slag Granulation Plant (320 kg/THM)	1,33,280	Sold for cement manufacture
Iron skull scrap	Runners & ladles	-	Used in SMS charge
Steel Melting Shop & Slag Crusher			
Bag Filter Dust (EOF, LF, FAFA etc.)	FES Bag Filters (1.25kg/T)	650	Bag Filter dust to be used in Sinter Plant
Slag	Oxygen Furnace (120kg/T)	62,420	After crushing Mixed in sinter plant blend 3,000 T metal recovered for recycle.
Steel skull	Ladles & Tundish	-	Used with scrap as charge
Rolling Mill			
Mill Scale	CCM & RM Scale Pits, settling tank & filter back wash (15 kg/T)	7,500	Iron bearing scale for sinter Plant
Recovered oily waste	Scale pit skimmer	20 kL	Chain lubrication/sold to Authorised recyclers.

Item	**Description**	**Quantity TPY**	**Facility for Control/ Utilization**
Miscellaneous wastes like Cotton wastes, replacement parts of rubber and metal parts, and hardware used refractories	Maintenance of Plant units	-	To be collected on a daily basis through a Contractor, who takes such waste outside the plant for further recycling.
Lime Kiln			
Lime stone dust & fines	Screens & bag filters	3,000	Used in Sinter Plant
Lime dust & fines	Lime screening & bag house	1,500	Sinter Plant and in PCM mould coating after making lime milk (Hydration)

17.0 The Public hearing of the project was held on 26.10.2017 at proposed site under the chairmanship of the Collector & District Magistate Sri S. Satyanarayana, IAS for setting up of 0.7 MTPA integrated steel plant. The issues raised during public hearing along with action plan and budget allotment are addressed in Revised final EIA report. The 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.	To construct Rain water harvesting pits in the area	JRIL will provide four numbers of rainwater harvesting pits within the plant site for recharging the groundwater. It is estimated that the Rain water harvesting potential is about 7,04,053 m^3/year which will be routed through rainwater harvesting pits.	During construction phase of the project	A budget of Rs 10 lakhs has been provided for the RWH pits.
2.	To increase the greenbelt development up to 50 to 60 % of the total area and suggested to consider planting medicinal plants	Greenbelt will be developed in an area of 52 Ha (33 % of the plant area). A thick green belt all along the roads and plant will be developed under	During Construction	Rs. 1.35 crores has been earmarked for Greenbelt development.

	and fruit bearing plants while developing the greenbelt.	afforestation program.		
3.	To lay the road separately from the National High way to their premises for transporting the raw material and suggested to develop the greenbelt on both sides of the roads.	Raw material will be received through road transport and stored in open storage areas till the railway siding is implemented. Railway siding is planned by APIIC by including Oravakal Mega Industrial Hub as a node in the Chennai – Bangalore Industrial Corridor (CBIC). APIIC will lay the approach road to the Industrial Hub. JRIL will transport the raw material and finished products by Railways once the railway siding is completed.	During the construction phase by APIIC	Not Applicable
4.	To form village Coordination Committee involving district officials and requested to give priority to demand oriented works while spending CSR funds.	Agreed. JRIL will form a coordination committee in consultation with the District Administration to prioritize the activities to be taken up under Corporate Environment Responsibility (CER).	A Coordination Committee will be formed during the construction phase and the respective CER activities will be taken up in consultation with the District Administration during the construction/operation phase of the project.	Rs. 8.2 Crores has been budgeted toward implementation of the CER Activities

5.	To provide Skill Development Training Programmes to the villagers prior to establishing the plant and also requested the AP1IC to solve the problem, of farmers who have lost then- assigned lands to the factory.	JRIL proposes to provide Skill Development Training Programmes to the educated youth. The land was allotted by APIIC in the Orvakal Mega Industrial Hub in Kurnool district of Andhra Pradesh (A.P) to JRIL. The issue of farmers will be dealt by APIIC since APIIC acquired the land for the Mega Hub.	The skill development initiative will be taken up during construction phase by associating with local ITIs. Not Applicable	A total amount of Rs. 8.2 Crores has been budgeted toward implementation of the CER Activities Out of this, a budget of Rs 60 Lakhs is provided for skill development initiatives/ programmes for taining of the unemployed. Not Applicable
6	To take up the developmental activities in their village such as laying of cement roads, construction of Mini Hospital, development of drainage facilities, development of school, providing RO Plant and also construction of the Culvert on the Kundu Vanka.	JRIL has conducted need based assessment study in the surrounding villages and has identified activities to be implemented under CER program. JRIL will form a coordination committee in consultation with the District Administration to implement these activities to be taken up under Corporate Environment Responsibility (CER).	The Coordination Committee will be formed during the construction phase and the respective CER activities will be taken up in consultation with the District Administration during the construction/operation phase of the project.	Rs. 8.2 Crores has been budgeted toward implementation of the CER Activities

7	Priority to the local villagers in (like indirect employment opportunities such as in construction works, transportation etc.,	The need based assessment in the surrounding villages were carried out and the various activities have been identified which will be implemented under the CER program.	JRIL will form a coordination committee in consultation with the District Administration to implement these activities under Corporate Environment Responsibility (CER).	Rs. 8.2 Crores has been budgeted toward implementation of the CER Activities
8	To adopt the surrounding villages and also to increase the CSR budget from 1.50 Crores to 3.0 crores for the implementation of the developmental activities in the villages.	The need based assessment in the surrounding villages were carried out and the various activities have been identified which will be implemented under the CER program.	JRIL will form a coordination committee in consultation with the District Administration to implement these activities under Corporate Environment Responsibility (CER).	Rs. 8.2 Crores has been budgeted toward implementation of the CER Activities
9	To pay the compensation to all the farmers who have lost their land in the land acquisition process to the factory.	The land was allotted by APIIC in the Orvakal Mega Industrial Hub in Kurnool district of Andhra Pradesh (A.P) to JRIL. The issue of farmers will be dealt by APIIC since APIIC acquired the land for the Mega Hub. The payment of compensation to the farmers is the subject matter of APIIC and Government.	Not Applicable	Not Applicable

10	To provide the employment opportunities to the educated local people.	The project will provide 1133 direct employment and 6000 indirect employment during construction phase. Preference will be given to the locals.	Not Applicable	Not Applicable
11	Collector and District Magistrate to pay compensation to their lands and furnished the list of villages who lost their land to the steel factory.	The issues related to payment of compensation to the farmers and land acquisition is the subject matter of APIIC and Government.	Not Applicable	Not Applicable
12	There are about 200 educated people in their village and requested the Management of the factory to provide employment to all educated people in their village based on their qualification.	The project will provide 1133 direct employment and 6000 indirect employment during construction phase. Preference will be given to the locals.	Not Applicable	Not Applicable
13	To take up the developmental activities in their village such as construction of CC Roads, improve Drainage facilities and also construction of the overhead tank in their village for the drinking water.	The need based assessment in the surrounding villages were carried out and the various activities have been identified which will be implemented under the CER program.	JRIL will form a coordination committee in consultation with the District Administration to implement these activities under Corporate Environment Responsibility (CER).	Rs. 8.2 Crores has been budgeted toward implementation of the CER Activities

14	There are so many people in the surrounding villagers who have completed Polytechnic, ITI courses and requested the management to provide employment opportunity to them by providing skill development programmes.	JRIL will give preference to local people for employment. JRIL will also provide skill training to the local people and make them employable.	The skill development initiative will be taken up during construction phase by associating with local ITIs.	A total amount of Rs. 8.2 Crores has been budgeted toward implementation of the CER Activities Out of this, a budget of Rs 60 Lakhs is provided for skill development initiatives/ programmes for taining of the unemployed.
15	To develop the green belt which will avoid the soil erosion.	Greenbelt will be developed in an area of 52 Ha (33 % of the plant area). A thick green belt all along the roads and plant will be developed under afforestation program.	During Construction	Rs. 1.35 crores has been earmarked for Greenbelt development.

18.0 An amount of 822.3 Lakhs (0.5 % of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

19.0 The capital cost of the project is Rs. 1657 Crores and the capital cost for environmental protection measures is proposed as Rs. 21.25 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.1.52 Crores**.** The detailed CER plan has been provided in the EMP in its page No. 266 to270. The employment generation from the proposed project is 1113 Direct & 6000 Indirect.

S. No	**Item**	**Capital cost**	**Recurring Cost per annum**
1	Air pollution Control (Bag Filter, ESP, Dust Suppression, Dust Extraction)	10.00	0.35
2	Continuous Ambient air quality stations (3 nos)	1.80	0.20
3	CEMS (Stack online analyser)	0.30	0.05
4	Effluent Treatment Plant and Sewage Treatment plant along with OEMS	0.75	0.10
	ETP & STP manual monitoring	-	0.10
5	Solid Waste Management	4.00	0.20
6	Liner for Raw material storage areas	2.00	0.10

7	Occupational health	1.00	0.12
8	Green belt development	1.30	0.08
9	Rainwater Harvesting system	0.10	0.02
10	CREP Monitoring and Return Filing	-	0.20
	Total	**21.25**	**1.52**

20.0 Greenbelt will be developed in an area of 52 Ha (33 % of the plant area). A thick green belt all along the roads and plant will be developed under afforestation program. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 1,30,000 saplings will be planted and nurtured in 52 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: M/s BS Envirotech, Hyderabad.

Observations of the committee:

23.0 The committee observed that no briquetting/ agglomeration was proposed in the proposal; provision of dry cooling shall be envisaged; the commitments made against the issues raised during the PH shall be revised; the Corporate Environmental responsibility shall be revised. The project proponent has submitted the reply to the observations vide his letter dated JRIL/MoEF/ISP-1.0/2018 dated 12th June 2018. The details are as follows:

1. Revised Summary of the Public hearing issues along with action plan and budget are given below:

SL	Issues raised during public hearing	Response of the project proponent after public hearing	Time bound Action plan	Budgetary provision
1	Suggested the management to take measures for the storage the rain water, to increase the greenbelt development up to 50 to 60 % of the total area and suggested to consider planting medicinal plants and fruit bearing plants while developing the greenbelt.	JRIL will provide four numbers of rainwater harvesting pits and Rain water Harvesting Pond within the Steel plant site for recharging the groundwater. JRIL will also construct Rain Water Harvesting Pits in Villages/Community Centres/Panchayat offices Buildings etc., in 7 villages. JRIL will also carryout Desilting of 6 ponds in the study Area for increase of storage capacity along with strengthening of the banks	During the construction phase	An amount of Rs 10 lakhs is budgeted for implementing RWH structures within the Project site and included in the EMP budget of Rs. 21.25 Crores. A budget of Rs 13.34 Crores is earmarked for village Infrastructure Development activities, which includes activities

		Greenbelt will be developed in an area of 52 Ha (33 % of the plant area). A thick green belt all along the roads and plant boundary will be developed under afforestation program. JRIL in association with district administration will be taken up distribution of Fruit bearing plants, avenue plantation, participation in Vanamahotsav.	During the construction phase	like construction of Rain Water Harvesting pits and desilting of village ponds (6 No.s). This is covered in the total amount of Rs. 16.2 Crores has been budgeted toward implementation of the CER Activities Rs. 1.35 crores has been earmarked for Greenbelt development and included in the EMP budget of Rs. 21.25 Crores. Rs. 42 lakhs is earmarked for development of greenery, tree plantations in the study area and is included in the budget of Rs 13.34 Crores is earmarked for village Infrastructure Development activities. This is covered in the total amount of Rs. 16.2 Crores has been budgeted towards implementation of the CER Activities
2	Suggested to lay the road separately	APIIC is already laying a 30 M wide approach road from	During the construction	Not Applicable

	from the National High way to their premises for transporting the raw material and suggested to develop the greenbelt on both sides of the roads.	the National Highway to the Industrial Hub. This will ensure that the Truck movement due to the proposed steel plant will not disturb the villages. Raw material to the proposed steel plant will be received through road transport and stored in open storage areas till the railway siding is implemented. Railway siding is planned by APIIC by including Oravakal Mega Industrial Hub as a node in the Chennai – Bangalore Industrial Corridor (CBIC). APIIC will lay the approach road to the Industrial Hub. JRIL will transport the raw material and finished products by Railways once the railway siding is completed.	phase by APIIC	
3	He requested the management to form village Coordination Committee involving district officials and requested to give priority to demand oriented works while spending CSR funds.	Agreed. JRIL will form a coordination committee in consultation with the District Administration to prioritize the activities to be taken up under *Corporate Environment Responsibility (CER).*	A Coordination Committee will be formed during the construction phase and the respective CER activities will be taken up in consultation with the District Administration during the construction/ operation phase of the project.	Rs. 16.2 Crores has been budgeted toward implementation of the CER Activities

4	Requested the management to provide Skill Development Training Programmes to the villagers prior to establishing the plant and also requested the AP1IC to solve the problem, of farmers who have lost then- assigned lands to the factory.	JRIL proposes to provide Skill Development Training Programmes to the educated youth. The land was allotted by APIIC in the Orvakal Mega Industrial Hub in Kurnool district of Andhra Pradesh (A.P) to JRIL. The issue of farmers will be dealt by APIIC since APIIC acquired the land for the Mega Hub. It is estimated that there would be about 20 to 30 Land Losers. They will be given Skill Development Training and suitable employment opportunities will be given by JRIL in the Project.	The skill development initiative will be taken up during construction phase by associating with local ITIs.	A budget of Rs 120 Lakhs is provided for Sustainable Livelihood Training/ Skill Development initiatives/ programmes for training of the unemployed. This is covered in the total amount of Rs. 16.2 Crores has been budgeted toward implementation of the CER Activities
5	Requested the management to take up the developmental activities in their village such as laying of cement roads, construction of Mini Hospital, development of drainage facilities, development of school, providing RO Plant and also construction of the Culvert on the Kundu Vanka.	JRIL has conducted need based assessment study in the surrounding villages and has identified activities to be implemented under CER program. JRIL will form a coordination committee in consultation with the District Administration to implement these activities to be taken up under *Corporate Environment Responsibility (CER).*	The Coordination Committee will be formed during the construction phase and the respective CER activities will be taken up in consultation with the District Administration during the construction/ operation phase of the project.	A budget of Rs 13.34 Crores is earmarked for village Infrastructure Development activities. This is covered in the total amount of Rs. 16.2 Crores has been budgeted toward implementation of the CER Activities

6	He urged the management to provide the priority to the local villagers in (like indirect employment opportunities such as in construction works, transportation etc.,	JRIL will give preference to local people for employment. JRIL will also provide skill training to the local people and make them employable. The project will provide 1133 direct employment and 6000 indirect employment during construction phase. Preference will be given to the locals.	During Construction of the Project.	A budget of Rs 120 Lakhs is provided for Sustainable Livelihood Training/ Skill Development initiatives/ programmes. This is covered in the total amount of Rs. 16.2 Crores has been budgeted toward implementation of the CER Activities
7	Requested the Management to adopt the surrounding villages and also to increase the CSR budget from 1.50 Crores to 3.0 crores for the implementation of the developmental activities in the villages.	The need based assessment in the surrounding villages were carried out and the various activities have been identified which will be implemented under the CER program.	JRIL will form a coordination committee in consultation with the District Administration to implement these activities under *Corporate Environment Responsibility (CER).*	Rs. 16.2 Crores has been budgeted toward implementation of the CER Activities
8	Pay the compensation to all the farmers who have lost their land in the land acquisition process to the factory.	The payment of compensation to the farmers is the subject matter of APIIC and Government.	Not Applicable	Not Applicable
9	He also requested the management	The project will provide 1133 direct employment and 6000	The skill development	A budget of Rs 120 Lakhs is provided

	of the industry to provide the employment opportunities to the educated local people.	indirect employment during construction phase. Preference will be given to the local people. The educated local people will be screened by JRIL and will be suitably employed after Training.	initiative will be taken up during construction phase by associating with local ITIs.	for Sustainable Livelihood Training/ Skill Development initiatives/ programmes. This is covered in the total amount of Rs. 16.2 Crores has been budgeted toward implementation of the CER Activities
10	There are about 200 educated people in their village and requested the Management of the factory to provide employment to all educated people in their village based on their qualification.	The 200 educated people will be screened by JRIL and will be suitably employed after Training. JRIL will give preference to local people for employment. JRIL will also provide skill training to the local people and make them employable.	The skill development initiative will be taken up during construction phase by associating with local ITIs.	A budget of Rs 120 Lakhs is provided for Sustainable Livelihood Training/ Skill Development initiatives/ programmes. This is covered in the total amount of Rs. 16.2 Crores has been budgeted toward implementation of the CER Activities
11	Requested the management of the factory to take up the developmental activities in their village such as construction of CC Roads, improve Drainage facilities and also construction of the overhead tank in their village for the drinking water.	A need based assessment study was conducted and JRIL has earmarked CER funds for implementation.	JRIL will form a coordination committee in consultation with the District Administration to implement these activities under *Corporate*	A budget of Rs 13.34 Crores is earmarked for village Infrastructure Development activities. This is covered in the total amount of Rs. 16.2 Crores has been budgeted toward implementation of the CER Activities

			Environment Responsibility (CER).	
12	There are so many people in the surrounding villagers who have completed Polytechnic, ITI courses and requested the management to provide employment opportunity to them by providing skill development programmes.	JRIL will conduct Skill Development Programmes as part of CER Activities. It is understood that there 200 educated people in the Study area. They will be screened by JRIL and will be suitably employed after Training.	The skill development initiative will be taken up during construction phase by associating with local ITIs.	A budget of Rs 120 Lakhs is provided for Sustainable Livelihood Training/ Skill Development initiatives/ programmes. This is covered in the total amount of Rs. 16.2 Crores has been budgeted toward implementation of the CER Activities
13	He also requested the management to develop the green belt which will avoid the soil erosion.	Greenbelt will be developed in an area of 52 Ha (33 % of the plant area). A thick green belt all along the roads and plant will be developed under afforestation program. JRIL in association with district administration will be taken up distribution of Fruit bearing plants, avenue plantation, participation in Vanamahotsav.	During Construction of the Project.	Rs. 1.35 crores has been earmarked for Greenbelt development and is included in the EMP Budget of Rs 21.25 Crores. Rs. 42 lakhs is earmarked for development of greenery, tree plantations in the study area and is included in the budget of Rs 13.34 Crores is earmarked for village Infrastructure Development activities. This is covered in the total amount of Rs. 16.2 Crores has

				been budgeted towards implementation of the CER Activities

2. The budget has been revised to Rs 16.20 crores for three years in accordance to the MoEFCC's office Memorandum # F.No. 22-65/2017-IA.III dated 01.05.2018 for Enterprise Social Commitment based on public hearing issues towards capital expenditure for Corporate Environment Responsibility (CER) as follows:

S.No	DESCRIPTION	Budget in Rs. Lakhs (for 3 years)
1	Village Infrastructure Development	1334
2	Sustainable Livelihood Training/Skill Development	120
3	Provision of Medical Facilities	105
4	Provision of Additional Infrastructure for Schools	17
5	Support for Agricultural Sector	44
	Total	**1620**

DETAIL BREAKUP OF BUDGET TOWARDS CER ALONG WITH ACTIVITIES

1. VILLAGE INFRASTRUCTURE DEVELOPMENT

S.No	Description of Activity	1st Year	2nd Year	3rd Year
1	Provision of bore wells/overhead tank, building for housing RO plant in 7 villages (@ 3.0 lakhs/borewell and RO plant unit) considering 5 borewells/ village (on an average)	30	35	40
2	Repair/Construction of internal village roads (Avg 3-5 km of internal roads per village @ Rs 20 lakhs/km) - Initially in 7 villages in 5 KM radius	200	250	250
3	Repair/construction of existing school buildings (Rs 8 lacs per school in 7 villages)	10	20	22
4	Repairs/construction of compound wall of school buildings (Guttapadu, Puricherla, Nannanuru) 3xRs 10 lacs per school	10	10	10
5	Construction of separate toilets for girls and boys with overhead water tank facility(Gramalaya design-school sanitary complex Model 2) 7 villages x Rs 60000/- village	14	14	14
6	Development of playground with necessary facilities 18 villages @Rs1.0 lac	6	6	6
7	Construction of buildings for Anganwadis in 4 villages namely Hussainapuram, Puricherla, Sekunala, Kalva) @Rs8.0 lakhs per unit	10	10	12
8	Construction of toilets (20% of the households in	10	20	20

S.No	Description of Activity	1st Year	2nd Year	3rd Year
	the four villages namely Guttapadu, Konthalapadu, Orvakal and Uppalapadu) about 200 households @25000 per toilet			
9	Construction of Bus shelters in 3 villages namely Guttapadu, Konthalapadu and Orvakal (Rs1.0 lakh per bus shelter)	1	1	1
10	Providing LED street lighting with solar panels at suitable places in Guttapadu, Konthalapadu, Orvakal and Uppalapadu villages.(50 nos/village@Rs25000/-)	15	15	20
11	Repair or Construction of Burial grounds/ small repairs of drainage Guttapadu, Puricherla, Nannaru villages.	10	10	10
12	Construction of small bridge across Pedda vagu near Guttapadu village (500 m length and width of 5 m)	60	60	0
13	Distribution of fruit bearing saplings, tree plantation programmes like Vanamahosthavam in the study area	7	15	20
14	Desilting of 6 ponds in the study Area/ strengthening of the banks	10	10	10
15	Construction of Rain Water Harvesting Pits in Villages/Community Centres/Panchayat offices Buildings etc., in 7 villages	10	10	10
	Total (Rs in lakhs)	403	486	445
2	SUSTAINABLE LIVELIHOOD TRAINING/SKILL DEVELOPMENT			
1	Establishment of Skill development center along with necessary infrastructure	10	15	20
2	Organising vocational training programs for employment generation in association with National Academy of Construction (masonry, carpentry, barbending, plumbing, welding, fitter, electrical, soft skills like computer programs etc)	10	15	15
3	Providing training for educated unemployed youth by ex-defence personnel for qualifying in Police, Para-military, Defence services including creating necessary infrastructure for the same. (Rs 20 lakhs for infrastructure like sheds consisting training hall, dining hall, bunker accommodation and Rs 3 lakhs for two sessions per year)	5	25	5
	Total (Rs in lakhs)	25	55	40
3	PROVISION OF MEDICAL FACILITITES			
1	Repair of existing PHC building and constructing additional Rooms/ centres along with associated hospital infrastructure and providing one	20	25	30

S.No	Description of Activity	1st Year	2nd Year	3rd Year
	Ambulance for emergency use			
2	Mobile veterinary Clinic	5	10	15
	Total (Rs in lakhs)	25	35	45
	PROVISION OF ADDITIONAL INFRASTRUCTURE FOR SCHOOLS			
1	Providing computers to ZP High Schools and Primary schools in study area (12 systems with UPS, furniture etc @ 60,000/- per system)	2	2	3
2	Science lab equipment to 4 ZP High Schools in Nannanuru/Husainapuram etc. (Rs 2.5 lacs per school)	2.5	2.5	5
	Total (Rs in lakhs)	4.5	4.5	8
	SUPPORT FOR AGRICULURAL SECTOR			
1	Provision of Agri clinics for providing advice/guidance to the farmers, with the help of Graduates in Agriculture	5	5	10
2	Taking up a project for improving the productivity of the soil and crop which would include Soil Enrichment, Providing advance training in Agriculture to local farmers, procurement of good quality seeds from Agricultural University/Horticultural Department, GoAP etc., and giving them free of cost to the needy farmers. (2 lakhs per village)	8	8	8
	Total (Rs in lakhs)	13	13	18

The pp also confirmed that all the fine generated will be extracted through pneumatic conveying system and utilized in the balling drum for agglomeration to be used for sinter plant. The PP also informed to expedite the railway siding.

Recommendations of the committee

23.0 After detailed deliberations, the committee recommended for grant of environmental clearance subject to the following specific and general conditions.

A. Specific conditions:

1. No ground water shall be extracted for the project as the project is located in the water scarcity area.

2. The project proponent shall explore the possibility of transportation of the raw material through the captive / common railway siding up to the plant. Meanwhile, the PP shall limit the road transportation to the nearest railhead.

3. The PP shall reuse the treated waste water in the process to the maximum extent possible and reduce the specific water consumption.

B. General Conditions:

1. An amount of Rs 16.20 Crores proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.

2. Green belt shall be developed in an area of 52 Ha 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.

3. The Capital cost Rs. 21.25 Crores and annual recurring cost Rs.1.52 Crores towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.

4. The project proponent shall (Air Quality Monitoring):

    a. 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(Integrated iron & Steel) as amended from time to time; 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.

    b. monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.

    c. Install system carryout to Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions;

    d. 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.

5. The project proponent shall (Water Quality Monitoring):

    a) install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel) 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.

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

c) 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.

6. The project proponent shall (Air Pollution Control):

a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards;

b) provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags;

c) provide secondary emission control system at SMS Converters;

d) provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;

e) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;

f) 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;

g) use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin;

h) provide wind shelter fence and chemical spraying on the raw material stock piles; and

i) design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

7. The project proponent shall (Water Pollution Control):

a) provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;

b) adhere to 'zero liquid discharge';

c) provide Sewage Treatment Plant for domestic wastewater;

d) provide garland drains and collection pits 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;

e) provide tyre washing facilities at the entrance of the plant gates;

f) introduce CO_2 injection in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning; and

8. The project proponent shall (Water conservation):

a) practice rainwater harvesting to maximum possible extent;

b) provide water meters at the inlet to all unit processes in the steel plants; and

c) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

9. The project proponent shall (Energy Conservation):

a) provide TRTs to recover energy from top gases of Blast Furnaces;

b) practice waste heat recovery from Sinter Plants coolers and Sinter Machines;

c) use torpedo ladle for hot metal transfer as far as possible. If not use ladles covers for open top ladles;

d) use hot charging of slabs and billets/blooms as far as possible;

e) provide waste heat recovery systems in all units where the flue gas or process gas exceeds 300°C;

f) explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed;

g) restrict Gas flaring to < 1%;

h) 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;

i) provide LED lights in their offices and residential areas; and

j) ensure installation of regenerative type burners on all reheating furnaces.

10. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.

11. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.

12. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.

13. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.

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

15. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.

16. 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

17. 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.

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

19. 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.

20. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.

21. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.

22. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

23. 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.

24. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

25. 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).

26. The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management &Transboundary Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens.

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

28. 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.

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

30. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

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

32. The project proponent shall (Post-EC monitoring):

    a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;

    b. put on the clearance letter on the web site of the company for access to the public.

    c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http:/envfor.nic.in.

    d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;

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

    f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;

g. 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;

h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

32.5. Expansion of steel plant by installing Ferro Alloys Plant (27000 TPA), Induction Funtance (2,34,000 TPA) and Rolling Mill (3,90,000 TPA) at Patwari Halka No. 92, Village Kapsada, Raipur – Bilaspur Highway, District Raipur in Chhattisgarh by **M/s Fortune Metaliks Limited** [Online Proposal No. **IA/CG/IND/4211/2010**; MoEFCC File No. J-11011/320/2009-IA.II(I)] – **Validity Extension of Environmental Clearance.**

1.0 **M/s Fortune Metaliks Limited** made online application vide proposal no. **IA/CG/IND/4211/2010** dated 25th April, 2018 for seeking extension of validity of the Environmental Clearance granted vide J-11011/320/2009-IA-II(I) Dated 21.03.2011 for the proposed expansion of steel plant by installing Ferro Alloys Plant (27000 TPA), Induction Funtance (2,34,000 TPA) and Rolling Mill (3,90,000 TPA) at Patwari Halka No. 92, Village Kapsada, Raipur – Bilaspur Highway, District Raipur in Chhattisgarh.

2.0 The environment clearance was issued for the following facilities along with the capacity:

S. No.	Product and production facility	Capacity
1	Induction Melting Shop to produce M.S. Billet	2,58,000 TPA
2	Rolling Mill (Coal Gas based) to produce Rerolled product	3,94,800 TPA
3	Ferro Alloys Plant to produce Ferro Alloys	27,000 TPA

3.0 It was informed that the company decided not to implement the Ferro Alloys Furnace thus request to exclude the Ferro Alloys Capacity of 27000 TPA and grant extension for the Induction Furnaces and Re Rolling mill only.

4.0 Details already implemented facility and remaining production facilities are as follows:

S. No.	Product and production facility	Capacity granted as per EC	Capacity already implemented	Facility remaining for which EC extension is applied for.	Remark
1	Induction Melting Shop to produce M.S. Billet	2,58,000	1,04,000	1,54,000	Induction Furnace is classified as Orange Category project by CPCB. The remaining capacity (1,54,000 TPA) could not be implemented for want of EHT power at 132 kV line from the Grid. Now it is

					sanctioned. So it can be implemented within next two years of time.
2	Rolling Mill (Coal Gas based) to produce Rerolled product	3,94,800	2,60,000	1,34,800	During the Implementation of the project we came across new technology of Hot Charging in which No Fuel is required. Thus we deferred the 1,34,800 TPA rerolling capacity for implementing with the remaining Induction Furnace Capacity. We will thus implement this capacity through direct hot charging based rerolling mill so it is a Green Process as no fuel is required. it can be implemented within next two years of time
3.	Ferro Alloys	70,000	0	0	Ferro Alloys Plant is not yet started due to power supply constrains and we have now decided not to implement this facility. This capacity may be excluded from the EC validity being extended for next three years.

5.0 It was informed that due to recession in steel sector and lack for financial resources as well as constrain in grid power availability at 33 KV, the company was unable to fully execute the facilities for which EC was obtained. Whereas, now, received permission from CSPDCL- Grid for power supply of 132 KV. Therefore, the company desired to implement the remaining capacity of Induction Furnace Melting to produce MS Billets and Re rolling Mill to produce Rerolled steel as per environment clearance granted.

6.0 The remaining Capacity of 134000 TPA of Re Rolling Mill will be implemented through Hot Charging (Direct Charging) in Re rolling mill which will save the fuel consumption and carbon emission. Accordingly, the existing 2,60,000 TPA re rolling mill be continued to be run on Coal Producer gas/ Furnace oil.

7.0 The PP decided not to implement the Ferro Alloys plant due to constrains of Power and Finance and requested to Ferro Alloys plant form the EC.

8.0 Capacity enhancement in Rolling Mill division will be achieved through modernization and optimization of process and increase in the operation hours, with high power supply along with installation of a third rolling mill with direct hot charging facility. The remaining capacity

enhancement can be achieved in next three years' time. With the modernization of existing installed Induction Furnaces facilities (to produce MS Ingot/Billet), we will able to enhance additional 25,000 TPA Billets production without any addition of Induction Furnaces thus total 1,29,000 TPA can be achieved by already installed facilities. This will be possible by increase of power load in few months' time.

9.0 Whereas to achieve to granted production capacity for M.S. Billet it is required to install new Induction Furnaces (i.e. 12 MT X3 Nos) to add 1,29,000 TPA production of Billets/ Ingots. For this we will also need to add 16 MW additional Power from the grid. For which we need to build 132 KV substation and draw 132 KV line. This may take at least 18 months to draw power. Then we will be able reach to production capacity of 2,58,000 TPA of MS Billets/Ingots through Induction Furnaces. Third re rolling mill with direct charging of Hot Billets will be installed with it.

10.0 The unimplemented facilties will be implemented in 24 months from the date of grant of extension in EC. Considering other sanctions required i.e. loan from Bank and power from CSPDCL, requested for extension of time for 36 months for implementation of this portion of capacity through Induction Furnace and hot charging based Re Rolling mill.

11.0 The delay in submitting the request for extension of validity beyond the valid period of existing EC was requested to condom as it is for less than a month and it happened due to confusion of validity of 7 years from the date of grant of Permission to Establish be CECB.

12.0 The committee advised the project proponent to submit the status of capacity before and after EC, and remaining capacity and status of technology before and after EC, and remaining capacity in the tabular form.

13.0 Accordingly, the PP submitted the status of capacity before and after EC, and remaining capacity and status of technology before and after EC, and remaining capacity in the tabular form as follows:

S. No.	Product and production facility	Exiting unit before application to EC on 2011	Capacity granted in EC (2011)`	Capacity addition after EC, from 2011 till date.	Remaining Capacity to be installed for which EC extension is applied.
1	Induction Melting Shop to produce M.S. Billet	24000 TPA (8 MT X 1)	2,58,000 TPA (24000 TPA + 2340000 TPA (8 X1 + 3x12 tons- IF &1x40 tons EAF with LRF & CCM	80000 TPA (10 X 3 Induction Furnace with CCM)	154000 TPA (through 12 MT X 3 Nos Induction Furnace with CCM.)
2	Rolling Mill (Coal Gas fired)	4800 TPA (Reheating Furnace based)	3,94,800 TPA (4800 TPA + 3,90,000 TPA 1,30,000 TPA Bar Mill	260000 TPA (130000 TPA – Bar Mill 1300000 TPA- Structure Mill	134800 TPA (this will be based on Hot Charging, No fuel will be

			1,30,000 TPA Structural Mill / Hot Strip Mill 1,30,000 TPA Cold Rolling Mill / Cold Strip Mill Coal Gas: 13700 Nm3/hr (35,000 TPA Coal))	13700 Nm^3/Hr Coal Gassifier)	required, the 4800 TPA Rerolling Mill capacity will be merged in this mill so the 4800 TPA reheating furnace based Mill will be closed.)
3	Ferro Alloys Plant to produce Ferro Alloys	Nil	27,000 TPA	Not implemented	Will not be implemented.

S. No.	Product and production facility	Exiting technology unit before application to EC on 2011	technology granted in EC (2011)	Technology adopted Capacity addition after (EC)	Technology to be adopted for Remaining Capacity to be installed
1	Steel Melting Shop (produce M.S. Billet)	24000 TPA Based on Induction Furnace Melting	2,58,000 TPA Based on Induction Furnace + Electrical Arc Furnace + LRF and CCM.	80000 TPA (Based on Induction Furnace and CCM)	154000 TPA (Induction Furnace with LRF and CCM. Note- In place of Electric Arc Furnace, Induction Furnace will be installed,
2	Rolling Mill (Coal Gas fired)	4800 TPA (Reheating Furnace based)	3,94,800 TPA (4800 TPA + 3,90,000 TPA 1,30,000 TPA Bar Mill 1,30,000 TPA Structural Mill / Hot Strip Mill 1,30,000 TPA Cold Rolling Mill / Cold Strip Mill Coal Gas: 13700 Nm3/hr (35,000 TPA Coal))	260000 TPA (130000 TPA – Bar Mill with hot rolling. 1300000 TPA- Structure Mill with Hot rolling 13700 Nm^3/Hr Coal Gassifier with 26000 TPA coal @100 Kg/tonne rolling.	134800 TPA (change in technology in place of cold rolling mill / strip mill, it is proposed to implement Hot charging based Rerolling Mill in which also no fuel will be required. The old 4800 TPA capacity

					will be discontinued.)
3	Ferro Alloys Plant	Nil	27,000 TPA (It was based on submerged arc furnace.)	Not implemented	Will not be implemented.

Recommendations of the Committee:

14.0 After detailed deliberations, the committee recommended for the extension of validity of the environmental clearance up to 20.03.2021 for steel melting shop with Induction Furnace with LRF and CCM and Rolling mill with hot charging

32.6. Proposed 800 TPD MS Billet/Ingot plant (production from MS scrap having 3 x 20 TPH induction furnaces) and 800 TPD rolled steel plant (products from MS Billets/Ingots) to be located at Village Paharuwal, Paharuwal Road, Near Kohara, Chandigarh Road, Tehsil and District Ludhiana (Punjab) of **M/s FORTUNE STEEL AND WIRE LIMITED** [Online Proposal No. IA/PB/IND/74797/2018; MoEFCC File No. IA-J-11011/174/2018-IA-II(I)] – **Prescribing Terms of Reference.**

1.0 The proponent has made online application vide proposal no IA/PB/IND/74797/2018 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. Since the proposed project is located within 5 Km from the critically polluted area (Ludhiana), the project is treated as Category "A" and the proposal is appraised at Central level.

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

2.0 M/s Fortune Steel and Wire Limited, Village Paharuwal, Paharuwal Road, Near Kohara, Chandigarh Road, Tehsil and District Ludhiana (Punjab), are planning to setup a secondary steel based industrial unit having a production capacity of MS Billets/Ingots @ 800 MT/day (or 264000 MT/year) by installing 3 sets of induction furnaces of (3 x 20 TPH) capacity. Besides this, the industry will also produce rolled products with installed production capacity of 800 MT/day (or 264000 MT/year). The project ensues capital investment of about Rs. 13720 lacs and will operate for 330 days in a year.

3.0 The complete power requirements have been estimated to be about 25000 kW (25 MW). The unit is also planning to install a DG sets of 2 x 500 kVA capacity. Land measuring about 2.48 hectares has been acquired for the proposed industrial unit. The project site is outside the Municipal Limits of Ludhiana.

4.0 The raw material used to be used for induction furnaces would be MS Scrap and Alloys. The industry would source the raw material from traders/import it from neighboring countries. The raw material for rolling mills would be MS ingot/billets which would be sourced from the industry itself. The industry will use the hot MS Billets/ingots for the rolled products and hence would save

the energy required for the stand alone rolling mills.

5.0 The industrial unit will install air cooled and water cooled cooling towers. Bag house type air pollution control system would be installed for the induction furnaces. The water requirements for the industry would be only for losses in cooling towers and domestic requirements. Daily water requirements of the industry would be around 25 m^3/day. The industry would generate less than 4.5 m^3/day of domestic sewage.

6.0 Solid waste will include induction furnace slag @ 15 MT/day. The solid wastes have commercial worth and will be sold. Hazardous waste will include (i) dust from air pollution control devices @ 2000 kg/day and used/spent lubricant and transformer oil @ 1000 litre/year. The hazardous wastes will be stored on-site in HDPE bags, inside a lined and covered room before being disposed. The wastes will, subsequently, be disposed through the State's common hazardous waste disposal facility. The used oils will be in metallic drums inside a lined and covered room and will be sold to the authorized recyclers.

Observations of the committee:

7.0 The Committee observed that the proposed location is in the vicinity of critically polluted area (Ludhiana). It is not clear regarding the distance of the project of the boundary of critically polluted area. It is also observed that the pre-feasibility report is not as per the requirements. No requisite information has been provided in the PFR for prescribing the Terms of Reference.

8.0 Therefore, the Committee desired to submit revised Pre-Feasibility Report, *inter alia*, including resource requirement (land, water, power, raw material requirement), distance from the boundary of critically polluted area, proposed solid waste generation and utilization plan, environment sensitivity of the surrounding area.

Recommendations of the Committee:

9.0 Therefore, the proposal is returned in the present form.

32.7. Expansion of Ductile Iron Pipe Plant (2,00,000 TPA To 5,50,000 TPA) by **M/s Rashmi Metaliks Limited**, located at Village Gokulpur, Post Office Shyamraipur, District Paschmi Mednipur, West Bengal [Online proposal No**. IA/WB/IND/60075/2016**; MoEFCC File No. **J-11011/237/2016-IA.II(I)**] – **Further consideration for Environmental Clearance based on reply to ADS.**

1.0 **M/s Rashmi Metaliks Limited** made online application vide proposal no. **IA/WB/IND/60075/2016**, dated **11th January 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' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level as Category "A".

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

2.0 The proposed expansion of Ductile Iron Pipe Plant (2,00,000 TPA to 5,50,000 TPA) of

M/s Rashmi Metaliks Limited, is located at Village Gokulpur, Post Office Shyamraipur, District Paschmi Mednipur, West Bengal was initially received in the Ministry on 31st October, 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 13thmeeting held on 24th November, 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 31st January, 2017 vide Ref. File No J-11011/237/2016-IA.II.(I).

3.0 The project of **M/s Rashmi Metaliks Limited**, is located at Village Gokulpur, Post Office Shyamraipur, District Paschim Mednipur, West Bengalis for expansion of its existing Ductile Iron Pipe Plant from 0.2 to 0.55 million tons per annum (million TPA). The existing project was accorded environmental clearance vide Memo No. EN/2567/T-II-1/047/2009 dated 9-10-2009 from Department of Environment, West Bengal & Memo No.962/ EN/T-II-1/047/2009 from SEIAA, West Bengal dated 17.04.2015. The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneshwar vide Lr. No. 110-238/EPE/118 dated 11th January, 2018. The regional officer reported certain non-compliances such as irregular submission of six monthly reports; safety measures not up to the mark; storage of raw material in open space, poor housekeeping; non-paving of internal roads; no full-fledged ETP; non-submission of expenditure on CSR details; etc. The proposed expansion of Ductile Iron Pipe Plant and existing facilities are as given below:

Name of the Units	Existing As per EC		Proposed Expansion		Total (Existing + Proposed)
	Capacity	Production	Capacity	Production	Production
Mini Blast Furnace	1x215 m^3	1,80,000 TPA	-	-	1,80,000 TPA
Sinter Plant *	2x 25 m^2 + 1x70 m^2	10,90,000 TPA	-	-	10,90,000 TPA
Pig Casting Machine	600 TPD	600 TPD	-	-	600 TPD
SMS *	4 x 40 T EAF / LRF	5,00,000 TPA	-	-	5,00,000 TPA
Pellet Plant	9,00,000 TPA	9,00,000 TPA	-	-	9,00,000 TPA
Ductile Iron Pipe Plant	2,00,000 TPA	2,00,000 TPA	3,50,000 TPA	3,50,000 TPA	5,50,000 TPA
Oxygen Plant *	60 TPD	60 TPD	-	-	60 TPD
Lime Calcination Plant	1200 TPD	1200 TPD	-	-	1200 TPD
Rolling Mill *	3,65,200 TPA	3,65,200 TPA	-	-	3,65,200 TPA
Coal Gasifier (Stand By)	6000 Nm^3/hr	6000 Nm^3/hr	-	-	6000 Nm^3/hr

4.0 The total land of M/s Rashmi Metaliks Limited is 58.27 Hectares (144 acres). The existing Ductile Iron Pipe Plant is located on 6.07 Hectares (15 acres) of land and expansion of DI Pipe Plant will take place within the RML premises for which 4.05 Hectares (10 acres) of land will be needed within the 58.27 Hectares of land. No additional land is required for the proposed expansion project. The land is industrial in nature. No forest land involved. The entire land has been acquired for the project. The river Kangsavati passes at a distance of 4.5 km from the project site. 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 lies between Latitude 22°21‘28.57"N to 22°22‘0.88"N &Longitude - 87°17‘12.15"E to 87°17‘55.48"E in Survey of India topo sheet No. 73 N/7 at an elevation of 33.5 m AMSL. The depth to water as measured in the open wells is between 11 and 12 feet below the land surface. The water occurring in deeper zones is under pressure and is reported usually to rise to within 25 to 30 feet below the land surface. The total thickness of the aquifer in the study area varies from 3.1 to 17.1 m.

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 Chapter-3.0, Section-3.12 reporting presence of flora and fauna in the study area.

7.0 Ductile Irons Pipes manufacturing process inter alia include Molten Hot Metal preparation and Chemistry correction; Magnesium treatment; Centrifugal Casting; Core Making; Mold Maintenance; Heat Treatment by Annealing Furnace; Zinc Coating; Hydraulic Pressure Testing; Cement Motor Lining; Bitumen Coating; and Finishing. A ductile iron pipe is produced with centrifugal casting method. The molten ductile iron is poured into a rapidly spinning water-cooled mould and centrifugal force results in an even spread of iron around the circumference.

8.0 The details of Raw materials required along with estimated quantity, sourced from and mode of transport is as given below:

Sr. No.	Name of the Raw Materials	Source (TPA)	Mode of Transportation	Estimated Quantity (TPA)
1	Pig Iron/ Hot Metal	Rashmi Metaliks Ltd., Kharagpur; Orissa Metaliks Pvt. Ltd., Kharagpur	Through Crane/ conveying System	3,75,000
2	Mold Powder	Local Market	Road	949
3	Refractory (WH-A+K)	Local Market	Road	2065
4	Ferro Silicon	Rashmi Cement Limited, Jhargram	Road	1050
5	Inoculants	Local Market	Road	336
6	Magnesium	Local Market	Road	595
7	Slag Coagulant	Local Market	Road	485
8	Zinc	Local Market	Road	662

9	Runner Coat	Local Market	Road	1789
10	Bitumen/ Epoxy Paint	WRAS* Approved Vendor	Rail/ Road	1472 KL

9.0 The solid waste generated along with existing and proposed quantity and disposal scheme as follows:

Sl	Particulars	Existing Quantity in TPA	Proposed Quantity in TPA	Total Quantity in TPA	Disposal Scheme
1	Core Sand & Slag	5429	10500	15929	Used for land filling
2	Cement Slurry	572	7324	7896	Sold to Brick Manufacturer
3	From APC Devices –Mg & Zn Dust	83	117	200	Used in sinter plant
4	Scrap	Variable	-	-	Used in the process

10.0 The daily make up water requirement for the entire existing plant is 1065 m^3/day and additional water requirement for the proposed expansion project is about 830 m^3/day. Thus, the total water requirement will be 1895 m^3/day. The raw water will be sourced from Kangsabati River and bore wells. The permission for drawl of groundwater / surface water is obtained from concerned authority.

11.0 The existing power requirement of the entire project is 30 MW and an additional power of 10 MW will be required for its DIP expansion project. Power will be sourced from WBSEDCL supply system & Captive Power Plant.

12.0 Baseline Environmental Studies were conducted during summer season i.e. from March, 2017 to May, 2017. Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated: PM10 (70.8 μg/m^3 to μg/m^3 to 82.8 μg/m^3 μg/m^3), $PM_{2.5}$ (29.8 μg/m^3 to 32.2 μg/m^3), SO2 (7.5 to 14.6 μg/m^3) and NOx (16.4 to 27.0 μg/m^3). The results of the modeling study indicated that the maximum increase of GLC for the proposed project is 4.04 μg/m^3 (NE direction) with respect to PM.

13.0 Ground water quality has been monitored in 9 locations in the study area and analyzed. pH: 6.9 to7.6, Total Hardness: 192 to 219 mg/l, Chlorides: 65 to 90 mg/l, Fluoride: 0.28 to 0.49 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 10 locations – 2 Kangsabati river water samples and 8 pond water samples. For Kangsabati River water, pH: 7.1 to 7.3; DO: 6.9 to 7.1 mg/l and BOD: 3 mg/l. For 8 pond water samples, pH: 6.9 to 7.8; DO: 5.9 to 6.6 mg/l and BOD: 4 to 8 mg/l.

14.0 Noise levels are in the range of 54.7 – 71.6 dB(A) for day time and 44.1 – 59.2 dB(A) for night time.

15.0 No R&R is involved.

16.0 It has been reported that a total of 17941 TPA of waste will be generated due to the project, out of which 10500 will be used for land filling, 7324 TPA will be sold to the brick manufacturar,

117 TPA will be used in Sinter Plant. The proposed DIP project shall be installed within the existing plant occupying total land area of 58.27 hectares. 27% of the total plant area is covered under Green Belt. Remaining 6% area will be covered with more plantation to attenuate the noise levels and trap the dust generated due to the project development activities.

17.0 Consent to establish is obtained from West Bengal State Pollution Control Board vide memo no. 56-2N-28/2009 (E) dated 19-01-2016 and Consent to operate is obtained from West Bengal State Pollution Control Board vide memo no. 5825-3888/WBPCB (HRO)-K/2014 (Unit-I) dated 16/03/2017 is valid up to 31-3-2022.

18.0 The Public hearing of the project was held on 29th August 2017 at Mahasakli Manasangha, Salkui, P.O. Malkalpur) near B.D.O. office), Kharagpur-1, Dist. Paschim Mednipur, West Bengal under the chairmanship of Mr. S.K Meena, I.A.S, Additional District Magistrate (G) & DLLRO, Paschim Medinipur for production of 0.55 million TPA of ductile iron pipes. The Statement of main issues raised by the public and response of the project proponent with action plan is as follows:

Sl. No	**Issues raised during PH**	**Response by project proponent (After PH)**	**Action Plan proposed**	**Budgetary provision as on 09-12-2017**
1.	To give the Mouza detail of the proposed project.	M/s. RashmiMetaliks limited stated the audience that the project location is atKhidirpurMouza, Village- Gokulpur, Shyamraipur.	Not Applicable	Nil
2.	To develop nearby village, development of village/ local road & improve road nearby existing RashmiMetaliks plant, contribute to local infrastructure development by providing playing & health facilities. He also requested them to give priority to local people for employment in their proposed project. He requested the project proponent to give assurance/commitments regarding the same.	RML stated that road nearby existing plant is being repaired periodically and in future more focus will be given to develop the local roads. RML in past given priority to the local people for employment opportunity based on their qualification for their existing plants / units.	Proper emphasis will be laid on the development of the local roads. The company will develop facilities for primary health in the surrounding villages. The existing practice will be adopted. The company Will give preference to	Rs 160 lacs have been allocated for the construction of road and Rs. 20 lacs are allocated for developing primary health facilities in the surrounding villagesas perEnterprise Social Commitment, in connection with the proposed project. Besides, Rs. 15 lacs are earmarked

			the local people for the employment in its proposed project, based on their qualification.	against training to unemployed educated local youth for skill development.
3.	To develop nearby village, improve local road conditions & develop a service road along the NH-6 Bombay Road. He also requested them to give priority to local people for employment in their proposed project as per their skill. Extensive greenery needed to be developed.	Already stated above regarding the development of the local village roads. However, it will be difficult for the company to construct new approach road nearby existing plant along with NH – 6, because the land belongs to NHAI and NHAI has proposal for increasing the lane of existing NH-6 Highway. Greenbelt development inside the plant premises is a regular activity.	Will give employment priority to the local people based on their academic qualification. Action has already been taken by management of RML for developing Green Belt by undertaking extensive plantation programme. Besides, the company has also planned for the development of parks and tree plantation in the nearby areas.	Rs 160 lacs have been allocated for the construction of roads in the villages as a part of ESC. Rs. 40 lacs have been allocated as CAPEX and Rs. 4 lacs as OPEX for the greenbelt development inside the plant area for environmental protection measures for the project. Besides, Rs. 20 lacs are allocated for the development of park and tree plantation in the nearby areas as per ESC.
4.	To give job to the land loser and develop nearby school & village under their corporate Social responsibility (CSR) Scheme.	The proposed expansion will take placewithin the existing plant premises, so no additional land is be required. The local people will be given employment opportunity based on	The companyhas identified certain areas, to be considered for imparting the CSR activities in the context of the local scenario of the area.	ESC expenditure incurred for Rashmi Group during 2016-17 is Rs168 lacs. For the proposed project,2.5 % of the project cost i.e., Rupees 413lacsshall be

		their qualification. The company has been providing necessary help to the nearby school & village through CSR program. The same will continue in future also.		utilized over a period of 5 years against Enterprise Social Commitment. Rs. 21 lacs have been allocated for the financial support to the local school.
5.	To operate their pollution control device for the proposed project efficiently and continuously during process activities, emphasis on improvement of the local road condition. He however emphasized on the need to control pollution.	The company has already installed the necessary Pollution Control devicesin its existing operational plant. In the proposed project also, various control devices shall be installed for the control of pollutants, to be generated.	For the proposed plant, adequate control measures like installation of bag filters, dust suppression system& to keep the emission within the permissible limit. OCEMS (online Continuous Emission Monitoring System) will be installed and will be connected to CPCB server as per CPCB guideline to keep track of real time emission. The plant will be designed as zero liquid discharge plant.	Adequate fundi.e., CAPEX (RS. 7 crores) and OPEX (Rs 70 Lacs) has been allocated for environmental mitigation measures, out of which 2.7 crores are earmarked as capital expense on air pollution control systems.
6.	Issues related to the regular working of existing air pollution control system, red water coming out of the existing operational plant, and also raised	There is efficient operation of the respective Air Pollution Control devicesin the existing plant, which contain the resultant emission	To control red water discharge, the company management engaged experts & technical persons and after	Expenditure already incurred by management of RashmiMetaliks Limited in civil works for

	question on Public hearing announcement procedure. No proper publicity was done.	levels of various pollutants within the permissible limit. The plant is designed as zero liquid discharge plant. However, during monsoon due to heavy rain, storm water is discharged outside the plant. Announcement for public hearing was made with mention of venue and date.The same has been captured through various photographs.	detail study, it has been finalized that a storm water reservoir will be made where the excess water will be collected, which will be used for dust suppression and controlling fugitive emission. The initial step for construction of storm water reservoir has already been taken by the management.	construction of storm water reservoir to arrest effluent discharge is rupees 5.6 Lacs..
7.	To give the Mouza detail of the proposed project. He also stated that within 10 Km area habitation is there, but project proponent is misguiding the local people by stating no habitation is there.	M/s. RashmiMetaliks limited stated to the audience that the project location is at KhidirpurMouza, Village- Gokulpur, P.O-Shyamraipur. The proposed expansion project will be installed within the existing plant premises. So, no additional land will be required.	Not Applicable.	Nil
8.	Strongly objected to proposed project. Polluted water is being discharged from the existing unit creating pollution and damaging crops. Local people are being forced to give up their land. No CSR work is being done. The upcoming project will	The local land owners sell their land for industrialization after various discussions and proper negotiation only. The upcoming project will be set up within the existing premises so the local people will not be get affected.	To control red water discharge, management engaged experts & technical persons and after detail study it has been finalized that a storm water reservoir will be made where the	ESC expenditure incurred for Rashmi Group during 2016-17 is 168 lacs.For the proposed project, rupees 413 lacs are earmarked, which will be utilized in 5

	come within 500 m. of densely populated area. Green belt is being totally destroyed. The area is being devastated due to the operation of the industry. Deputation has placed before the administrative authorities. The Air pollution control device is not being operated. Effluent (red water) is discharged from the existing operational plant, dust Emission problem from the existing unit, frequent accidents problem nearby plant, land procuring procedure, C.S.R fund utilization, safety and welfare of the workers of the unit and not providing jobs to the local people. He also stated that within 10 Km area habitation is there, but project proponent is misguiding by stating no habitation is there near by the plant area.	RML has been undertaking various CSR activities since long and ensure the same will continue in future. The plantation is done on regular basis. The existing APC devices are efficiently operated to contain the pollutants' concentrations with in the permissible levels, which is also cross checked by West Bengal Pollution Control Board. The water comes out from the plant due to over flooding of heavy rain water in monsoon season. The company management engaged experts to overcome this problem. Land is procured for Expansion of Industry to generate Employment, develop the socio economic of the area. The industry was commissioned in the year 2007 at Gokulpur, Shyamraipur, district Paschim Mednipur. After setting up of the industry, the socio-economic condition of this area has very much improved.	excess water will be collected, which will be used for dust suppression and controlling fugitive emission. The initial step for construction of storm water reservoir has already been taken by the management.	years. Besides, adequate fund i.e., CAPEX (RS. 7 crores) and OPEX (Rs 70 Lacs) has been allocated for environmental mitigation measures. Expenditure already incurred by management of Rashmi Metaliks Limited in civil works for construction of storm water pond to arrest effluent discharge is rupees 5.6 Lacs.
9.	Happy with the past C.S.R activities carried out by project proponent like organizing Blood	Stated the actual CSR activities and motive of RML.	Not Applicable	Nil

	Donation camps, Eye Checkup Camps, providing ambulance services to the accident victims, supporting / funding nearby school. While addressing the above said statement he said that he came to know about this Public hearing after getting leaflet that was distributed by project proponent. In addition to this, he said that the huge direct/indirect job opportunities is being created in the existing operational plant and mentioned that both direct and indirect employment will be generated due to the proposed project.			

19.0 The company proposes to invest on the Enterprise Social Commitment (ESC) activities. For this purpose, the company proposes to 4.13 Crores, which is 2.5% of the total project cost (Rs. 165 Crores). This fund shall be utilized over a period of 7 years. Company has identified certain areas, to be considered for implementing the ESC activities in the context of the local scenario of the area:

PROPOSED ESC ACTIVITIES	INVESTMENT (IN LACS)							
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Total
Construction of W/C/Toilet (2) each for 6 schools. (@ Rs. 7.00 Lakhs per set of 2 Toilets)	7	7	7	7	7	7	-	42.0
Drinking Water Infrastructure (Tubewell in nearby villages – 10 nos. @ Rs. 1.5 Lakhs)	3	3	3	1.5	1.5	1.5	1.5	15.0
Construction of metal consolidation road (10 km) in villages ((@Rs. 16 Lakhs per km)	25	25	24	24	24	19	19	160.0
Development of Community Hall – Total 4 nos. (@ Rs. 10 Lakhs per Hall)	7	7	7	5	5	4.5	4.5	40.0

Local Village Pond upgradation - 3 ponds (@ Rs. 5 Lakhs per Pond)	3	3	2	2	2	2	1	15.0
Street Lighting (solar) provision at suitable public places – 50 nos. (@ Rs. 0.5 Lakhs per Solar Light)	4	4	4	4	3	3	3	25.0
Financial Support to the Local School for extension of building / class room	4	4	4	3	2	2	2	21.0
Construction of charitable Dispensary	3	2	1	1	1	1	1	10.0
Primary health for the surrounding villages	4	3	3	3	3	2	2	20.0
Financial Support to Local Temple	6	6	4	4	4	3	3	30.0
Training to unemployed educated local youth for skill development.	3	2	2	2	2	2	2	15.0
Developments of parks, plantation of trees in the nearby area.	4	4	3	3	2	2	2	20.0
TOTAL								413

20.0 The capital cost of the project is Rs 165 Crores and the capital cost for environmental protection measures is proposed as Rs 700 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 70 Lakhs. The employment generation from the proposed project / expansion is 600 (regular), 500 (on contractual) basis. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Sl. No.	Description	Capital cost, Rs. Lakhs	Recurring cost per annum, Rs. Lakhs
1	Air Pollution Control Systems	270	27
2	Water conservation & Pollution Control	120	12
3	Solid Waste Management System	70	7
4	Green belt development	40	4
5	Noise Reduction Systems	80	8
6	Occupational Health Management	70	7
7	Risk Mitigation & Safety Plan	30	3
8	Environmental Management Department	20	2
TOTAL		700	70

21.0 The proposed DIP project shall be installed within the existing plant occupying total land area of 58.27 hectares. 27% of the total plant area is covered under Green Belt. Remaining 6% area will be covered with more plantation.

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

23.0 EIA/EMP prepared by EIA Consultant: M/s Envirotech East Private Limited, Kolkata vide Accreditation No.: NABET/EIA/1011/010.

24.0 The proposal was considered in the 28th meeting of EAC held during 5th – 7th February, 2018. After deliberations, the committee observed that non-compliances reported by Regional Officer was not closed; Transfer of hot metal from Orissa Metaliks Limited (Group Company of Rashmi Metaliks) is proposed which involve Environmental and safety Issues; several non-compliances of ToRs prescribed for EIA report.

25.0 Therefore, the Committee sought revised EIA report incorporating following:

1. Closure report of all non-compliances of earlier EC conditions reported by RO, MoEFCC

2. Revised table of issues raised during PH, commitment of PP, time bound action plan along with fund provision.

3. 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.

4. Revised Corporate Environmental Policy addressing the standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions to the board of directors directly; hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions

5. EIA report shall be revised as per the generic structure given in EIA Notification 2006 and compliance to all the ToRs.

6. Detailed Hazard Identification and Risk Assessment (HIRA) and project specific/site specific HIRA;

7. Based on HIRA, the detailed DMP inter alia including EP&RP for proposed hot metal transport from the group company.

8. In EIA report, Criteria for selection of sampling location, interpretation of baseline data and revised socio-economic and ecology and biodiversity report shall be furnished.

9. Revised air quality modelling for normal, abnormal and emergency situations shall be carried out

25.0 The project proponent has submitted reply to ADS to the issues raised in 28th and 29th EAC meetings. The details inter alia include:

Point 1. Closure report of all non-compliances of earlier EC conditions reported by RO, MoEF&CC

Reply: The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar

vide Letter No. 110-238/EPE dated 27th March, 2018. Enclosed as Annexure-II in EIA Report.

Point 2. Revised table of issues raised during PH, commitment of PP, time bound action plan along with fund provision

Reply: The Public hearing of the project was held on 29th August 2017 at Mahasakli Manasangha, Salkui, P.O. Malkalpur (near B.D.O. office), Kharagpur-1, Dist. Paschim Mednipur, West Bengal under the chairmanship of Mr. S.K Meena, I.A.S, Additional District Magistrate (G) & DLLRO, Paschim Medinipur for production of 0.55 million TPA of ductile iron pipes. The Statement of main issues raised by the public and response of the project proponent with time bound action plan along with fund provision is as follows:

S. N	Issues raised during PH	Response by project proponent (After PH)	Time Bound Action Plan proposed	Budgetary provision
1	Develop nearby village, development of village/ local road & improve road nearby existing Rashmi Metaliks plant.	Since its inception, Rashmi Metaliks Ltd. (RML) is committed for the development and upliftment of socio-economic status of the entire Jangal Mahal Area. CSR expenditure incurred for Rashmi Group during 2016-17 is Rs. 1.68 Crores. The company stated that the road nearby its existing plant is repaired periodically in consultation with Road Construction Department, Govt. of West Bengal and in future more focus will be given to develop the local roads under the proposed ESC Activities. RML has already made application with the supporting documents and the processing fees to NHAI, PIU Kharagpur for the construction of the service road of approx. 2.6 km length from Saha Chowk to its plant.	The company has decided to invest in the following areas for the development of the nearby villages & development of the local roads: • Development of Community Halls • Drinking Water Infrastructures in the nearby villages • Local Village Pond up gradation • Construction of metal consolidation road in villages. Besides, the company will coordinate with Road Construction Department officials for repairing of road facility in the nearby area. New Service road will be constructed after getting final approval from NHAI. The entire job will be completed in 5 years' time.	The company has earmarked Rs. 40 lacs for Development of Community Halls under ESC. Rs. 15 lacs have been allocated for the Drinking Water Infrastructures in the nearby villages. Rs. 15 lacs have been earmarked for Local Village Pond up gradation. Rs 160 lacs are allocated for Construction of metal consolidation road in villages.
2	Give priority to local people including land losers for employment in the proposed project.	RML has given priority to the local people for employment opportunity in its existing plants, based on their academic qualification and skill. In the proposed project also, local people will be given preference, based on requirement and skill.	As in the existing project, the emphasis will be laid on the employment of the local people. Necessary fund under ESC has been earmarked by the company for Skill Development, which will	Under ESC, Rs. 15 lacs are earmarked for Skill development to unemployed local youth through National Skill Development Corporation, Govt. of India Scheme.

			be invested over a period of 5 years.	
3	Local people are being forced to give up their land.	The local land owners sell their land for industrialization (setting up green-field plant and also for recreational work, greenbelt development/ creation) after various discussions and proper negotiation only. The upcoming project will be set up within the existing premises so the local people will not get affected.	-	-
4	Contribute to local infrastructure development by providing sports playing & health facilities.	RML stated that in past Financial Support is given to the Local School for extension of building class room, GYM centre. Free Medical Camps, Health check-up for surrounding villages is organised on regular basis. Rashmi Group has its own ambulance, which is available to the villagers round the clock in case of emergency.	Financial Support under ESC for next five years will be given in following segments: • Supporting schools for establishment of playgrounds in providing the facilities like badminton court, tennis court and levelling of ground. • Construction of charitable Dispensary • Providing equipment to the local hospitals 5 years (tentatively by 2023)	Company has earmarked Rs. 30 lacs for Supporting schools for establishment of mini sports complex or playgrounds under Enterprises Social Commitment. Rs. 10 lacs have been allocated for Construction of charitable Dispensary. Rs. 20 lacs have been allocated for Providing equipment to the local hospitals.
5	Develop nearby school.	RML in past has developed and provided necessary help to the nearby school through CSR program, which will continue in future.	The company has planned to invest in the following areas under ESC over a period of 5 years: • Financial Support to the Local School for extension of building / class room • Supporting schools for establishment of mini sports complex or playgrounds in providing the facilities like badminton court, tennis court and levelling of ground. • Construction of Toilets at schools	Company has earmarked Rs 21 Lacs for Financial Support to the Local School for extension of building / class room under Enterprises Social Commitment. Rs. 30 lacs are earmarked for Supporting schools for establishment of mini sports complex or playgrounds. Rs. 42 lacs are allocated for Construction of Toilets at schools & at community places.

6	Red water coming out of the existing operational plant and damaging crops.	Plant is designed as zero discharge plant. But, sometimes, the water comes out from the plant due to over flooding during heavy rains in monsoon season, not from process water. In order to address the issue, a storm water reservoir is being constructed to collect the excess run-off water, which will be used for dust suppression. At present, there is no water discharge outside plant premises. The excess water, if any, left is pumped to the movable water tanker for its subsequent use for dust suppression.	The construction of storm water pond is already in progress, which will be completed by December 2018.	For Storm water pond construction, fund, allocated in CAPEX and OPEX of the existing project is being utilized.
7	Air pollution control device is not being operated. Dust Emission problem from the existing unit.	Existing Plant is having valid Consent to Operate from WBPCB. Latest Stack Monitoring Report from WBPCB & water report from NABL accredited lab also confirms the compliance of the industry on environment protection measures. In the existing plant adequate control measures like Electrostatic Precipitators, bag filters, Venturi Scrubber, Cyclone Separator, dust suppression system are already in place at the relevant points. All the major stacks are equipped with online continuous monitoring system to ensure the desired efficiency of the respective control systems.	Not applicable	Nil
8	Green belt is being totally destroyed. The area is being devastated due to the operation of the industry.	At present, 27% of the existing plant area is under green Belt. This is being further increased with more plantations. An Initiative has been taken by management of RML in this direction by engaging third party for extensive green belt development. In the financial year 2018-2019, 500 plantations are proposed in phase-wise manner and for this, pit cutting work has already started on 10 acres of additional land nearby plant area.	More Green Belt Development in the existing plant is under process. For Development of parks, plantation of trees in the nearby areas fund is earmarked in ESC, which will be invested over a period of 4 years.	For Green Belt development already fund was deployed in CAPEX and OPEX of existing project and is being utilized in a time bound manner. Apart from this, the company has allocated Rs 20 Lacs for Development of parks, plantation of trees in the nearby areas under Enterprises Social Commitment.
9	Frequent accident problems near existing plant. Safety and welfare of the	PPEs are provided to the workers with strict imposition and mandatory practice for all the workers to use the PPEs. Proper operating condition is being	Adequate fund allocation has been done for Risk Mitigation & Safety Plan for the proposed project.	Adequate funds from proposed project have been deployed in CAPEX (RS. 30 Lacs) and OPEX (Rs 3 Lacs) for Risk Mitigation &

	workers of the unit.	maintained along with regular health check-up and rotational work policy so that the same worker is not exposed beyond threshold limit.		Safety Plan and will not be diverted to other purpose.

Point 3: 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.

Reply: The Company proposes to invest on the Corporate Environment Responsibility (CER) activities. For this purpose, the company proposes to 4.13 Crores, which is 2.5% of the total project cost (Rs. 165 Crores). This fund shall be utilized over a period of 5 years. Company has identified certain areas, to be considered for implementing the CER activities in the context of the issues raided during Public hearing and local scenario of the area:

Proposed CER activities	Investment (in lacs)					Total (in lacs)
	Year 1	Year 2	Year 3	Year 4	Year 5	
PUBLIC HEARING RELATED ACTIVITIES						
Construction of 14 nos. Toilets at schools & community places (@ Rs. 3.00 Lakhs per set of 2 Toilets, separately for Ladies & Gents)	9	9	9	9	6	42.0
Drinking Water Infrastructure (Tube well in nearby villages – 10 nos. @ Rs. 1.5 Lakhs)	4.5	4.5	3.0	1.5	1.5	15.0
Construction of metal consolidation road (10 km) in villages ((@Rs. 16 Lakhs per km)	32	32	32	32	32	160.0
Development of Community Hall – Total 4 nos. (@ Rs. 10 Lakhs per Hall)	10	10	10	10	-	40.0
Local Village Pond up gradation - 3 ponds (@ Rs. 5 Lakhs per Pond)	5.0	5.0	5.0	-	-	15.0
Financial Support to the Local School for extension of building / class room	5	5	4	4	3	21.0
Construction of charitable Dispensary	3	3	2	1	1	10.0
Promotion of Sports (Distribution of sports materials like Football, Volleyball, Cricket etc. among the villagers.)	8	7	6	5	4	30.0
Skill development to unemployed local youth through National Skill Development Corporation, Govt. of India Scheme	4	3	3	3	2	15.0
Development of parks, plantation of trees in the nearby areas.	5	5	4	3	3	20.0
NEED BASED ACTIVITIES						
Street Lighting (solar) provision at suitable public places – 50 nos. (@ Rs. 0.50 Lakhs per Solar Light)	5.0	5.0	5.0	5.0	5.0	25.0
Primary health for the surrounding villages	5	4	4	4	3	20.0
TOTAL						413

Point 4 : Revised Corporate Environmental Policy addressing the standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions to the board of directors directly; hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions.

Reply: Revised Corporate Environment Policy approved by Board of Director along with Board Resolution for constitution of "Corporate Environment Cell" (CEC) is enclosed as **Annexure-X** in Revised EIA Report. Hierarchical system to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions is shown in Organization Structure.

Point 5: EIA report shall be revised as per the generic structure given in EIA Notification 2006 and compliance to all the ToRs.

Reply: Revised EIA Report is made as per the generic structure given in EIA Notification 2006 and compliance to all the ToRs condition.

Point 6: Detailed Hazard Identification and Risk Assessment (HIRA) and project specific/site specific HIRA.

Reply: Hazard identification and Risk Assessment (HIRA) specific to the Iron & Steel Industry operations are given in Chapter -7.0, Page C7-1 to C7-19 of Revised EIA Report.

Point 7: Based on HIRA, the detailed DMP inter alia including EP&RP for proposed hot metal transport from the group company.

Reply: Proposed mitigation measures based on Hazard identification and Risk Assessment (HIRA) for Iron & Steel Industry specific to hot metal transport from the group company are given in Chapter -7.0, Page C7-19 to C7-29 of Revised EIA Report.

Point 8: In EIA report, Criteria for selection of sampling location, interpretation of baseline data and revised socio-economic and ecology and biodiversity report shall be furnished.

Reply: Revised socio-economic and ecology and biodiversity report with finding of socio economic survey, Criteria for selection of sampling location and interpretation of baseline data are given in Chapter -3.0, Page C3-52 to C3-77 of Revised EIA Report.

Point 9: Revised air quality modeling for normal, abnormal and emergency situations shall be carried out

Reply: Air quality modeling for normal, abnormal and emergency situations are given in Chapter -4.0, Section-4.3, Page C4-4 to C4-10 of Revised EIA Report.

Observations of the committee:

The committee deliberated on the reply to ADS and certificate of compliance of the earlier EC conditions and observed that the reply to additional information sought is satisfactory.

Recommendations of the committee:

26.0 After detailed deliberations, the committee recommended for grant of environmental clearance under the provisions of the EIA Notification, 2006 subject to following specific and general conditions:

A. Specific conditions:

1. The Project Proponent shall take the responsibility of implementing the HIRA and implementation of Risk Assessment Plan during the transportation of hot metal envisaged from the adjacent M/s Orissa Metaliks Limited.

B. General Conditions:

1. An amount of Rs 4.13 Crores proposed towards Corporate Environmental Responsibility (CER) as proposed in the EMP shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.

2. 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.

3. The Capital cost Rs. 700 Lakhs and annual recurring cost Rs. 70 Lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.

4. The project proponent shall (Air Quality Monitoring):

    a. 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(Integrated iron & Steel) as amended from time to time; 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.

    b. monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.

    c. Install system carryout to Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions;

d. 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.

5. The project proponent shall (Water Quality Monitoring):

a) install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel) 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.

b) 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; and

c) 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.

6. The project proponent shall (Air Pollution Control):

a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards;

b) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;

c) provide secondary emission control system at SMS Converters;

d) provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;

e) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;

f) 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;

g) use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin;

h) provide wind shelter fence and chemical spraying on the raw material stock piles; and

i) design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

7. The project proponent shall (Water Pollution Control):

g) provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;

h) adhere to 'zero liquid discharge';

i) provide Sewage Treatment Plant for domestic wastewater;

j) provide garland drains and collection pits 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;

k) provide tyre washing facilities at the entrance of the plant gates;

l) introduce CO_2 injection in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning; and

8. The project proponent shall (Water conservation):

a) practice rainwater harvesting to maximum possible extent;

b) provide water meters at the inlet to all unit processes in the steel plants; and

c) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

9. The project proponent shall (Energy Conservation):

a) provide TRTs to recover energy from top gases of Blast Furnaces;

b) practice waste heat recovery from Sinter Plants coolers and Sinter Machines;

c) use torpedo ladle for hot metal transfer as far as possible. If not use ladles covers for open top ladles;

d) use hot charging of slabs and billets/blooms as far as possible;

e) provide waste heat recovery systems in all units where the flue gas or process gas exceeds 300°C;

f) explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed;

g) restrict Gas flaring to < 1%;

h) 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;

i) provide LED lights in their offices and residential areas; and

j) ensure installation of regenerative type burners on all reheating furnaces.

10. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.

11. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.

12. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.

13. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.

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

15. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.

16. 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

17. 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.

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

19. 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.

20. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.

21. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.

22. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

23. 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.

24. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

25. 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).

26. The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management &Transboundary Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens.

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

28. 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.

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

30. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

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

32. The project proponent shall (Post-EC monitoring):

    a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;

    b. put on the clearance letter on the web site of the company for access to the public.

    c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http:/envfor.nic.in.

d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;

e. monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;

f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;

g. 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;

h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

32.8. Proposed Technology Demonstration Plant (TDP) [For processing 1900 TPA of Zircon and 3500 TPA of Ilmenite] within the existing premises of Orissa Sands Complex of **M/s Indian Rare Earths Limited** at Orissa Sands Complex, village Matikhalo, Tehsil Chatrapur, District Ganjam, State Orissa. **[Online Proposal No. IA/OR/IND/22927/2014;** MoEFCC File No. J-11011/44/2014-IA-II (I)] **– Further consideration for Environmental Clearance based on reply to ADS.**

1.0 **M/s Indian Rare Earths Limited** made online application vide proposal no. IA/OR/IND/22927/2014, dated 15.04.2017 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. 2(b) Mineral Beneficiation under Category "A" EIA Notification 2006 and the proposal is appraised at Central level

2.0 The Technology Demonstration Plant of M/s Indian Rare Earths Limited (IREL) located in Village Matikhalo, Tehsil Chatrapur, Ganjam District, Odisha, State was initially received in the Ministry on 17.01.2014 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 17th meeting held on 18.03.2014 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 19.05.2014 vide Lr. No J-11014/44/2014-IA-II(I).

3.0 The project of M/s Indian Rare Earths Limited (IREL) Orissa Sands Complex (OSCOM), located in Matikhalo Village, Chatrapur Tehsil, Ganjam District, Odisha State is for setting up of a new Technology Demonstration Plant for Production of 1900 TPA of Zircon and 3500 TPA of Ilmenite. The existing project was accorded environmental clearance vide lr.no.21/18/84-ENI/IA.II dated 14th May 1991 for OSCOM operations and vide letter No J-14011/5/91/IA-I dated 24th September 1993 for Thorium Plant Operations. Subsequently EC was granted Vide Letter No J-11015/348/2009-IA.II (M) dated 9th February 2011 for Monazite Processing Plant (MoPP). The

expansion of Mining and Mineral Separation Units (CEMMU) to enhance the Raw sand mining from 25,00,000 TPA to 75,00,000 TPA, EC has been granted vide Letter no: J-11015/528/2007-IA.II (M) dated 23rd September 2014 subject to submission of Stage –I Forest Clearance for the forest land involved. The Status of Compliance of Earlier EC was obtained from Regional Office, Eastern Region, Bhubaneshwar vide Lr. No No 101-05/EPE/235 dated 22.01.2018 for OSCOM and No 101/EPE dated 08.01.2018 for MoPP . There are no non-compliances reported by Regional officer. The existing plant end products and their capacities are as follows:

Sl.	Plant	End product	Capacity (TPA)
1	Mining & Mineral Separation	Ilmenite along with other associated heavy minerals	2,20,000 T of ilmenite plus 46,000 T of associated heavy minerals.
2	ZPP	Zirconia & zirconia based chemicals	3.5
3	Monazite Processing Plant	Tri Sodium Phosphate (TSP)	13500
		Rare Earths Chloride	10375
		Ammonium Di-uranate as U_3O_8	22 – 26
		Thorium Oxalate	2000
		Thorium Nitrate/Thorium Oxide	150

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

Name of Unit	Number of Units	Capacity of Each Unit	Production Capacity
Technology Demonstration Plant	1	Production Capacity 1. Zirconium oxy chloride 2. Titanium dioxide 3.Iron Oxide (RED) **By Products** 1. High pure silica 2. Ammonium Chloride crystal 3. Gypsum	 3416 TPA 1672 TPA 1038 TPA 566 TPA 3197 TPA 10513 TPA

4.0 The total land required for the project is 7500 m^2, which is within the existing premises of IREL, OSCOM. No land acquisition or land use conversion is proposed. No forestland involved. 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 a flat terrain with a gentle slope and it is within existing premises of OSCOM plant. and reported to lies between Point A: 19º18’45.66” N, 84º57’51.34” E; Point B: 19º18’47.32” N, 84º57’53.22” E; Point C: 19º18’49.71” N, 84º57’50.90” E; Point D: 19º18’48.04” N, 84º57’49.02” E at an elevation of 8 -12.m AMSL.

6.0 No National Parks / wild life sanctuaries / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. are located within the Core and Buffer Zone of the Project. The authentic map from CWLW is also provided by the proponent. The authenticated list of flora and fauna provided reporting the presence of Schedule I Species i.e. Olive Ridley Turtle at about 12 km from the

project site.

7.0 'OR' zircon is fused with caustic for production of frit. The frit manufacturing process involves fusion of zircon sand in the presence of caustic or caustic flakes. The sintered mass is leached with water. The water soluble rich sodium silicate is removed by filtration and kept in a separate storage tank for recovering silica value. The slurry is filtered and the air-dried cake known as frit is allowed to react with dilute sulphuric acid. The zirconium present in the frit is converted to zirconium sulphate while silica present as sodium silicate in the frit is converted to silicic acid gel. The zirconium sulphate slurry is filtered to separate zirconium sulphate solution from silicic acid and purified by Solvent Extraction (SX) process. The SX is carried out in counter current 'Mixer Settlers' which involves three steps i.e. Extraction, Scrubbing and Stripping. The stripped-out solution is converted to zirconium sulphate. The sulphate slurry is converted to zirconium hydroxide by ammonia and filtered. After washing, zirconium hydroxide wet cake is collected. For production of Zirconium Oxy-chloride, the wet hydroxide cake is re-dissolved in concentrated HCl and cooled. The zirconium oxy-chloride crystal is precipitated & filtered. The mother liquor is recycled after recovery of zirconium oxy-chloride. The sodium sulphate filtrate is treated with calcium chloride to precipitate sulphate value as Gypsum. The filtrate containing 11% w/v of sodium chloride is collected separately for further processing. The wash water generated from the frit washing (for sodium removal) is enriched with sodium chloride which is collected separately for further processing. The effluent obtained from hydroxide section is a mixture of ammonium sulphate and ammonium chloride which is then treated with calcium chloride to precipitate sulphate value as Gypsum. Pure ammonium chloride solution is sent to evaporator for concentration and recovered as a by-product after crystallization. The sodium silicate leach liquor obtained from frit production unit is treated with un-slaked lime under controlled precipitating conditions to precipitate out Calcium silicate leaving behind Sodium hydroxide in filtrate. Dissolution of calcium silicate in conc. HCl precipitates out silica and calcium chloride so produced is used for extraction of sulphate value present in zirconium hydroxide filtrate. By this process, Sodium hydroxide with a concentration of approximately 12-13% w/v is generated which is re-utilized to precipitate out Copperas for production of Iron oxide Red pigment.

8.0 The targeted production capacity is processing 1900 TPA of Zircon and 3500 TPA of Ilmenite.

9.0 M/s IREL was accorded to use 13,500 m^3 /day of water, supplied by Orissa Public Health & Engineering Department (OPHED) as per contractual agreement and 1,776 m^3 /day of bore well water (from existing 12 number of bore wells) for existing operations at rated capacity. The total raw water requirement for TDP is 238 m^3 /day. This water will be met from the existing OPHED water supply system or through one single bore well (existing).

10.0 M/s IREL has an agreement with Orissa State Electricity Board (OSEB) for supply of power up to 15 MW. Due to the stoppage of Chemical Plants, the contract demand has been reduced to 6.5 MW. The present power consumption for existing Mining & Mineral Separation units is around 4.8 MW and 3.6 MW for Monazite Processing Plant. The additional power requirement for proposed Capacity Expansion of Mining & Mineral Separation Units (CEMMU) will be around 6.0 MW, and 2.0 MW for TDP. Therefore, the total power requirement will be around 16.4 MW which will be met by increasing contract demand of existing power supply agreement with SOUTHCO, OSEB. Provision of one D.G. set (250 KW capacity) may be taken

up in future depending upon the requirement which will be operated occasionally in case of power failure.

11.0 Baseline Environmental Studies were conducted during post-monsoon season i.e. from October to December 2014. Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated: Particulate matter (PM10) ranges from 42.3 to 63.4 μg/m3 ; Particulate matter (PM2.5) ranges from 16.4 to 28.7 μg/m3 ; Sulphur dioxide (SO2) are 10.1 to 15.2 μg/m3 ; Oxides of Nitrogen (NOx) are 15.3 to 21.3 μg/m3 ; and Carbon monoxide (CO) are 0.6 to 1.3 μg/m3 The predicted Ground Level Concentrations (GLCs-max) are Particulate matter (PM10) is 4.78 μg/m3 ; Sulphur dioxide (SO2) is 7.65 μg/m3 ; Oxides of Nitrogen (NOx) is 4.36 μg/m3 ; HCl is 0.14 μg/m.

12.0 Ground water quality has been monitored in 8 locations in the study area The results of the collected ground water samples show that most of the water samples collected adhered to IS permissible limits for drinking water sources. The pH values of the ground water samples were found to be in the range of 6.8 – 7.9. The Total dissolved solids of the ground water samples were found to be in the range of 153 - 1157 mg/l. The Total hardness value of the ground water samples were found to be in the range of 37 - 598 mg/l.

13.0 The Noise levels observed in the study area at 8 locations indicated that Leq (Day) ranges from 50.0 to 67.8 dB(A) and Leq (Day) ranges from 42.3 to 62.9 dB(A).

14.0 It has been reported that there are no people in the core zone of the project. No R&R is involved. It has been envisaged that no families to be rehabilitated.

15.0 The main solid waste from the Technology Demonstration Plant will be Insoluble mass from Ilmenite processing unit (156 kg/day), Iron and Heavy metal solid cake from SX-2 (1774 kg/day), the un-reacted mass from Zircon processing unit (90 kg/day) and ETP cake (481 kg/day). The insoluble mass along with Iron and Heavy Metal solid cake from Ilmenite processing will be stored for recovery of valuable rare elements like vanadium and niobium. Unreacted mass from Zircon processing unit can be sold as by-product. Solid waste of ETP cake will be stored in an identified location. About boiler ash and clinker, generated from the proposed boiler house, will be periodically transported to low lying/mined out area for backfilling and road making. Plantation will also be developed around the interim storage area. The possibility of selling it to brick manufacturers shall be explored in future.

16.0 It has been reported that the Consent to Establish from the State Pollution Control Board, Odisha obtained vide Lr. No.8191/Ind-II-NOC-5831 dated 16th May 2015 and consent is valid up to 15th May 2020.

17.0 The public hearing was scheduled on 22.04.2016 under the chairmanship of Additional District Collector, but it was postponed due to entering of miscreants/anti-socials forcibly to the venue/dais area. The Public hearing was conducted again on 6th December 2016 at old site office of IREL, in front of SBI (IREL Campus branch), Matikhalo, Chatrapur. The main issues raised during the PH are non-compliance of commitments made during earlier PH; pollution; plantation in the project including mining area; infrastructure development; etc. An amount of 35.0 Lakhs (2% of projected profit before tax for TDP) has been earmarked for Enterprise Social Commitment

based on public hearing issues.

18.0 The total project cost is Rs. 54.16 Crores for establishing Technology Demonstration Plant, out of which Rs. 450 Lakhs will be the capital investment for environment and pollution control measures. Provision of Rs. 9.0 Lakhs will be the annual recurring expenditure for pollution control and maintaining the environmental safeguard measures

19. Green belt will be developed in 2475 m2 in project area and along periphery of the site. In addition to that, thick green belt will be developed along the Tsunami protection bund. Apart from the bulk plantation around the boundaries, roadside avenue plantations will also be taken up. Based on the agro-climatic conditions of the region, location of the proposed plant, physico bio-chemical properties of the soil strata, nature of the pollutants and their rate of dispersion, it is. suggested to develop greenbelt around the plant. It was reported that mass scale plantation in mined out area is already in progress for the exiting OSCOM plant operations

20. IREL confirms that there is no court case or violation under EIA Notification to the project or related activity.

21.0 The proposal was considered in the 18th meeting of Expert Appraisal Committee held during 3rd-5th May 2017. Based on the presentation and detailed deliberations held, the committee desired following information for further consideration of the proposal.

i. EIA/EMP should address the acids and bases generated in the process; recovery of by products; biological degradation of hazardous primary amines and volatile solvents used for solvent extraction.

ii. Wastewater management plan to achieve zero liquid discharge (ZLD).

iii. Assessment of concentrations of Alpha and Beta radiations in pre and post treatment of effluents.

iv. 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.

v. Risk Assessment report should also include site specific also

vi. Storage facilities and operations for all the hazardous substances utilised in the process. The damage criteria and consequent analysis shall be addressed on the layout plan of the plant.

vii. Comprehensive details of existing and proposed plant with respect of land, production, configuration of the processing units and by products shall be provided.

viii. Comprehensive details of existing and proposed plant with respective to emissions, discharge and control measures shall be provided.

ix. Certified compliance report of earlier EC of the existing plant from the RO, Bhubaneswar shall be submitted.

x. Greenbelt development plan shall be prepared and submitted with substituting the casuarina species with other indigenous species.

xi. The site plan/plant layout shall be prepared clearly showing the existing plant, proposed TDP, greenbelt, approach road, internal roads, mining lease area, etc.

xii. Conservation measures for Olive Ridley Turtles.

xiii. The PP should confirm that the proposed plant area does not fall under CRZ.

22.0 The project proponent submitted reply to the ADS. The details of reply is as follows:

Point No.1: EIA/EMP should address the acids and bases generated in the process; recovery of by products; biological degradation of hazardous primary amines and volatile solvents used for solvent extraction

Reply: Source of Acids & Base Generation in the process are as follows:

No.	Plant	Sources	Qty. (Per day)	Nature of the Effluent	Qty./day discharged to ETP	Treatment Required
1	Titanium Dioxide	From Gypsum Section	16,135 kg	Acidic	27,059 kg	Dosing by CaO
2	---Do---	DM plant	10,924 kg	Mild alkaline		
3	--Do---	Sodium Chloride from Iron oxide production unit	48,427 kg	acidic	48427 kg	Evaporation
4	----Do--	Sodium Chloride from Solid waste Section	5,393 kg	Neutral	5393 kg	Evaporation
5	---Do---	Sodium Chloride from Organic activation Section	15,706 kg	Neutral	15706 kg	Multiple Effect Evaporation
6	Zirc. Oxy-chloride	From Silica Unit	2,988 kg	Acidic	9986 kg	Dosing by CaO
7	--DO--	DM plant	6,998 kg	Mild alkaline		
8	---Do--	Sodium Chloride from frit wash and Gypsum unit	21,281 kg	Mild acidic	21281 kg	Evaporation
9	---Do---	Ammonium Chloride bearing wash liquor from zirconium Hydroxide section	87,402 kg	Ammonical	87,402kg	Evaporation
Total			2,15,254			

Recovery of by products

The technology involves chemical processing of zircon and Illmenite in an integrated manner with few common input materials, such as, Sulphuric acid, Caustic lye, Hydrochloric acid, Calcium oxide, Ammonia, Primene JM-T, Methyl Iso butyl Ketone(MIBK), N-Tri-Decane to produce high pure material, such as, Titanium Dioxide, Zirconium oxy-chloride, Silica, Calcium silicate, Pigment grade Iron oxide or Transparent iron oxide which usually find application as starting

material in several high tech areas.

The above chemical process is a blend of Hydrometallurgical & Solvent Extraction technology for optimal use of two important minerals, such as, Ilmenite and Zircon for extraction of Titania, Iron oxide (Red) and Zirconium oxy-chloride in a cost effective manner.

The common effluent management system of the process would make the production process more effective and economically viable from commercial point of view. Similarly, development of valuable by-products like Calcium sulphate (Gypsum) and silica, judicious utilization of water and well planned effluent management system for recycle and reuse of generated effluent have made the process more environmental friendly

Degradation of hazardous primary amines and volatile solvents used for solvent extraction was carried out through Indian Institute of Chemical Technology and the report has been submitted.

Point No. 2: Wastewater management plan to achieve zero liquid discharge (ZLD).

Reply:

Details of Waste Water Generation in the TDP process: The total water requirement for the integrated plant is 238 m^3/day which includes 133t/h for generation of steam which will be met from Odisha Public Health & Engineering Department(OPHED). There is also a provision for condensate recovery and reuse as DM water. Effluent of 37 m^3/day will be generated and will be sent to the existing ETP.

Disposal of treated effluent: 37,045 m^3/day of treated effluent will be utilized in Mineral Separation Plant for reject pumping purpose. Therefore, as advised by MoEF&CC, there will be zero effluent discharge to environment from TDP.

Point No. 3: Assessment of concentrations of Alpha and Beta radiations in pre and post treatment of effluents

Reply: The details of Gross Alpha & Gross Beta activity levels in pre and post treatment effluents along with activity balance are submitted

Point No. 4: 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

Reply: The issues raised during public hearing and commitment of the PP along with time bound action plan and financial allocation has been provided

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
1.	Mr. N. Duryodhan Reddy, Chatrapur. Addressed the gathering and showed his	Indian Rare Earths Ltd. (IREL), Orissa Sands Complex (OSCOM) as a Government of India Public Sector Undertaking (PSU) is already taking necessary action on the aspects towards education, environmental protection, Plantation & Roads and Health care	Peripheral development works will be carried out in consultation with District Authorities,	**Time Frame:** Already under progress the same will be improved / strengthened **Budget:**

	dissatisfaction and said that IREL has not fulfilled the promise made in the previous Public Hearing and not taken any steps towards Education, Pollution problem, Plantation and Road. Due to IREL local people are facing Skin Disease and even effected by Cancer. Therefore, they all oppose the Project.	facilities I. Peripheral development works are regularly carried out in consultation with District Authorities, Village Panchyats, and Village Committees etc. as per Govt. of India rules. ii. <u>Education facility</u> IREL is taking utmost care to provide proper education to the children of the local area/villages. Two schools, one English medium school i.e., Atomic Energy Central (AEC) School (CBSE) and one Oriya medium school i.e., Shrama Shakti Vidya Pith (S.S.V.P.) School (CHSE) are run by IREL at housing colony premises where in all the nearby village children are getting their education. Admission in AEC School is taken up as per the norms of Atomic Energy Education Society. It may be mentioned here that in the same school, about 60% students are from non - DAE (DAE - Department of Atomic Energy) category. Further, in Oriya Medium School (run by IREL), about 80% of students of non-DAE category are availing their education. One +2 Science College is also functioning by AEC School within the same premises. IREL is spending around Rs.50.00 lakhs per year towards maintenance of these educational institutions. iii. <u>Pollution issues:</u> IREL, OSCOM is taking all the necessary steps towards Environmental Protection. Pollution control equipment's have been installed and all the emissions (stack, treated effluent, solid wastes, hazardous wastes, low level radioactive wastes) are appropriately treated and monitored regularly. The monitoring reports are regularly submitted to Statutory Authorities. The monitoring values indicate that all the discharges are within the permissible limits. Regular monitoring is also carried out by OSPCB officials and no adverse report from OSPCB is	Village Panchyats, Village Committees etc. as per Govt. of India rules. As a Govt. of India PSU, the company management will give preference to local eligible people through both direct and indirect employment. Health camps, awareness campaigns, educational facilities are being taken up by IREL on regular basis.	**Developmental Activities** Rs 54.2 Lakhs is earmarked as per New CER Guidelines and the expenditure will be made on health, education, sanitation etc. **Environment Protection** Rs 450.00 Lakhs as Capital expenditure and Rs 9.00 Lakhs as Annual Recurring expenditure is earmarked

		reported. Health Physics Unit (HPU), an independent unit of Environmental Assessment Division (EAD) of Bhaba Atomic Research Center (BARC), Government of India (GoI) is functioning at OSCOM to monitor the radiological safety aspects in and around IERL to check the adequacy of the containment as per Atomic Energy Regulatory Body (AERB) guidelines/requirements. The same unit independently collects, analyses the environmental data and send quarterly reports to AERB. Moreover, the same Plant is inspected / monitored time to time by AERB to evaluate the radiation safety aspects as required under the rules/acts. iv. <u>Plantation:</u> The mined out area is leveled to its near original topography and thereafter planted with local species like Casuarina, Cashew nut, date palm, etc. by adopting a systematic plantation program. The development, maintenance and survival rate of plantation is taken care adequately by way of offering a contract to Private Contractor/Co-operative Society of the Local village. During last six years i.e. from 2011-12 to 2015-16, 3,16,017 numbers of trees were planted in 86.61 ha of mined out area with the survival rate of about 90%. During dredging and reclamation operations, we also leave some water bodies in mined out area, which helps in plantation growth, maintain the moisture in the soil, attracts birds and thus, the ecological conditions are restored back. The same area has been inspected by Statutory Authorities like, OSPCB, MoEF, IBM and DGMS, who have expressed their satisfaction regarding the mining operation, leveling and rehabilitation of the mined out area carried out by IREL since 1986. Some part of mined out area is also handed over to State Govt. after due plantation.. v. <u>Road development</u> Regarding repairing the road from Kaliabali junction to Matikhalo village, the road belongs to Roads & Building		

		Department of State Government. Considering the bad shape of the road and utilization of local people as well as IREL, OSCOM employees, some part of the road is repaired periodically by IREL, OSCOM. During the current year itself, IREL, OSCOM spent about Rs.1.5 lakhs for its repair. vi. <u>Health problems e.g.Skin diseases & Cancer due to IREL,OSCOM operation:</u> IREL is having one First Aid Centre in plant premises and one Family Health Center at IREL housing colony where in the medical treatment facility is not only given to the employees and their families but also to the local villagers at free of cost. In addition to that, under corporate social responsibility (CSR) IREL is also conducting nos. of medical camps including eye camps in nearby villages on quarterly basis with close co-ordination and association of reputed Govt. Doctors. Mobile health camps have also been conducted in nearby villages rendering medical services for twenty days in a month in association with a reputed local NGO i.e Seva, Berhampur. The entire service including operational cost, subsequent treatment and medicinal cost is provided at free of cost to the local villagers. The Health Survey report of employees and local village population for last five years (i.e., from 2011-2015) are also submitted with EIA report.		
2	Mr. P. Dharma Reddy, Kanamana – GP. He said IREL has not taken up any step for its Monazite Processing Plant as per the commitment made earlier. Hence Oppose.	Indian Rare Earths Ltd. (IREL), Orissa Sands Complex (OSCOM) as a Government of India Public Sector Undertaking (PSU) is already taking necessary action on the aspects towards education, environmental protection, Plantation & Roads and Health care facilities. It is also confirmed that all the commitments are being fulfilled as a Responsible Govt of India PSU taking into confidence of the local villages surrounding the plant	Peripheral development works will be carried out in consultation with District Authorities, Village Panchyats, Village Committees etc. as per Govt. of India rules. As a Govt. of India PSU, the company management will	**<u>Time Frame:</u>** Already under progress the same will be improved / strengthened **<u>Budget:</u>** **Developmental Activities** Rs 54.2 Lakhs is earmarked as per New CER Guidelines and the expenditure will be made on health, education, sanitation etc. **Environment Protection** Rs 450.00 Lakhs as

			give preference to local eligible people through both direct and indirect employment. Health camps, awareness campaigns, educational facilities are being taken up by IREL on regular basis.	Capital expenditure and Rs 9.00 Lakhs as Annual Recurring expenditure is earmarked
3	Mr. Krushna Chandra Nayak, Chatarpur. Not able to present due to disturbance of the audience.	Though Mr. Krushna Chandra Nayak could not speak due to disturbance, considering the views, IREL OSCOM has confirmed that all the welfare activities informed will be undertaken taking into confidence of local villagers.	All the peripheral developmental works will be carried out in consultation with District Authorities. Apart from that Village Panchyats and Committees will also be consulted for identifying the needs and accordingly the development works will be undertaken.	**Time Frame:** 0 – 3 months after obtaining EC **Budget:** **Developmental Activities** Rs 54.2 Lakhs is earmarked as per New CER Guidelines and the expenditure will be made on health, education, sanitation etc.
4	Mr.Dhuryodhana Nahak Chamakhandi He opposed the establishment of Technology Demostration Plant (TDP) of M/s Indian Rare Earths Limited	Considering the views of the public, IREL OSCOM has confirmed that all the welfare activities informed will be undertaken taking into confidence of local villagers.	All the peripheral developmental works will be carried out in consultation with District Authorities. Apart from that Village Panchyats and Committees will also be consulted for identifying the needs and accordingly the development works will be undertaken in coordination with Local NGO	**Time Frame:** 0 – 3 months after obtaining EC **Budget:** **Developmental Activities** Rs 54.2 Lakhs is earmarked as per New CER Guidelines and the expenditure will be made on health, education, sanitation etc.
5	Mr.Nilakantha Das, Pattapur			
6	Mr. R. Polleya Reddy Kanamana – GP : Opposed			
7	Mr. Eju Amin Khan, Chatarpur: Oppos			

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<tr><td>8</td><td>Mr. S. Mohan Rao, Badaputi: Opposed</td><td></td><td></td><td></td></tr>
<tr><td>9</td><td>Mr.Gurudev Behera, Badaputty, Due to IREL, the local people are facing serious health problem, hence they strongly opposing the establishment of TDP.</td><td>It is informed that IREL is having one First Aid Centre in plant premises and one Family Health Center at IREL housing colony where in the medical treatment facility is not only given to the employees and their families but also to the local villagers at free of cost. In addition to that, under corporate social responsibility (CSR) IREL is also conducting nos. of medical camps including eye camps in nearby villages on quarterly basis with close co-ordination and association of reputed Govt. Doctors. Mobile health camps have also been conducted in nearby villages rendering medical services for twenty days in a month in association with a local NGO.</td><td>All the medical facilities will be further strengthened considering the needs</td><td><u>Time Frame:</u>
Already under implementation

<u>Budget already Spent</u>
<table><tr><td>Year</td><td>Medical Expenses incurred (IREL OSCOM & Local villages) Rs. Lakhs</td></tr><tr><td>2015-2016</td><td>253.15</td></tr><tr><td>2016-2017(up to Dec 2016)</td><td>208.97</td></tr></table></td></tr>
<tr><td>10</td><td>M. Dasudu, Sana Arjipali Ward Member: Opposed</td><td>Considering the views of the public, IREL OSCOM has confirmed that all the welfare activities informed will be undertaken taking into confidence of local villagers.</td><td>All the peripheral developmental works will be carried out in consultation with District Authorities.

Apart from that Village Panchyats and Committees will also be consulted for identifying the needs and accordingly the development works will be undertaken.</td><td><u>Time Frame:</u>
0 – 3 months after obtaining EC

<u>Budget:</u>

Developmental Activities
Rs 54.2 Lakhs is earmarked as per New CER Guidelines and the expenditure will be made on health, education, sanitation etc.</td></tr>
<tr><td>11</td><td>A.Venkata, Bada Arjipalli: TDP & MOP should be stopped.</td><td>Considering the views of the public, IREL OSCOM has confirmed that all the welfare activities informed will be undertaken taking into confidence of local villagers.
MoPP caters to the strategic requirement & country’s energy and security needs hence is having national importance.
MoPP operations are monitored by</td><td>All the peripheral developmental works will be carried out in consultation with District Authorities.

Apart from that Village</td><td><u>Time Frame:</u>
0 – 3 months after obtaining EC

<u>Budget:</u>

Developmental Activities
Rs 54.2 Lakhs is earmarked as per New CER Guidelines and the</td></tr>
<tr><td>12</td><td>Ramesh Chandra Sahu, Matikhalo: Opposed</td><td></td><td></td><td></td></tr>
<tr><td>13</td><td>Muna Pradhan,</td><td></td><td></td><td></td></tr>
</table>

	Matikhalo: Opposed	statutory agencies e.g. officials from OSPCB, MoEF&CC and AERB	Panchyats and Committees will also be consulted for identifying the needs and accordingly the development works will be undertaken.	expenditure will be made on health, education, sanitation etc. **Environment Protection** Rs 450.00 Lakhs as Capital expenditure and Rs 9.00 Lakhs as Annual Recurring expenditure is earmarked
14	Arjuna Pradhan, Chamakhandi G.P.: Opposed			
15	G. Arya, Youth INTUC Ganjam Dist. President IREL did not take necessary steps to control Pollution problem. He further said due to pollution, the temperatures are raising from 20° C to 40° C, therefore opposed.	<u>Pollution issues:</u> IREL, OSCOM is taking all the necessary steps towards Environmental Protection. Pollution control equipment's have been installed and all the emissions (stack, treated effluent, solid wastes, hazardous wastes, low level radioactive wastes) are appropriately treated and monitored regularly. Health Physics Unit (HPU), an independent unit of Environmental Assessment Division (EAD) of Bhaba Atomic Research Center (BARC), Government of India (GoI) is functioning at OSCOM to monitor the radiological safety aspects in and around IERL to check the adequacy of the containment as per Atomic Energy Regulatory Body (AERB) guidelines/requirements. The same unit independently collects, analyses the environmental data and send quarterly reports to AERB.	An Environmental Monitoring Plan has been prepared and incorporated in the EIA report. IREL, OSCOM will undertake all the Environmental Monitoring Studies on regular basis as per the statutory requirement and submit the reports to Authorities. Any deviation will be immediately address by IREL - OSCOM	**<u>Time Frame:</u>** Already under progress the same will be improved / strengthened **<u>Budget:</u>** **Environment Protection** Rs 450.00 Lakhs as Capital expenditure and Rs 9.00 Lakhs as Annual Recurring expenditure is earmarked
16	Mr. Prashanta Kumar Kar, Vice Chairman - Chatrapur Block Request for postpone the Public Hearing(PH) to another date	-	-	

<table>
<tr><td>17</td><td>Mr. S. Chakrepani Reddy Takiria – Berhampur, IREL has not provided employment from past 35 years, which was committed during the establishment of Monazite Processing Plant of IREL. So he has Opposed</td><td>Employment opportunity: People from local areas have been given preference for direct employment.

Indirect employment opportunity through different contractors, engaged in IREL under different work contracts / service contracts have also been generated.

IREL, OSCOM is owned 100% by Government of India. It is a Public Sector Undertaking under the administrative control of Department of Atomic Energy. Therefore, the local people, based on their skill and qualification, will be given preference depending upon the requirement as per Government of India guidelines.</td><td></td><td></td></tr>
<tr><td>18</td><td>Mr. Ganesh SahuPuruna Chatarpur: Opposed</td><td>Considering the views of the public, IREL OSCOM has confirmed that all the welfare activities informed will be undertaken taking into confidence of local villagers.</td><td>All the peripheral developmental works will be carried out in consultation with District Authorities.

Apart from that Village Panchyats and Committees will also be consulted for identifying the needs and accordingly the development works will be undertaken.</td><td><u>Time Frame:</u>
0 – 3 months after obtaining EC

<u>Budget:</u>

Developmental Activities
Rs 54.2 Lakhs is earmarked as per New CER Guidelines and the expenditure will be made on health, education, sanitation etc.</td></tr>
<tr><td>19</td><td>Mr. Padma Charan Sahu Sarpanch - Kallipalli GP

As people are suffering from Kidney Problem therefore this project is Opposed</td><td>It is informed that IREL is having one First Aid Centre in plant premises and one Family Health Center at IREL housing colony where in the medical treatment facility is not only given to the employees and their families but also to the local villagers at free of cost. In addition to that, under corporate social responsibility (CSR) IREL is also conducting nos. of medical camps including eye camps in nearby villages on quarterly basis with close co-ordination and association of reputed Govt. Doctors. Mobile health camps have also been conducted in nearby villages rendering medical services for twenty days in a month in association</td><td>All the medical facilities will be further strengthened considering the needs</td><td><u>Time Frame:</u>
Already under implementation

<u>Budget already Spent</u>
<table><tr><td>Year</td><td>Expenses incurred (IREL OSCOM & Local villages) Rs. Lakhs</td></tr><tr><td>2015-2016</td><td>253.15</td></tr></table></td></tr>
</table>

		with a local NGO.		2016-2017(up to Dec 2016)	**208.97**	**1.56**
20	Mr. Santosh Kumar Sahoo, Chamakhandi: As they have lost their Land and Forest, Hence, he is opposing the Plant.	The present proposal does not involve any acquisition of land either private or forest land. The salient features of Land Acquisition taking place in OSCOM, IREL is as follows:- 1. Land acquisition for mining operations is purely of temporary nature. 2. It involves one time compensation payment for the standing trees and annual lease rent of land for one year or more based on the requirement of mining operations. 3. Assessment and award of Compensation is made under the provisions of the Mines and Minerals (Development & Regulation) Act, 1957. Payment of compensation is made in presence of Tahasildar who is the Compensation Officer. 4. After completion of mining operation, followed by leveling and rehabilitation with plantation, the same mined out land is returned back to the land owner and ownership of the land is restored in the process. 5. Land acquisition does not involve any permanent displacement of any person from his property. 6. Land acquisition is possible only after taking written consent of the land owner. 7. Assessment and award of compensation including settlement of any claim/dispute is not a time consuming affairs like permanent acquisition of land under the provisions of Land Acquisition Act, 1894. 8. No forestland is acquired / used till date by IREL, OSCOM for its mining purpose and infrastructure development purposes.	Any land acquisition in mining area is / will be carried out as per the guidelines and mutual consents only.		

21	Mr J. Aginashu, Baginipeta Project is Life Threating so - Opposed	IREL – OSCOM is implementing all the Occupational Health and Safety issues as per OHSAS – 140001 guidelines. All the safety measures suggested in EIA report will be strictly adhered. IREL is having First Aid Centre and Family Health Center at IREL housing colony. IREL is also conducting nos. of medical camps in nearby villages on quarterly basis. Mobile health camps have also been conducted in nearby villages rendering medical services for twenty days in a month in association with a local NGO.	Occupational Health and Safety awareness programs will be undertaken on an yearly basis and all the employees will be provided the awareness w.r.t usage of PPE's and adhering to OH & S procedures. All the medical facilities will be further strengthened considering the needs	**Time Frame:** Already under implementation **Budget** Rs 25.00 Lakhs has been earmarked for OH & S
22	Mr P. Lambodhara Reddy, Kallipalli: Opposed	Considering the views of the public, IREL OSCOM has confirmed that all the welfare activities informed will be undertaken taking into confidence of local villagers.	All the peripheral developmental works will be carried out in consultation with District Authorities. Apart from that Village Panchyats and Committees will also be consulted for identifying the needs and accordingly the development works will be undertaken.	**Time Frame:** 0 – 3 months after obtaining EC **Budget:** **Developmental Activities** Rs 54.2 Lakhs is earmarked as per New CER Guidelines and the expenditure will be made on health, education, sanitation etc.

Point No. 5: Site Specific Risk Assessment studies & Disaster Management Plan;

Reply: Hazard Identification and Risk Analysis: The main hazard potentials in the proposed Processing Plant Facility are categorized as below:

- Material hazards; Coal and Diesel used as a fuel used in the proposed Technology Demonstration Plant. In addition to that ammonia, Hydrochloric Acid, Sulphuric Acid, N-Tri –Decane will be used in the plant.

- Process hazards due to loss of containment during handling of hazardous materials or processes resulting in fire, explosion, etc.

- Mechanical hazards due to "mechanical" operations such as welding, maintenance, falling objects etc. - basically those NOT connected to hazardous materials.

- ❖ Electrical hazards: electrocution, high voltage levels, short circuit, etc.

Point 6: Storage facilities and operations for all the hazardous substances utilized in the process. The damage criteria and consequent analysis shall be addressed on the layout plan of the plant

Reply: Storage facilities are as follows:

No.	Chemicals	Plant Inventory (Max)	Storage inventory (Max)
1	Hydrochloric acid (30%)	2x20 m^3	2x20 m^3
2	Sulphuric acid (98%)	2x32m^3	2x32m^3
3	Caustic flakes	28m^3	28m^3
4	Primene JMT/ MIBK	2x20 m^3	2x20 m^3
5	Anhydrous Ammonia	15t	15t
6	ZOC or zirconia equivalent compounds	60t	60t

- The threat zones due to the storage of HCL is less than 10 meters for 100 ppm (AEGL-3) for a release duration of one hour.
- The threat zones due to the storage of Ammonia is less than 10 meters for 1100 ppm (AEGL-3) for a release duration of one hour.
- The threat zones due to the storage of MIBK is less than 10 meters for less than 10 meters for 3000 ppm (PAC-3) for a release duration of one hour

Point 7: Comprehensive details of existing and proposed plant with respect of land, production, configuration of the processing units and by products shall be provided

Reply:

1. Details of Land

Mining Lease Area (in Ha.)	**Acquired Land of M/s IREL**								
2464.054	**LAND BREAK UP**								
	Plant Complex & Railway Siding (in Ha)							**Housing Colony (in Ha)**	
	Mineral Separation Plant Area	Monazite Proce-ssing Plant Area	Other Infrastructure facilities i.e. Roads & Buildings	Railway Siding	Plantation Area	Proposed Technology Demonstration Plant	Vacant Area	Area for Staff Quarters & Township	Vacant area
	4.5	13	28.7	47.74	8.0	0.75	105.63	38.0	62.2
	Total Area … 208.32 Ha							**Total Area: 100.2 Ha**	

2. <u>Product /By-product details:</u>

A. <u>OSCOM</u>

Sr.No.	Product	Capacity (as per MoEF&CC EC letter No.21/18/84-EN/IA II dated 14th May 1991)
1	Ilmenite	2,20,000 TPA
2	Rutile	10,000 TPA
3	Zircon	2,000 TPA
4	Sillimanite	30,000 TPA
5	Monazite	4,000 TPA

B. MoPP:

Sr. No	Product	Capacity (as per MoEF&CC letter No.J-11015/348/2009-IA.II(M) dated 9th February 2011
1	Tri Sodium Phosphate (TSP)	13500 TPA
2	Rare Earth Chloride	11220 TPA
3	Ammonium Di-uranate as U_3O_8	26 TPA
4	Thorium Oxalate	2000 TPA
5	Thorium nitrate/oxide	150 TPA

C. Proposed TDP:

Sr.No	Product	Capacity
1.	Products (i) Zirconium oxy chloride (ii) Titanium Dioxide (iii) Iron Oxide(RED)	 3416 t/annum 1672 t/annum. 1038 t/annum.
2.	By products (i) High pure silica (ii)Ammonium chloride crystal (iii) Gypsum	 566 t/annum. 3197 t/annum. 10,513 t/annum.

Point No. 8. Comprehensive details of existing and proposed plant with respective to emissions, discharge and control measures shall be provided

Reply: Comprehensive details of existing and proposed plant respective to emission discharge and control measures were provided by the PP

Cumulative Impacts

	Predicted GLCs in µg/m³			
Study period	October, November & December 2014			
Baseline Scenario (max)	**PM_{10}**	**SO_2**	**NO_x**	**HCl**
	63.4	15.3	21.3	-

Predicted Ground Level Concentrations (GLCs-max)	4.78	7.65	4.36	0.14
Over All Scenario (worst case)	68.18	22.95	25.66	-
NAAQ Standards for rural and residential areas (2009)	100	80	80	-

Point 9. Certified compliance report of earlier EC of the existing plant from the RO, Bhubaneswar shall be submitted**.**

Reply: Certified EC Compliance report for OSCOM and MOPP plant from RO Bhubaneswar is submitted by IREL OSCOM

Point 10: Green Belt Development Plan shall be prepared and submitted with substituting the casuarina species with other indigenous species**.**

Reply: Revised green belt development plan is submitted

Point 11: The site plan/plant layout shall be prepared clearly showing the existing plant, proposed TDP, greenbelt, approach road, internal roads, mining lease area, etc**.**

Reply: Revised Site Plan showing existing plant, proposed TDP location green belt etc is also submitted by IREL OSCOM

Point 12: Conservation measures for Olive Ridley Turtles.

Reply: Details of Conservation measures proposed along with conservation plan approved by CWLC has also been submitted by IREL OSCOM

Point 13. The PP should confirm that the proposed plant area does not fall under CRZ

Reply: The HTL / LTL demarcation plan showing that the proposed plant does not fall under CRZ is submitted along with undertaking by IREL OSCOM

Recommendations of the committee:

22.0 After detailed deliberations, the committee observed that the reply to the ADS is not satisfactory for the ADS points (i), (ii), (iii). (iv), (v), (xii) and (xiii). Therefore, the committee advised to submit the reply to ADS specific to the information sought. Therefore, the proposal is deferred.

32.9. Expansion of Integrated Steel Plant & Captive Power Plant (WHRB 8 MW; AFBC 17 MW) at village Punjipatra, District Raigarh, Chhattisgarh by **M/s Scania Steels and Powers Limited** [Online proposal No. **IA/CG/IND/67506/2007;** MoEFCC File No. J-11011/1267/2007-IA.II (I)] **- Further consideration for environmental clearance based on reply to ADS.**

1.0 **M/s Scania Steels and Powers Limited** submitted online application vide proposal No. **IA/CG/IND/67506/2007** dated 17th August 2017 along with copies of EIA/EMP report seeking environmental clearance for the proposed expansion of Integrated Steel Plant & Captive Power

Plant (WHRB 8 MW; AFBC 17 MW) at village Punjipatra, District Raigarh, Chhattisgarh by M/s Scania Steels and Powers Limited under the provisions of the EIA Notification, 2006. 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.

2.0 The proposal was for expansion of Integrated Steel Plant & Captive Power Plant (WHRB 8 MW; AFBC 17 MW) of M/s Scania Steels and Power Limited located in Village Punjipatra, Tehsil Tamnar, District Raigarh, State Chhattisgarh was initially received in the Ministry on 27th November 2007 and 7th April 2008 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 80th meeting held on 15th April 2008 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the erstwhile Ministry of Environment and Forests had prescribed ToRs to the project on 25th April 2008 vide Lr. No. J-11011/1267/2007-IA.II(I) the expansion of Sponge Iron plant production capacity from 66,000 TPA to 1,32,000 TPA, establishment of Induction furnaces with CCM to produce MS Billets of 1,35,000 TPA, Power Plant of 8 MW, based on WHRB & 17 MW, based on AFBC Boiler, a Ferro Alloys manufacturing plant of 1x5 MVA capacity to produce 7,500 TPA of Ferro Alloys. MoEFCC had accorded Environmental Clearance (EC) for the project vide Letter No. J-11011/1267/2007-IA.II(I) dated 5th November 2008. The project was exempted from the requirement of Public Hearing due to expansion of the project at the same site under 7 (ii) of the EIA Notification 2006.

3.0 Subsequently, MoEFCC issued two amendment letters; one dated 3rdJuly 2009 pertaining to the change of the configuration of the Induction Furnace and the other dated 1stJune 2011, vide which it granted the permission for the disposal of Char, to be generated by Sponge Iron Plant to the other companies till the coal linkage is available for the AFBC boiler.

4.0 In the meantime, M/s Jan Chetana filed an appeal in National Environment Appellate Authority (NEAA) vide appeal No. 8/2009 against the issue of environmental clearance for this expansion project. Subsequently, Hon'ble National Green Tribunal issued an order dated 9th February 2012 directing "MOEF&CC to take prompt steps for completing the exercise of public consultation (Public Hearing) and curing the deficiency in EIA/EMP and re-visit the entire project in the light of the observations made by it and complete the exercise as expeditiously as possible".

5.0 The M/s Scania Steels and Powers Limited filed a civil appeal before the Hon'ble Supreme Court of India (I.A. No. 3 in Civil Appeal No(s). 6025 of 2012) to stay the order issued by Hon'ble NGT and requested to give permission to start production of the expansion project as all required clearances have been obtained and lot of investment has been made in the expansion project.

6.0 The Hon'ble Supreme Court of India vide order dated 16th May, 2014 issued order "to complete the public hearing as per the Act/ Notification, duly considering the objections received from the public and the decision thereon shall be taken by MoEF&CC. It further directed the entire process to be completed within two months and the report to be submitted to court in a sealed cover".

7.0 Subsequently, Chhattisgarh Environment Conservation Board wrote a letter vide Lr. No. TS/CECB/2014 dated 06.06.2014 to MoEF&CC, Govt. of India, with the clear intimation of the

Supreme Court Order dated 16th May 2014 and requested for the guidance to comply with the said order. The letter emphasized on the validity of the already prescribed ToRs by MoEFCC and raised the concern whether the public consultation/ hearing should be conducted based on the previously prepared EIA Report. In response, MoEF&CC issued a Letter No. L-11011/28/2009-IA.II(I) dated 24th September 2014, with the clear mention of the collection of fresh one-season data while addressing all the deficiencies, pointed out in the order, including the following issues and revise the draft EIA-EMP Report accordingly:

i. Collection of baseline data more than 4 months before the ToRs were communicated by MoEF (para 36, page 27 of the judgment)

ii. Authenticity of data, collected particularly for SO_2, which was reported below detectable limits (para 36, page 27 of the judgment), hence unrealistic air quality data has been presented.

iii. The overall impacts worked out based on mathematical modelling does not appear to reflect the true picture, as AAQ levels of mercury, which would be found in an area where a number of sponge iron units are located, has not been estimated (page 28 of judgment).

iv. Water quality data in Tables 3.10 and 3.11 of the EIA Report, which states that the fluoride levels are the same in ground water and in surface water, which is unrealistic (page 28 of judgment).

v. Re-examine the water balance on how the treated effluents can be utilized and for what purpose (page 29 of judgment).

8.0 MoEF&CC further advised the project proponent to submit the Draft EIA Report, thus prepared by a QCI/NABET accredited consultant to Chhattisgarh Environment Conservation Board for conducting public hearing as per the provisions laid out in the EIA Notification 2006. After public hearing, it advised to revise the EIA-EMP, incorporating the issues raised in the public hearing in a separate chapter with specific capital and recurring costs for the implementation of the measures/issues contained therein and then to submit the final one to the Ministry.

9.0 As advised, the Draft EIA/EMP Report was prepared, accommodating all the components, based on the finalized ToRs for its submission to Chhattisgarh Environment Conservation Board for the conduct of Public Hearing/Consultation. Subsequently, the Public Hearing was conducted on 25th May 2017 near Banjari Mandir, Tehsil Tamanar, District Raigarh in Chhattisgarh. The project proponent submitted an application for environmental clearance to the Ministry online on 17th August 2017 vide Online Proposal No IA/CG/IND/67506/2007.

10.0 The project of M/s Scania Steels and Power Limited located in Punjipatra Village, Tehsil Tamnar, District Raigarh, Chhattisgarh State is for expansion of production of sponge iron from 66,000 to 132,000 tonnes per annum (TPA). The existing project was accorded environmental clearance vide Lr.no. J-11011/1267/2007–IA.II(I) dated 5th November 2008. The Status of compliance of earlier EC was obtained from Regional Office, Nagpur vide Lr. No. J-11011/1267/2007-IA II (I) dated 5th November 2008.

10.0 The overall plant scenario is presented hereunder:

Product/ Unit	Units under operation before EC obtained vide Letter No. J-11011/1267/2007-IA.II(I) dated 5th November 2008	Units (as per EC obtained vide Letter No. J-11011/1267/2007-IA.II(I) dated 5th November 2008 and Amendment Letters dated 3rd July 2009 & 1st June 2011)	Units under Operation with valid Consent to Operate from Chhattisgarh Environment Conservation Board	Units commissioned (but not under Operation) after EC obtained vide Letter No. J-11011/1267/2007-IA.II(I) dated 5th November 2008 and after valid Consent to Establish from Chhattisgarh Environment Conservation Board
Sponge Iron Plant	66,000 TPA (2x100 TPD)	66,000 TPA (2x100 TPD)	66,000 TPA (2x100 TPD)	66,000 TPA (2x100 TPD)
Steel Melting Shop - Induction Furnaces (with matching LRF & CCM)	-	1x6 T + 1x8 T + 2x15 T	1x6 T *	1x8 T
Ferro Alloys Plant	-	7500 TPA (1x5MVA SAF)	-	-
Captive Power Plant	-	25 MW (8 MW WHRB based & 17 MW AFBC based)	-	-
* Presently not in operation. Renewal for Consent to Operate is under process.				

12.0 The overall capacity of the plant after expansion will be as follows:

Name of unit	**No. of units**	**Production Capacity**
Sponge Iron Plant	2x100 TPD	200 TPD
Steel Melting Shop - Induction Furnaces	(1x6 T + 1x8T + 2x15 T) (with matching LRF & CCM)	1,35,000 TPA
Ferro Alloys Plant	(1x5 MVA SAF)	7500 TPA
Captive Power Plant	8MW WHRB based & 17 MW AFBC based	25 MW

13.0 At present, 2x100 TPD Sponge Iron Plant is in operation, for which valid 'Consent to Operate' from Chhattisgarh Environment Conservation Board (CECB) is available. In expansion proposal, 2x100 TPD Sponge Iron Plant & 1x8T Induction Furnace have been commissioned after

obtaining the necessary 'Consent to Establish' and 'Consent to Operate' for the same from CECB. However, these units under the expansion proposal are presently not in operation as the case is pending in Supreme Court. Apart from the above, another 1x6T Induction Furnace has also been implemented after necessary approvals from CECB, obtained separately. The unit is presently not in operation. Renewal for "Consent to Operate" is under process. Besides, one Rolling Mill of 30,000 TPA capacity to manufacture M. S. Rod/TMT Bar along with a Producer Gas Plant with 100 TPD capacity, using coal gas technology is also operating as Unit-2 after necessary approvals from CECB in the adjoining land.

14.0 The total land required for the project is 23.472 ha (58 acres) which is already under the possession of the company. Noforestland is involved. The entire land has been acquiredfor the project. Kelo River which flows at a distance of 6.3 kms at ESE direction from the project site. This river is a main tributary of River Mahanadi. Kurket River which is another important river in the study area is flowing about 7.6 Km away at WNW direction from the project site. The Rabo dam which is situated on the way of the Kurket River is located about 7 Km distance at west direction from the project site.

15.0 The study area has a slightly rugged topography with ridges and isolated hills of Cuddapah sandstones, running in a more or less NW-SE direction and the geographical coordinates of the project site are Latitude 22˚04'09.50"N to 22˚04'26.50"N and Longitude 83˚20'43.90"E to 83˚21'03.60"E with Above Mean Sea Level (AMSL) 323 meters (1059 ft).

16.0 The ground water table reported to ranges between 2.95 to 7.9 m below the land surface during the post-monsoon season and 5.69 to 14.9 m below the land surface during the pre-monsoon season.

17.0 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.

18.0. M/s SSPL is presently operating 2x100 TPD DRI Kilns. The other 2x100 TPD DRI Kilns, which are already commissioned, will also be operational in future. The total annual capacity of sponge iron production for all 4 kilns will be 1,32,000 TPA, considering 330 working days in a year. The DRI plant consists of castable lined rotary kiln, a rotary cooler, feed circuit & day bins and the product processing unit. Sponge iron or direct reduced iron (DRI) is used as raw material in induction furnace for the manufacture of steel. It is produced in lumps or pellet form, compacted and briquettes form. It has a honeycomb structure with small pores and used as a substitute of iron scrap. The waste heat gas from the rotary kiln is routed through dust settling chamber (DSC) and then taken to waste heat recovery boiler (WHRB) to produce steam and 8 MW Power. After recovery of heat the flue gas is treated in an Electrostatic Precipitator (ESP) to remove the particulate matter. Bag filters are used as de-dusting system for controlling fugitive emission from the product handling section.

19.0. The targeted production capacity of the sponge iron is 1,32,000 MTPA. The ore for the plant would be procured from (Iron and manganese ores from open market in Odisha, Coal from SECL and open market, Dolomite from open market). The ore transportation will be done through Rail/Road.

20.0. Total water to the tune of 868.8 m^3/day is required for both the existing and the future projects. The source of raw water is ground water, drawn through bore well. The permission for drawl of groundwater is obtained from Central Ground Water Authority (CGWA) vide Letter No. 21-4(33)/CGWA/NCCR/2008-969 dated 02.06.2016.

21.0. The power requirement of the total project is estimated as 20 MW, which will be sourced from Captive Power Plant after the implementation of all the projects.

22.0. Baseline Environmental Studies were conducted during winter season i.e. from December 2014 to February 2015 and additional period of 1st June 2017 to 15th June 2017. Ambient air quality monitoring has been carried out at 8 locations during 1st December 2014 to 28th February 2015 and the data submitted indicated: PM_{10}(97.1 µg/m^3 at Gourmuri to 174.9 µg/m^3 inside project site), $PM_{2.5}$ (38.1 µg/m^3 at Tumidih to 68.4 µg/m^3 inside project site), SO_2 (7.2 µg/m^3at Baraplai to 15.5 inside project site µg/m^3) and NOx (7.2 µg/m^3at Baraplai to 23.0 inside project site µg/m^3). The results of the modeling study indicated that the maximum incremental values of SO_2, NOx & PM would be about 20.74 µg/m^3, 11.47 µg/m^3& 2.46 µg/m^3 respectively, which will occur in 'SE' direction at a distance of 0.8 Km, 1 Km. & 1.0 Km. respectively w.r.t. the origin.

23.0. Ground water quality has been monitored in 8 locations in the study area and analysed. The p^H ranges to (5.1 - 6.9); Total Dissolved Solids (TDS) (34 to 232) mg/lit; while Total Hardness (10 to 186) mg/lit; alkalinity (4 to 176) mg/lit; Calcium (3 to 47) mg/lit; and Magnesium (0.5 to 17) mg/lit respectively. Sulphate, Nitrate and Chloride were observed in the ranges of (2 - 7) mg/lit, (0.5 - 2.5) mg/lit and (11 - 41) mg/lit respectively. Values of Iron content were found from below detectable limit (<0.05 mg/lit.) to 0.1 mg/lit in these water samples. Surface water samples were analysed from 8 locations. p^H: 6.0 to 7.7; DO: 5.8 to 6.7. mg/l and BOD: < 4 to 5mg/l.

24.0. Noise levels are in the range of 54.2 to 65.8 dB(A) for daytime and 46.9 to 57.3 dB(A) for nighttime.

25.0. It has been reported that as per 2011 census, the total population in the 10 Km radius area is 55,746. No R&R is involved in the project.

26.0. It has been reported that a total of 20,000 tons/m^3 of dolo-char will be generated due to the project, entire quantity will be used in AFBC boiler. The slag waste of 2250 tons/m^3 shall be used for land filling and road construction. It has been reported that a total of 1.73 lac tons per annum of waste will be generated due to the project, which will be used for power generation, brick making, ferro alloy production besides land filling and road construction. There will be the provision of temporary storage yard for the solid wastes within the plant area.

27.0. It has been reported that the Consent to Establish / Consent to Operate from the Chhattisgarh Environment Conservation Board obtained vide Lr. No. 1481/TS/CECB/2017 dated 29.06.2017 and consent is valid up to 30.06.2020.

28.0. The Public Hearing of the project was held on 25th May 2017 at Banjari Mandir, Tehsil Tamanar, district Raigarhunder the chairmanship of ADM Raigarh for production of 135000 TPA induction furnace with CCM for billet caster, 7500 TPA ferro alloy plant, 17 MW AFBC boiler based & 8 MW WHRB based power plant in connection with the expansion of the existing plant. The issues raised during public hearing are related to pollution, employment, solid waste

management, fly ash etc. An amount of Rs. 3.75 crore (2.5% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues. The details of Enterprise Social Commitment as follows:

Sl. No	Proposed Activities under ESC	Fund provision (IN LACS)
1	Construction of W/C/Toilet (2) each for 4 schools. (@ Rs. 6.25 Lakhs per set of 2 Toilets)	25.0
2	Drinking Water Infrastructure (Tubewell in nearby villages like Punjipatra; Padkipahri, Chaidoria & Charratangar – 10 nos. @ Rs. 1.5 Lakhs)	15.0
3	Construction of metal consolidation road (7 km) in villages (Punjipatra – 3 km; Padkipahri-2 km & Charratangar-2 km) (@Rs. 15 Lakhs per km)	105.0
4	Development of Community Hall, one each for four villages likePunjipatra; Padkipahri, Chaidoria & Charratangar– Total 4 nos. (@ Rs. 8 Lakhs per Hall)	36.0
5	Local Village Pond upgradation - 6 ponds (2 ponds in each three villages- Punjipatra; Padkipahri, Chaidoria) (@ Rs. 5 Lakhs per Pond)	30.0
6	Street Lighting (solar) provision at suitable public places – 100 nos. (@ Rs. 0.5 Lakhs per Solar Light)	50.0
7	Financial Support to the Local School for extension of building / class room	24.0
8	Construction of charitable Dispensary – 1 no.	10.0
9	Primary health for the surrounding villages	20.0
10	Financial Support to LocalTample	15.0
11	Training to unemployed educated local youth for personality development.	25.0
12	Developments of parks, plantation of trees in the nearby area.	20.0
	TOTAL	375

29.0. The capital cost of the project is Rs.150 Crores and the capital cost for environmental protection measures is proposed as Rs. 300 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 30 Lakhs.The detailed ESC plan has been provided in the EMP in its page No. 202. The employment generation from the proposed expansion project is 400 persons [150 persons (Direct) & 250 persons (Indirect)].

30.0. In the existing plant area, there is significant presence of the greenbelt. Out of the total plant area of 23.472 hectares (58 acres), the area covered under plantation is 7.85 hectares (19.4 acres). Hence, over 33% of the total plant area is covered under plantation.

31.0. The entire project including the existing units occupies the total 23.472 hectare (58 acres) of land. The average rainfall in the area is recorded as 1.2 m. Hence, the total run-off will be 2,81,664 cu.m/annum, out of which about 2,00,000 cu.m rain water can be harvested. The company has planned for 4 nos. ponds for rain water harvesting. In the existing plant area, a rain water harvesting tank has been recently constructed, while another one is under construction. The

dimension of the existing RWH tank is Top area (50m x 33m), Bottom area (44m x 27m) and depth as 3.5 m. This can fulfil the water requirement of the plant for around 9 days, considering the maximum water requirement of the plant after the implementation of the proposed project as 905 KLD. Rest 2 nos. will be constructed after the issuance of the necessary Environment Clearance from MoEFCC.

32.0 The proposal was further considered in the 22nd meeting of Expert Appraisal Committee [EAC] (Industry-I) held during 11th – 13th September 2017.

33.0 The PP along with accredited EIA Consultant, M/s Envirotech East Pvt Ltd., Kolkata made a detailed presentation. The Committee observed from slide no. 14 and slide no.92 that the PP expanded the existing sponge iron plant (66000 TPA which is in operation since 2003) by installing 30000 TPA rolling mill and 100 TPD producer gas plant since 2011-12 without obtaining prior Environmental Clearance and mentioned that these units were operating with Consent to Operate from Chhattisgarh Environment Conservation Board.

34.0 After deliberations, the Committee opined that the implementation of 30000 TPA rolling mill and 100 TPD producer gas plant without prior EC will be treated as violation of EIA Notification 2006 and subsequent amendments. Accordingly, the Committee sought the clarification in this regard from the Project Proponent.

35.0 The Committee also desired to revise the following information presented by the PP.

i. The PP shall make a commitment on the issues raised in the Public Hearing along with time bound action plan and fund allocation in the form of CAPEX against each issue under Enterprise Social Commitment (ESC).

ii. Material balance and revised Water balance of the process flow diagram shall be provided.

iii. The AAQ parameters should be given in 98 percentile values instead of range.

iv. Additional baseline data for one month, other than monsoon period, shall be collected and submitted.

v. Since several pages of the EIA/EMP uploaded on the web site of the Ministry are not readable, the PP should upload the legible copy of EIA /EMP report on the website of this Ministry.

36.0 The project proponent has submitted reply to Additional details sought.

I. The project proponent has informed that 30000 TPA rolling mill and 100 TPD producer gas plant does not attract the provisions of EIA Notification, 2006 due to following reasons:

i. The Rolling Mill along with Producer Gas Plant (Unit-II) is registered as a separate unit with the District Trade and Industry Center (DTIC), Raigarh.

ii. The existing Sponge Iron Plant of 66,000 TPA capacity is registered through IEM. The IEM is registered in the name of M/s Sidhi Vinayak Sponge Iron Pvt. Ltd. in the year 2003

which was acquired by M/s Scania Steels & Powers Ltd. (SSPL, the current PP) in the year 2006.

iii. The land which came along with the acquisition of M/s Sidhi Vinayak Sponge Iron Pvt. Ltd. did not contain the piece of land where unit-II is located.

iv. The land of unit-II (Khasra No. 103/2) was purchased & registered in the name of M/s SSPL in April, 2010 with the intention of putting up a Rolling Mill.

v. The Rolling Mill of M/s Scania Steels and Powers Ltd., Unit II is located in a separate land and have separate boundary and gate which is about 0.5 km from the main gate of Sponge Iron Plant.

vi. As far as the Unit-II project is concerned, the capacity of Rolling Mill is 30,000 TPA. EC is not required for a separate unit as per item no. 3(a) of Schedule of EIA notification 2006 as amended vide SO. No. 3067 (E) dated 1st December, 2009. Producer Gas Plant is not included in the schedule of EIA notification 2006 & its subsequent amendments. The PP therefore obtained separate Consent for unit-II project.

II. The issues raised in the public hearing with action plan and Budgetary Provision for the implementation of the measures/issues contained therein are summarized in the following table:

Sl. No.	Issues raised during PH	Response by project proponent (after PH)	Action Plan proposed	Budgetary provision as on 05.01.2018
1.	It is necessary to seek the permission of Gram Sabha for the installation of any Company.	The company has already obtained the NOC from local body/ Panchayats (namely Amaghat Gram Panchayat,Amlidihi Gram Panchayat,Gadgaon Gram Panchayat, Taraimal Gram Panchayat &Tumidihi Gram Panchayat), falling in 10 km radius area of the project.	Not applicable	Nil
2.	People belonging to the villages are illiterate. How can they read such voluminous documents prepared in English and Hindi.	as per EIA Notification, 2006 & its subsequent amendments ofMoEFCC, GoI, Executive Summary both in Hindi & English (11 pages) along with the draft EIA report were made available to the public well before the conduct of public	Not applicable	Nil

		hearing.		
3.	There is mention of the employment of 150 people but there is no discussion for the employment of those people who are being affected by the pollution generated. There should have been discussion for the employment of the people belonging to the affected Gram-Panchayat.	76 no. of local people, who are the residents of the area in the project vicinity are already employed, in proposed expansion also, local people will be given preference, based on requirement and skill.	As in the existing project, the emphasis will be laid on the employment of the local people.	Nil
4.	Pond of the village is completely dried up due to fly ash of the company. There is absolutely no water in this pond. Tumidih dam is filled up by 10-12 feet with fly ash. A no. of animals have died in the wet land created due to fly ash. In my village, 35 industries have been implemented. Only one village is suffering due to the pollution generated by these 35 industries. In my village, a no. of people died due to T.B., many are still suffering.	The issue of fly ash is not applicable as the existing units do not generate fly ash.	Not applicable.	Nil.
5.	The company had made certain promises in the areas of education, health, employment, which still remain un-fulfilled.	As already mentioned above, the company has given preference in employment of the local people in its existing project.	The same approach shall be adopted in the proposed project. Besides, the company has been undertaking ESC activities	The company has earmarked 58 lacs for Skill development to unemployed local youths through National Skill Development Corporation, Govt. of India

			in the local area as per the local needs. It shall continue to be mindful of its social and moral responsibilities to consumers, employees, shareholders, society and the local community.	Scheme under ESC. Rs. 25 lacs are earmarked towards Financial Support to the Local Schools for repairing of buildings. Rs. 15 lacs are allocated for Providing equipment to the local hospitals. Rs. 25 lacs are allocated for providing 5 nos. ambulances, equipped with emergency facilities.
6.	Please collect the data of the health status of the people, crop, Production status and ground water availability status within 10 Kms radius.	The health status report, obtained from Block Medical Officer of the area. As per BMO report, people are found suffering from the diseases like Cough & cold, fever, body pain etc. which look quite normal for any area and does not draw any concern. The entire area falls under safe zone as far as the status of ground water is concerned.	Not applicable.	Nil
7.	Promote skill development training to unemployed youth to get better skills and to get employment	Already mentioned above regarding employment of the local youths in the project.	The company has planned for the skill development to the	Rs. 58 lacs are earmarked for this purpose under ESC.

	chances in your industry remaining youth to get other places jobs.		unemployed local youths through National Skill Development Corporation, Govt, of India Scheme. In this connection, it will construct a building along with the necessary infrastructures to serve the purpose.	
8.	Take up proper pollution control measures Air, Water, Land.	Zero effluent discharge concept is being adopted which will continue after the expansion project. Required air pollution control measures have already being taken in the existing project. The stack emission analysis report substantiates this as the pollutants emission data are well within the stipulated limits. The proposed expansion project will be installed within the existing 58 acres land. No additional land shall be acquired.	To control air pollution, there will be required control measures like installation of Electrostatic Precipitators (ESPs), bag filters, dust suppression system and stacks of adequate height at relevant points.	The capital cost and annual operating cost of environmental mitigation measures are estimated to be Rs. 12.0 Crores and Rs. 120.0 Lakhs respectively.
9.	Today, Kiln Nos. 1,2,3,4 all are installed and are in operation. Then, why this public hearing,	Only Kilns No. 1 & 2 are in operation.	Not applicable.	Nil
10.	Whatever data are available in the EIA report, they are for	The baseline data were generated during the period of 1st December,	Not applicable	Nil

	2014. But the Public Hearing is being conducted in 2017. Have the data not changed for Raigarh District in last 4 years?	2014 to 28th February, 2015. The same stands valid upto the completion of 3 years period. In addition, the same was supplemented by again generating it during 1st June, 2017 to 15th June, 2017 and again from 16th October, 2017 to 16th November, 2017.		
11.	This is the document, which tells about the data of the elephants in 10 Km. radius area and about the compensation, the Forest Department has made. But, there is no mention of any elephant in the EIA report.	There is no such incidents or records in the Forest Department.	Not applicable	Nil
12.	The expansion of this company has already taken place in 2012. For this, no permission has been taken. Here, 4 Kilns are installed.	Both Consent to Establish & Consent to Operate were obtained from CECB for the installation of the said kilns.	Not applicable	Nil
13.	Presently, 8-10 percent people are suffering from the serious diseases like Cancer, I have seen 10 families dying due to Cancer in last 2 months 52 percent people are suffering from serious diseases like asthenia, essinophilia. Water sources are so much polluted, which result in the development of	There are no such records that 8-10 percent people are suffering from the serious diseases like Cancer or 52 percent people are suffering from serious diseases like asthenia, essinophilia.	Not applicable.	Nil

	the serious diseases like scabies, itching etc.			
14.	The person, who has prepared the EIA report was speaking in English. Out of the total public, sitting here, 2 percent people properly understand Hindi. 2 to 4 other persons might understand whatever was spoken in English. The people did not understand whatever was told. Here, people know Chhattisgarhi, Hindi.	The summary of the EIA Report was explained in Hindi by the EIA Consultant.	Not applicable.	Nil
15.	The company in its study report has nowhere studied the third most important issue regarding water level of this area.	It is understood that the issue pertains to ground water. The ground water of the area falls under safe zone.	Not applicable.	Nil
16.	I have gathered one information from Water Resource Department, PHED, people have told that this company is in operation for last 15 years, but I tell you that the Company has neither filed any application in last 15 years for ground water nor the company has any permission for the same.	Company has already obtained permission from CGWA, New Delhi to abstract the ground water for the project.	Not applicable.	Nil
17.	The company has never undertaken any CSR activity in 10 km. radius area.	The company is running in loss whereas the CSR fund is allocated on the basis of annual profit. However, the Project Proponent has invested Rs. 7 lacs for the development and needs of the local people in the	Not applicable	Not applicable

		year 2017-18.		
18.	The way how air and water pollution is resulting in various diseases, the industries should explore how to address this through facts and mitigate.	Zero effluent discharge concept is being adopted which will continue after the expansion project. Adequate air pollution control measures have already being taken in the existing project. The stack emission analysis report substantiates this as the pollutants emission data are well within the stipulated limits. The health status report, obtained from Block Medical Officer of the area. As per BMO report, people are found suffering from the diseases like Cough & cold, fever, body pain etc. which look quite normal for any area and does not draw any concern.	Already mentioned against Sl. No. 8.	The cost is envisaged against Sl. No. 8 as Environmental Cost.
19.	As per the provision of the EIA Notification 2006, its para 7, sub-para 3 and Part 3, the public hearing should be conducted only at this project site or its village. You are conducting the public hearing at 3 km. away at the premises of Banjari Temple at Taraimal, a great violation.	The location of the Public Hearing was decided by Chhattisgarh Environment Conservation Board, local administration and local panchayat..	Not applicable	Nil
20.	Honorable Justice of	The Public Hearing was	Not applicable	Nil

	the Supreme Court, by upholding the order, directed the company and the administration to ensure the completion of public hearing within 60 days. This is the decision of the Honourable Supreme Court on 20.05.2014 and the public hearing is being conducted today on 25.05.2017, which is the violation of the Honourable Supreme Court,	conducted as per direction of the local administration.		
21.	The public hearing should have been carried out within 45 days.	Same as above	Not applicable	Nil
22.	The company has not presented any report on the local development of the area, how many people have been given employment, etc. They have just mentioned in the EIA report that this number of people shall be employed in the plant.	Same as mentioned against Sl. No. 3.	Same as mentioned against Sl. No. 3.	Nil
23.	Companies make big promises but the promises are not kept. They say that they would provide employment, money, a place to live, but they provide nothing.	The company will make efforts to support development of the area by socio-economic activities under ESC & CSR.	-	Nil
24.	Have they carried out any tests in the laboratory for soil, air and water samples to detect Mercury, Lead, Arsenic and Nickel	There is no fly ash generation till date. The dolochar, generated is supplied to the power plants. In future, the fly ash will be supplied to	Not applicable	Nil

	levels? There is already so much pollution. How have they been given permission? Secondly, there is no fly ash dyke. This point should be noted that the company has been operating without a fly ash dyke since the past 10-15 years. The district administration has built a fly ash dam and they are depositing fly ash in the jungles and Kelo river.	the brick manufacturers. The MoUs with the respective companies are already available.		
25.	A study on the effects of the pollutants on personal belongings, order, tradition, way of life that the local people have to face, is missing.	The EIA report is prepared in compliance with the guidelines of the EIA Notification.	Not applicable	Nil
26.	The EIA report should have contained the data of the agricultural land, forest land, wells, ponds, small streams and other sources of water which have been damaged by becoming drains due to the fly ash deposition.	Land use and land cover map is prepared and presented in the EIA Report. Since there is no disposal of fly ash, the impact of fly ash in the region has not been in the scope of impact assessment.	Not applicable	Nil
27.	Even today the people cannot think that they don't have proper drains in the villages, dirty water is flowing in the dam. There are no schools for the children to ensure their future.	There is no effluent discharge from the project.	The company will construct and repair drains.	The company has allocated Rs. 10 lacs for Construction & repairing of local drains under ESC.
28.	Where has the dolochar been disposed off during the study period?	Dolochar is supplied to the power plants.	The company will install a captive power plant where the dolochar shall be utilized.	Nil

29.	The ESP is not working. There is so much smoke and dust. All the trees, fans, roofs have been covered by dust. The roads are so busy that there are accidents regularly. Company should have an ambulance. A mini hospital should be set up at BanjariMandir where the sick people can wait. The people from outside are getting jobs but local people are unemployed. First priority should be given to the local people.	The stack emission data, generated through the online monitoring system, connected to server of CPCB / CECB are well within the stipulated norms. This itself is the manifestation of the adequacy of the performance of the ESP installed in the existing plant, which is well upto the satisfactory level. 76 no. of local people, who are the residents of the area in the project vicinity are already employed, In proposed expansion also, local people will be given preference, based on requirement and skill.	The company will provide 5 ambulances, equipped with emergency facilities. Besides, it will also provide the equipment to the local hospitals.	Rs. 25 lacs are allocated for providing the ambulances and Rs. 15 lacs for providing the equipment to the local hospitals through ESC.

III. Proposed Enterprise Social Commitment is as follows:

PROPOSED ESC ACTIVITIES	BUDGET (IN LACS)					TOTAL IN LACS
(A) BASED ON PUBLIC HEARING	1st year	2nd year	3rd year	4th year	5th year	
Skill development to unemployed local youths through National Skill Development Corporation, Govt. of India Scheme. Construction of a building along with the necessary infrastructures for this purpose like different machineries for industries.	20.0	14.0	12.0	6.0	6.0	58.0
Construction & repairing of local drains	2.0	2.0	2.0	2.0	2.0	10.0
Construction of total 4 nos. Toilet Complexes, separately for girls & boys (@ Rs. 6.25 Lakhs per Toilet Complex)	6.25	6.25	6.25	6.25	-	25.0
Financial Support to the Local Schools for repairing of buildings	5.0	5.0	5.0	5.0	5.0	25.0
Providing equipment to the local hospitals	3.0	3.0	3.0	3.0	3.0	15.0
To provide 5 no. ambulances, equipped	5.0	5.0	5.0	5.0	5.0	25.0

with emergency facilities						
Supporting schools for establishment of mini sports complex or playgrounds in providing the facilities like badminton court, tennis court and levelling of ground.	4.0	4.0	4.0	4.0	4.0	20.0
(B)BASED ON NEED BASED ASSESSMENT						
Drinking Water Infrastructure (Tubewell in nearby villages like Lakhs Punjipatra; Padkipahri, Chaidoria&Charratangar – 10 nos. @ Rs. 1.5 Lakhs)	3.0	3.0	3.0	3.0	3.0	15.0
Construction of metal consolidation road (4 km) in villages (Punjipatra – 2 km; Padkipahri-1 km & Charratangar-1 km) (@Rs. 15 Lakhs per km)	15.0	15.0	15.0	15.0	-	60.0
Development of Community Halls, one each for four villages likePunjipatra; Padkipahri, Chaidoria&Charratangar– Total 4 nos. (@ Rs. 8 Lakhs per Hall)	8.0	8.0	8.0	8.0	-	32.0
Local Village Pond upgradation - 6 ponds (2 ponds each in three villages - Punjipatra, Padkipahri, Chaidoria) (@ Rs. 5 Lakhs per Pond)	10.0	5.0	5.0	5.0	5.0	30.0
Street Lighting (solar) provision at suitable public places – 100 nos. (@ Rs. 0.5 Lakhs per Solar Light)	10.0	10.0	10.0	10.0	10.0	50.0
Developments of parks, plantation of trees in the nearby areas.	2.0	2.0	2.0	2.0	2.0	10.0
TOTAL						375.0

IV Material balance and water balance diagrams were provided.

V Ambient Air quality data, surface water quality data, noise levels, soil quality was provided.

VI All the additional information was addressed in the revised EIA/EMP.

37.0 The proposal was further considered in the 30th meeting of EAC held during 9th to 10th April, 2018. During the deliberations, the project proponent has explained that the raw material i.e. ingots / billets used for the rolling mill, which is established outside the premises was brought from the open market and informed that the purchase orders were available for substantiating this fact. He also informed that the revised EIA is unable to upload because the ADS option was not open in the website. The Committee also noted that the particulate matter concentration in the

Ambient Air in the study area is reported as higher than the norms prescribed.

38.0 After detailed deliberations the committee sought following information for further consideration of the proposal:

i. Substantiating evidence of purchases of the raw material for rolling mill from the open market.

ii. Action plan for reducing the particulate matter within the project site

iii. The PP shall submit the revised proposal by dropping the Ferro Alloys Plant and 17 MW AFBC based Captive Power Plant in view of the high levels of particulate matter in the AAQ of the study area.

iv. The PP shall calculate the revised incremental GLC based on the revised proposal

v. The time bound action plan for the issues raised during the public hearing shall be revised and substantiating with the data.

vi. The Revised EMP shall be upload on the website after provision of ADS in the website by the Ministry.

39.0 The project proponent has again submitted reply to Additional details sought by the Ministry:

Point No.1: Substantiating evidence of purchase of the raw material for rolling mill from the open market.

Reply: The raw materials i.e., Billets/Ingots, required for the rolling mill are purchased from the open market since its inception. Year-wise details of purchase of Billets/Ingots and / production / sale of product (TMT Bars) for the rolling mill (unit-2) are given in the following Table. The production & sale details of Sponge Iron being produced in the separate units are also given in the same table for reference (Copies of some of the purchase bills for the Billets/ingots used as raw material in the rolling mill for the respective years of operation have been provided.).

Year	Sponge iron produced (unit- 1)	Sponge iron sale (unit- 1)	Ingots / billets Purchase (unit- 2)	Tmt produced (unit- 2)	Tmt Sale (unit- 2)
2010-11	5406	5029	2649.73	2294	1895
2011-12	16204	15289	7752.58	7450	6373
2012-13	12106	12083	12559.03	10853	11190
2013-14	14546	15177	11311.66	11269	11219
2014-15	31458	31480	14219.38	11281	10824
2015-16	33571	29816	7551.28	6508	6196

2016-17	38270	40275	959.50	261	1218
2017-18	34378	35555	1082.45	354	642

Point No.2: Action plan for reducing the particulate matter within the project site

Reply: Action plan for reducing the particulate matter within the project site is as follows:

- The particulate matter emission from all the process stacks shall be reduced from the prescribed level of 50 mg/Nm^3 to 30 mg/Nm^3.
- The air pollution control equipment like ESP, Bag Filters, already installed/ to be installed shall have the required efficiency to ensure in meeting the reduced PM level of 30 mg/Nm^3 from all the process stacks.
- The monitoring of the secondary fugitive emissions will be carried around Product House, SMS and RMH guard.
- In the existing plant, proper safeguard has been taken by installing Dust Extraction System to arrest fugitive emissions, generated due to raw materials handling at Sponge Iron Plant.
- During operation of the other projects, there will be Dust Extraction/Dust Suppression Systems/Foggy Dust Arresters to control fugitive emissions at Furnace Tapping Points, raw material handling section and various other facilities inside the plant.
- All existing roads are already concreted. The additional roads, to be constructed for the expansion project shall also be concreted.
- Water sprinklers are already installed on the main roads. It will be further strengthened appropriately in synchronization with the expansion project.
- Raw materials will be stored in covered sheds.
- Adequate Green belt is already present in the existing project. The same will be further strengthened with more emphasis on the plantations along the boundary of the project area.
- There is online monitoring system for the existing stack, connected to the server of CPCB/ CECB. The similar online monitoring systems will be installed for the expansion project also.

Point No.3: The PP shall submit the revised proposal by dropping the Ferro Alloys Plant and 17 MW AFBC based Captive Power Plant in view of the high levels of particulate matter in the AAQ of the study area.

Reply: The proposal has been revised by dropping the Ferro Alloys Plant and 17 MW AFBC based Captive Power Plant in view of the high levels of particulate matter in the AAQ of the study area.

Accordingly, the revised EIA report has been submitted. The water requirement has been reduced from 36.2 cu.m./hr. to 26.5 cu.m/hr. The power requirement will be reduced to around 15 MW from 20 MW. The cost of the project has been revised to Rs. 90 crores from the earlier figure of Rs. 150 crores.

Point No.4: The PP shall calculate the revised incremental GLC based on the revised proposal

Reply: Based on the revised configuration of the project after dropping Ferro Alloys Plant and 17 MW AFBC based Captive Power Plant in view of the high levels of particulate matter in the AAQ of the study area, the incremental GLCs were recalculated. For the revised scenario, the maximum ground level concentrations of SO_2, NOx & PM would be about 6.06 µg/m^3, 4.45 µg/m^3 & 0.98 µg/m^3 respectively, which are lower than the pre-revised scenario.

Point No.5: The time bound action plan for the issues raised during the public hearing shall be revised and substantiating with the data.

Reply: The revised time bound action plan for the issues raised during the public hearing after substantiating with the data has been provided in the following table:

Sl. No.	Issues raised during PH	Response by project proponent (after PH)	Action Plan proposed	Budgetary provision as on 05.01.2018
1.	It is necessary to seek the permission of Gram Sabha for the installation of any Company.	The company has already obtained the NOC from local body/ Panchayats (namely Amaghat Gram Panchayat,Amlidihi Gram Panchayat,Gadgaon Gram Panchayat, Taraimal Gram Panchayat &Tumidihi Gram Panchayat), falling in 10 km radius area of the project.	Not applicable	Nil
2.	People belonging to the villages are illiterate. How can they read such voluminous documents prepared in English and Hindi.	as per EIA Notification, 2006 & its subsequent amendments of MoEF&CC, GoI, Executive Summary both in Hindi & English (11 pages) along with the draft EIA report were made available to the public well before the conduct of public hearing.	Not applicable	Nil
3.	There is mention of the employment of 150 people but there is no discussion for the employment of those people who are being affected by the pollution generated. There should have been discussion for the employment of the people belonging to the affected Gram-Panchayat.	76 no. of local people, who are the residents of the area in the project vicinity are already employed, In proposed expansion also, local people will be given preference, based on requirement and skill.	As in the existing project, the emphasis will be laid on the employment of the local people. Besides, the company has planned for the skill development to the unemployed local youths through National Skill Development Corporation, Govt, of India Scheme. In this connection, it will construct a building along with the necessary infrastructures to serve the purpose.	The company has earmarked 58 lacs for Skill development to unemployed local youths through National Skill Development Corporation, Govt. of India Scheme under Corporate Environment Responsibility (CER).

4.	Pond of the village is completely dried up due to fly ash of the company. There is absolutely no water in this pond. Tumidih dam is filled up by 10-12 feet with fly ash. A no. of animals have died in the wet land created due to fly ash. In my village, 35 industries have been implemented. Only one village is suffering due to the pollution generated by these 35 industries. In my village, a no. of people died due to T.B., many are still suffering.	The issue of fly ash is not applicable as the existing units do not generate fly ash.	Not applicable.	Nil.
5.	The company had made certain promises in the areas of education, health, employment, which still remain un-fulfilled.	As already mentioned above, the company has given preference in employment of the local people in its existing project.	The same approach shall be adopted in the proposed project. Besides, the company has been undertaking various CSR activities in the local area as per the local needs. It shall continue to be mindful of its social and moral responsibilities to consumers, employees, shareholders, society and the local community.	The company has earmarked 58 lacs for Skill development to unemployed local youths through National Skill Development Corporation, Govt. of India Scheme under Corporate Environment Responsibility (CER). Rs. 9 lacs are earmarked towards Financial Support to the Local Schools for repairing of buildings. Rs. 8 lacs are allocated for Providing equipment to the local hospitals. Rs. 10 lacs are allocated for providing 2 nos. ambulances, equipped with emergency facilities.

6.	Please collect the data of the health status of the people, crop, Production status and ground water availability status within 10 Kms radius.	The health status report, obtained from Block Medical Officer of the area. As per BMO report, people are found suffering from the diseases like Cough & cold, fever, body pain etc. which look quite normal for any area and does not draw any concern. The entire area falls under safe zone as far as the status of ground water is concerned.	Not applicable.	Nil
7.	Promote skill development training to unemployed youth to get better skills and to get employment chances in your industry remaining youth to get other places jobs.	Already mentioned above regarding employment of the local youths in the project.	The company has planned for the skill development to the unemployed local youths through National Skill Development Corporation, Govt, of India Scheme. In this connection, it will construct a building along with the necessary infrastructures to serve the purpose.	Rs. 58 lacs are earmarked for this purpose under Corporate Environment Responsibility (CER).

8.	Take up proper pollution control measures Air, Water, Land.	Zero effluent discharge concept is being adopted which will continue after the expansion project. Required air pollution control measures have already being taken in the existing project. The stack emission analysis report substantiates this as the pollutants emission data are well within the stipulated limits. Theproposed expansion project will be installed within the existing 58 acres land. No additional land shall be acquired.	To control air pollution, there will be required control measures like installation of Electrostatic Precipitators (ESPs), bag filters, dust suppression system and stacks of adequate height at relevant points.	The capital cost and annual operating cost of environmental mitigation measures are estimated to be Rs. 7.2 Crores and Rs. 72 Lakhs respectively.
9..	Today, Kiln Nos. 1,2,3,4 all are installed and are in operation. Then, why this public hearing,	Only Kilns No. 1 & 2 are in operation.	Not applicable.	Nil
10.	Whatever data are available in the EIA report, they are for 2014. But the Public Hearing is being conducted in 2017. Have the data not changed for Raigarh District in last 4 years?	The baseline data were generated during the period of 1st December, 2014 to 28th February, 2015. The same stands valid upto the completion of 3 years period. In addition, the same was supplemented by again generating it during 1st June, 2017 to 15th June, 2017 and again from 16th October, 2017 to 16th November, 2017.	Not applicable	Nil
11.	This is the document, which tells about the data of the elephants in 10 Km. radius area and about the compensation, the Forest Department has made. But, there is no mention of any elephant in the EIA report.	There are no such incidents or records in the Forest Department.	Not applicable	Nil
12.	The expansion of this company has already taken place in 2012. For this, no permission has been taken. Here, 4 Kilns are installed.	Both Consent to Establish & Consent to Operate were obtained from CECB for the installation of the said kilns.	Not applicable	Nil

13.	Presently, 8-10 percent people are suffering from the serious diseases like Cancer, I have seen 10 families dying due to Cancer in last 2 months 52 percent people are suffering from serious diseases like asthenia, essinophilia. Water sources are so much polluted, which result in the development of the serious diseases like scabies, itching etc.	Block Development Officer, Tamnar Block has also confirmed the same vide its letter dated 01.05.2018. Block Development Officer, Tamnar Block has confirmed vide his letter dated 01.05.2018 that there have been no deaths due to cancer in last two years (i.e., during 2015-16 and 2016-17) in the area covered by the health sub-centreSamaruma where the proposed project falls. Letter dated 01.05.2018 is enclosed as **Appendix C(i)**. Detailed record of patients in the same health sub-centre of Samaruma for the period July to September 2017 was also obtained from BMO Tamnar. A summary of the various diseases afflicting these patients (160 nos) is presented at **Appendix C(ii)**and shows most/all patients suffering from routine diseases like body pain, cough and cold etc and not a single case of any serious diseases could be found.	Not applicable.	Nil
14.	The person, who has prepared the EIA report was speaking in English. Out of the total public, sitting here, 2 percent people properly understand Hindi. 2 to 4 other persons might understand whatever was spoken in English. The people did not understand whatever was told. Here, people know Chhattisgarhi, Hindi.	The summary of the EIA Report was explained in Hindi by the EIA Consultant.	Not applicable.	Nil
15.	The company in its study report has nowhere studied the third most important issue regarding water level of this area.	It is understood that the issue pertains to ground water. The ground water of the area falls under safe zone.	Not applicable.	Nil

16.	I have gathered one information from Water Resource Department, PHED, people have told that this company is in operation for last 15 years, but I tell you that the Company has neither filed any application in last 15 years for ground water nor the company has any permission for the same.	Company has already obtained permission from CGWA, New Delhi to abstract the ground water for the project.	Not applicable.	Nil
17.	The company has never undertaken any CSR activity in 10 km. radius area.	The company is running in loss whereas the CSR fund is allocated on the basis of annual profit. However, the Project Proponent has invested Rs. 7 lacs for the development and needs of the local people in the year 2017-18.	Not applicable	Not applicable
18.	The way how air and water pollution is resulting in various diseases, the industries should explore how to address this through facts and mitigate.	Zero effluent discharge concept is being adopted which will continue after the expansion project. Adequate air pollution control measures have already being taken in the existing project. The stack emission analysis report substantiates this as the pollutants emission data are well within the stipulated limits. The health status report, obtained from Block Medical Officer of the area. As per BMO report, people are found suffering from the diseases like Cough & cold, fever, body pain etc. which look quite normal for any area and does not draw any concern.	Already mentioned against Sl. No. 8.	The cost is envisaged against Sl. No. 8 as Environmental Cost.
19.	As per the provision of the EIA Notification 2006, its para 7, sub-para 3 and Part 3, the public hearing should be conducted only at this project site or its village. You are conducting the public hearing at 3 km. away at the premises of Banjari Temple at Taraimal, a great violation.	The location of the Public Hearing was decided by Chhattisgarh Environment Conservation Board, local administration and local panchayat.	Not applicable	Nil

20.	Honorable Justice of the Supreme Court, by upholding the order, directed the company and the administration to ensure the completion of public hearing within 60 days. This is the decision of the Honourable Supreme Court on 20.05.2014 and the public hearing is being conducted today on 25.05.2017, which is the violation of the Honourable Supreme Court,	The Public Hearing was conducted as per direction of the local administration.	Not applicable	Nil
21.	The public hearing should have been carried out within 45 days.	Same as above	Not applicable	Nil
22.	The company has not presented any report on the local development of the area, how many people have been given employment, etc. They have just mentioned in the EIA report that this number of people shall be employed in the plant.	Same as mentioned against Sl. No. 3.	Same as mentioned against Sl. No. 3.	Nil
23.	Companies make big promises but the promises are not kept. They say that they would provide employment, money, a place to live, but they provide nothing.	The company will make efforts to support development of the area by socio-economic activities under CER & CSR.	-	Nil
24.	Have they carried out any tests in the laboratory for soil, air and water samples to detect Mercury, Lead, Arsenic and Nickel levels? There is already so much pollution. How have they been given permission? Secondly, there is no fly ash dyke. This point should be noted that the company has been operating without a fly ash dyke since the past 10-15 years. The district administration has built a fly ash dam and they are depositing fly ash in the jungles and Kelo river.	There is no fly ash generation till date. The dolochar, generated is supplied to the power plants. In future also, there will be no fly ash generation.	Not applicable	Nil
25.	A study on the effects of the pollutants on personal belongings, order, tradition, way of life that the local people have to face, is missing.	The EIA report is prepared in compliance with the guidelines of the EIA Notification.	Not applicable	Nil
26.	The EIA report should have contained the data of the agricultural land, forest land, wells, ponds, small streams and other sources of water which have been damaged by becoming drains due to the fly ash deposition.	Land use and land cover map is prepared and presented in the EIA Report. Since there is no disposal of fly ash, the impact of fly ash in the region has not been in the scope of impact assessment.	Not applicable	Nil

27.	Even today the people cannot think that they don't have proper drains in the villages, dirty water is flowing in the dam. There are no schools for the children to ensure their future.	There is no effluent discharge from the project.	The company will construct and repair drains.	The company has allocated Rs. 5 lacs for Construction & repairing of local drains under Corporate Environment Responsibility (CER).
28.	Where has the dolochar been disposed off during the study period?	Dolochar is supplied to the power plants.	The same practice will continue in future also.	Nil
29.	The ESP is not working. There is so much smoke and dust. All the trees, fans, roofs have been covered by dust. The roads are so busy that there are accidents regularly. Company should have an ambulance. A mini hospital should be set up at BanjariMandir where the sick people can wait. The people from outside are getting jobs but local people are unemployed. First priority should be given to the local people.	The stack emission data, generated through the online monitoring system, connected to server of CPCB / CECB are well within the stipulated norms. This itself is the manifestation of the adequacy of the performance of the ESP installed in the existing plant, which is well upto the satisfactory level. However, the company has made a voluntary commitment to reduce the stack emissions from the stipulated maximum limit of 50 mg/$NM^3$to a maximum of 30 mg/Nm^3 by improving the efficiency of ESPs. 76 no. of local people, who are the residents of the area in the project vicinity are already employed, In proposed expansion also, local people will be given preference, based on requirement and skill.	The company will provide 2 ambulances, equipped with emergency facilities. Besides, it will also provide the equipment to the local hospitals.	Rs. 10 lacs are allocated for providing the ambulances and Rs. 8 lacs for providing the equipment to the local hospitals through under Corporate Environment Responsibility (CER).

Funds to the extent of Rs. 2.25 Crores i.e., 2.5% of total project cost (90 Crores) has been earmarked for investment under Corporate Environment Responsibility. This fund will be utilized over a period of 5 years.

PROPOSED ACTIVITIES UNDER CORPORATE ENVIRONMENT RESPONSIBILITY	**BUDGET (IN LACS)**					**TOTAL (IN LACS)**
(A) BASED ON PUBLIC HEARING	1st year	2nd year	3rd year	4th year	5th year	
Skill development to unemployed local youths through National Skill Development Corporation, Govt. of India Scheme. Construction of a building along with the necessary infrastructures for this purpose like different machineries for industries.	20.0	14.0	12.0	6.0	6.0	**58.0**

Construction & repairing of local drains	1.0	1.0	1.0	1.0	1.0	**5.0**
Construction of total 2 nos. Toilet Complexes, separately for girls & boys (@ Rs. 6.25 Lakhs per Toilet Complex)	6.25	6.25	-	-	-	**12.5**
Financial Support to the Local Schools for repairing of buildings	2.0	2.0	2.0	2.0	1.0	**9.0**
Providing equipment to the local hospitals	2.0	2.0	2.0	2.0	-	**8.0**
To provide 2 no. ambulances, equipped with emergency facilities	5.0	5.0	-	-	-	**10.0**
Supporting schools for establishment of mini sports complex or playgrounds in providing the facilities like badminton court, tennis court and levelling of ground.	4.0	4.0	4.0	4.0	-	**16.0**
(B)BASED ON NEED BASED ASSESSMENT						
Drinking Water Infrastructure (Tubewell in nearby villages like Punjipatra; Padkipahri, Chaidoria & Charratangar – 6 nos. @ Rs. 1.5 Lakhs)	3.0	3.0	1.5	1.5	-	**9.0**
Construction of metal consolidation road (3 km) in villages (Punjipatra – 2 km & Padkipahri-1 km) (@Rs. 15 Lakhs per km)	15.0	15.0	15.0	-	-	**45.0**
Development of Community Halls, one each for two villages namely Punjipatra &Padkipahri– Total 2 nos. (@ Rs. 8 Lakhs per Hall)	8.0	8.0	-	-	-	**16.0**
Local Village Pond upgradation - 6 ponds (2 pondseach in three villages- Punjipatra,Padkipahri, Chaidoria) (@ Rs. 2.5 Lakhs per Pond)	5.0	2.5	2.5	2.5	2.5	**15.0**
Street Lighting (solar) provision at suitable public places – 35 nos. (@ Rs. 0.5 Lakhs per Solar Light)	4.0	4.0	4.0	3.0	2.5	**17.5**
Developments of parks, plantation of trees in the nearby areas.	1.0	1.0	1.0	1.0	-	**4.0**
TOTAL						**225.0**

Point No.6: The Revised EMP shall be upload on the website after provision of ADS in the website by the Ministry.

Reply: The revised EIA/EMP Report was uploaded in the website after provision of ADS in the website by the Ministry.

The revised capital and revenue cost of the EMP after dropping of Ferro Alloys Plant and 17 MW AFBC based Captive Power Plant is as follows:

Sl	Item	Capital Cost in Crores	Revenue cost in Lakhs / annum
1	Air Pollution Control System	6.00	60.00
2	Water conservation and Pollution control	0.42	4.20
3	Solid waste Management system	0.18	1.80
4	Greenbelt development	0.18	1.80
5	Environmental Monitoring	0.24	2.40

5	Noise reduction systems	0.06	0.60
6	Environmental management Department	0.12	1.20
	Total	7.20	72.00

Observations of the committee:

40.0 The project proponent has submitted the documentary evidences for the purchase of the raw material from the open market for the rolling mill substantiating that the rolling mill was actually operating independent of sponge iron plant. After detailed deliberations, the committee reached the opinion that the rolling mill was indeed operating independently of the sponge iron plant.

41.0 Detailed deliberations were held regarding the ambient air quality (particulate matter) which was on higher side. After deliberations, the project proponent has agreed to drop the following units for keeping the ambient air quality (particulate matter) under control:

i. Ferro Alloys Plant; and

ii. 17 MW AFBC based Captive Power Plant

42.0 Further, the project proponent shared commitment to reduce the emission of particulate matter from all the process stacks from 50 mg/Nm^3 to 30 mg/Nm^3. The project Proponent also assured that particulate matter concentration would be contained within the acceptable limits and National Ambient Air Quality Emission Standards prescribed by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009.

Recommendations of the committee:

43.0 In view of the above deliberations, the committee recommended for environmental clearance for the Sponge iron Plant (2X100 TPD); Steel Melting Shop ((1x6 T + 1x8T + 2x15 Twith matching LRF & CCM); 8 MW WHRB based Captive Power Plant subject to following specific and general conditions.

Specific Conditions:

1. The EC is subject to the outcome of Civil Appeal No. 6025 of 2012 before Hon'ble Supreme Court of India.

2. The particulate matter emission from all the process stacks shall not be more than 30 mg/Nm^3.

3. The project proponent shall take adequate measures to bring the Ambient Air Quality as per National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009.

4. The monitoring of the secondary fugitive emissions will be carried around Product House, SMS and RMH guard as per the frequency specified under the National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009.

General Conditions:

1. An amount of Rs 225 Lakhs proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.

2. Green belt shall be developed in 7.85 Ha 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.

3. The Capital cost Rs. 7.2 Crores and annual recurring cost Rs. 72 Lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.

4. The project proponent shall (Air Quality Monitoring):

    a. 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 414 (E) dated 30th May 2008 as amended from time to time; 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.

    b. 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.

    c. Install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions; and

    d. 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.

5. The project proponent shall (Water Quality Monitoring):

    a) install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; 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.

b) 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; and

c) 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.

6. The project proponent shall (Air Pollution Control):

a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

b) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;

c) provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;

d) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;

e) 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;

f) ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation;

g) provide wind shelter fence and chemical spraying on the raw material stock piles.

7. The project proponent shall (Water Pollution Control):

a) adhere to 'zero liquid discharge';

b) provide Sewage Treatment Plant for domestic wastewater; and

c) provide garland drains and collection pits 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.

8. The project proponent shall (Water Conservation):

a) practice rainwater harvesting to maximum possible extent; and

b) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

9. The project proponent shall (Energy Conservation):

    a) provide waste heat recovery system on the DRI Kilns;

    b) use dolochar generated for power generation;

    c) 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; and

    d) provide the project proponent for LED lights in their offices and residential areas;

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

11. 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.

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

13. 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.

14. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.

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

16. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

17. 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.

18. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

19. 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).

20. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

21. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.

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

23. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

24. 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 shall be submitted to the Ministry's Regional Office.

25. The project proponent shall (Post-EC monitoring):

    a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;

    b. put on the clearance letter on the web site of the company for access to the public.

    c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http:/envfor.nic.in.

    d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;

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

    f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;

    g. 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;

    h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

32.10. Proposed expansion of existing Steel Plant by installation of Sponge Iron (3x350 + 2X600 TPD Kilns) Plant, Induction Furnaces (6x18 T) with 40 T capacity AOD & Matching CCM, 0.1 MTPA Ferro Alloys Plant and 0.5 MTPA Rolling Mill. Located at Kulhariya village, DurgawatiTahasil, Bhabua, Biharby **M/s ECO Cements Limited**

[Online Proposal No. IA/BR/IND/73897/2018; J-11011/287/2010-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

32.11. Expansion of Steel Manufacturing Unit located at Village- Kala Amb, Trilokpur Road, Tehsil- Nahan, Distt- Sirmour, Himachal Pradesh by **M/s JAY AAY Alloys Private Limited** [Online Proposal No. IA/HP/IND/74439/2018; MoEFCC File No. IA-J-11011/153/2018-IA-II(I)] – **Terms of Reference.**

1.0 The project proponent submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on13/04/2018 vide Online Application No.IA/HP/IND/74439/2018.

2.0 M/s. Jay Aay Alloys Pvt. Ltd. proposes expansion of existing manufacturing unit byaddition of two numbers of induction furnaces of capacity15 TPH each for manufacturing of Steel ingots and billets and also increases the capacity of rolling mill for manufacturing of Round MS-Bars, TMT Bars, wire rod, Flats.

3.0 Consent to Operate was accorded by Himachal Pradesh Pollution Control Board vide lttr. No. HPSPCB/PCB-ID18948validity of CTO is up to 30/03/2019.

4.0 The proposed unit will be located atVillage- Kala Amb, Trilokpur Road, Tehsil- Nahan, Distt- Sirmour, Himachal Pradesh.

5.0 The project has already 4.77 acres(1.93 Ha) land. No additional land is required for expansion. No forestland involved. Of the total area 33% land will be used for green belt 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 approx780.65 Lakh rupees. Proposed employment generation from proposed project will be 60 Persons by direct employment.

8.0 The targeted production capacity of the unit after expansion will be 1, 26,000 TPA Steel Ingots, 1, 20,000TPA Round, TMT bars, wire rod, and flats. The raw material for the plant would be procured from Local & international Market. The raw materialtransportation will be done through Covered Trucks. 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	15 TPH each	1,26,000
Rolling Mills	1	7 MT	1,20,000

9.0 The electricity load of total 6000 KW will be procured from Himachal Pradesh Power Corporation Limited. Two numbers of sound proof DG sets having capacity 125KVA& 200 KVA have already installed. No DG set required for expansion.

10.0 Proposed raw material for project is MS Scrap & Ferro Alloys. The requirement would be fulfilled from local & international market.

11.0 Water Consumption for the proposed project will be 77KLD (Existing- 32.0 KLD). Domestic & industrial waste water will be treated through septic tank and reused for plantation within premises. Proposed project is based on ZERO discharge.

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: Chandigarh Pollution Testing Laboratory - E I A Division; (Certificate No. NABET/ EIA/ 1619/ SA 057), Mohali, Punjab.

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

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

2. 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.

3. 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 1st May 2018.

4. Certificate compliance of CTO from the Regional officer of the SPCB shall be submitted along with EIA/EMP.

5. The PP shall provide substantiating evidence for not obtaining the environmental clearance for the existing plant under EIA Notification, 1994.

32.12. Proposed expansion of existing Steel Plant by installation of Sponge Iron (3x350 + 2X600 TPD Kilns) Plant, Induction Furnaces (6x18 T) with 40 T capacity AOD & Matching CCM, 0.1 MTPA Ferro Alloys Plant and 0.5 MTPA Rolling Mill. Located at Village Dhasna, Jamuria, P.O. Bahadurpur, District Burdwan, West Bengal by **M/s SHYAM SEL AND POWER LIMITED** [Online Proposal No. IA/WB/IND/6892/2009; J-11011/97/2008.-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

32.13. 3.5 MTPA Integrated Steel Plant including 295 MW CPP at Village: Halavarthi,Tehsil: Koppal, Dist: Koppal, State: Karnataka by **M/s AARESS Iron & Steel Limited (AISL)** [Online Proposal No. IA/KA/IND/27952/2015; MoEFCC File No. F. No. J-11011/161/2015-IA.II(I)] **– Validity Extension of ToR.**

1.0 **M/s AARESS Iron & Steel Limited(AISL)** made application vide online proposal no. IA/KA/IND/27952/2015 dated 24th April, 2018 seeking extension of validity of Terms of reference granted for the proposed 3.5 MTPA Integrated Steel Plant including 295 MW CPP at Village: Halavarthi,Tehsil: Koppal, Dist: Koppal, State: Karnataka vide F. No. J-11011/161/2015-IA II (I) dated 22nd July 2015.

2.0 It was informed that the project proponent has submitted the draft EIA/EMP report to the State Pollution Control Board for conduct of PH on 24th February 2018. However, the PH could not be conducted due to scheduled state elections.

3.0 Further, the PH was conducted on 28th May 2018 and awaiting for the proceeding of the Public hearing and it may take some more time to submit the final EIA/EMP. Therefore, it was requested for extension of validity of the Terms of Reference.

Recommendations of the Committee:

4.0 After detailed deliberations, the committee recommended for extension of validity of Terms of reference for one more year i.e. up to 21st July 2019.

12th June 2018 (Teesta)

32.14. Expansion of Ferro Alloy Plant at Sector – B, Jindal Industrial Park, Punjipathra Village, Gharghoda Tehsil, Raigarh District, Chhattisgarh by **M/s Tirumala Balaji Alloys Pvt. Ltd**. [Online Proposal No. **IA/CG/IND/58249/2016**; MoEFCC File No. **J-11011/213/2016-IA.II(I)] – Environmental Clearance**

1.0 **M/s Tirumala Balaji Alloys Pvt. Ltd**. made online application vide proposal no. **IA/CG/IND/58249/2016** dated 14th May, 2018 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

The details submitted by Project Proponent:

2.0 The proposed expansion of Steel Plant of M/s. TIRUMALA BALAJI ALLOYS PVT. LTD. located at Sector -B, Plot Nos.111,112,113,114, O.P. Jindal industrial Park, Punjipathra Village, Gharghoda Tehsil, Raigarh (D), Chhattisgarh was initially received in the Ministry on 9th August, 2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised in 10th EAC (Industry-1) meeting held on 29th August– 31st August

2016 for prescribing ToR to the expansion project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR to the project on 18th November 2016 vide Lr. No. J-11011/213/2016-IA II (I).

3.0 The project of M/s. TIRUMALA BALAJI ALLOYS PVT. LTD. located at Sector -B, O.P. Jindal industrial Park, Punjipathra Village, Gharghoda Tehsil, Raigarh (D), Chhattisgarh is does not have E.C. as the plant was established in 2004. (as per EIA Notification 1994 EC required for capital investment more than Rs 100 Crores, for Greenfield projects). Accordingly CTE has been taken from CECB, Chhattisgarh vide Order No: 560/R.O/TS / CECB /2004 dated 30th June 2004 & amended in 18th February, 2005 for Ferro Alloy Plant of 2 x 9 MVA Capacity (SEAF) to manufacture Fe-Mn - 28000 TPA (OR) Si-Mn - 28000 TPA (OR) Fe-Cr - 28000 TPA. Hence Certified Compliance report of Consent to Operate issued for existing plant from the Regional Office,CECB, Raigarh, C.G. There is no non-compliances reported by Regional officer, CECB, Raigarh.

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

S. No	Unit / Product	Permitted capacities as per CTE obtained vide dated 30th June 2004	Proposed Expansion	After Expansion
Submerged Electric Arc Furnaces		2 x 9 MVA	1 x 9 MVA	2x9 MVA & 1x9 MVA
1	Ferro Manganese (Fe-Mn)	28,000 TPA (93.3 TPD)	20,000 TPA (66.7 TPD)	48000 TPA (160 TPA)
	OR			
2	Silico manganese (Si-Mn)	28,000 TPA (93.3 TPD)	14,000 TPA (46.7 TPD)	42000 TPA (140 TPD)
	OR			
3	Ferro Chrome (Fe-Cr)	28,000 TPA (93.3 TPD)	15,000 TPA (50 TPD)	43000 TPA (143.3 TPD)
	OR			
4	Ferro Silicon (Fe-Si)	Nil	15,000 TPA (50 TPD)	15000 TPA (50 TPD)

5.0 The total land required for the existing & proposed expansion project is 6 Ha. / 15 acres. The land is industrial. Entire land is taken on lease from M/s. Jindal Steel & Power Limited. Chhattisgarh State Industrial Development Corporation (CSIDC) has given 218.253 Ha. of land to M/s. JSPL on lease for development of industrial Park. Expansion will be taken up in the existing plant premises only. No additional land is proposed. No forest land involved. No River / stream passes through the plant area. It has been reported that no natural water body / stream exists in the plant area and any modification / diversion in the existing natural drainage pattern at any stage has not been proposed.

6.0 The topography of the area is flat with undulations and reported that the site lies between 22º03'36.55" to 22°02'47.67" North Latitude and 83°20'35.70" to 83°20'44.10" East longitude in Survey of india Topo sheet no. 64 N/8 at an elevation of 315 AMSL. The ground water table

reported to ranges between 3 to 14 m bgl below the land surface during the post-monsoon season and 2 to 6 m bgl below the land surface during the pre-monsoon season.

7.0 There are no notified National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ migratory routes for Birds with in 10 Km. radius of the plant. However as per the secondary source movement of Elephants is observed within 10 Kms. radius of the plant. Conservation plan is prepared and submitted to Principal Chief Conservator of Forests (PCCF), Raipur. Recommendations / comments of the Principal Chief Conservator of Forests (PCCF), Raipur have been obtained. As per their recommendation, a fund of Rs. 30.00 Lakhs to be spent for the Plan Period i.e. 2 years (2017 to 2018 & 2018 to 2019) and it would be funded by the Project Proponent i.e. M/s. TIRUMALA BALAJI ALLOYS PVT. LTD. Species of bird such as Peacock is reported from the forest areas of the buffer zone are listed in Schedule - 1 of the Indian Wildlife (Protection) Act. Peacock is listed under the Least concern category. The list of flora and fauna during study period in the study area is furnished in Pg. no. 3.50 to 3.62 of Chapter # 3 of EIA report.

8.0 Detailed process provided in the EIA report and list of raw material for the proposed expansion project is given below

Sl.	**Raw material**	**Quantity (TPA)**	**Source**	**Distance w.r.t. Plant**	**Mode of transport**
for Manufacturing Fe-Si					
1.	Quartz	22000	Local	50 Kms.	By Road (Covered Trucks)
2.	LAM coke	9000	Imported from Australia, China	480 Kms.	From Vizag Port by Road (Covered Trucks)
for Manufacturing Si-Mn					
1.	Manganese Ore	26,500	Balaghat (M.P.) Imported from South Africa	500 Kms. 480 Kms.	By Road (Covered Trucks) From Vizag Port by Road (Covered Trucks)
2.	Quartz	4,000	Local	50 Kms.	By Road (Covered Trucks)
3.	Mn. Slag	11,000	Inhouse	---	By Conveyers
4.	LAM coke	3,500	Imported from Australia, China	480 Kms.	From Vizag Port by Road (Covered Trucks)
for Manufacturing Fe-Cr					
1.	Chrome ore	35000	Sukinda (Odisha) Import (Indonesia)	400 Kms. 480 Kms.	By Road (Covered Trucks) From Vizag Port by Road (Covered Trucks)
2.	LAM coke	14000	Imported from Australia, China	480 Kms.	From Vizag Port by Road (Covered Trucks)

for Manufacturing Fe-Mn					
1.	Manganese Ore	26000	Balaghat (M.P.) Imported from South Africa	500 Kms. 480 Kms.	By Road (Covered Trucks) From Vizag Port by Road (Covered Trucks)
2.	LAM coke	9000	Imported from Australia, China	480 Kms.	From Vizag Port by Road (Covered Trucks)
3.	Dolomite / Limestone	2800	Local	50 Kms.	By Road (Covered Trucks)

9.0 The targeted production capacity of the plant after expansion project is production Fe-Mn from 28000 TPA to 48000 TPA (OR) Si-Mn from 28000 TPA to 42000 TPA (OR) Fe-Cr from 28000 TPA to 43000 TPA (OR) new product Fe-Si of 15000 TPA. Major Rawmaterial transportation will be done through Ship from Vizag port, A.P. and from there to Raigarh Railway Station by Rail. The Rawmaterial unloaded at Raigarh Railway Station will be transported to the project site by road through covered trucks, which is at 20 Kms. from the plant.

10.0 Water requirement for the expansion project is estimated as 25 KLD. Total water requirement for the entire project will be 68.2 KLD, which will be sourced from Groundwater. The permission for drawl of water is approved by CGWA vide NOC no. CGWA/NOC/IND/ORIG/2018/3738 dated 8th June 2018**.**

11.0 Total power required for the proposed expansion project will be Max. of 19 MW which will be M/s. Jindal Steel and Power Limited.

12.0 Baseline Environmental Studies were conducted during winter season i.e. from 1st October 2016 to 31st December 2016. Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated:$PM_{2.5}$ (18.2 to 45.3 mg/m^3), PM_{10} (32.5 to 78.5 µg/m^3), SO_2 (6.5 to 22.6 mg/m^3), NOx (7.0 to 29.5 mg/m^3) & CO (445 to 1280 mg/m^3).The results of the modeling study indicates that the maximum increase of GLC due to the proposed expansion project & Vehicular emissions will be 0.67 µg/m^3 with respect to the PM, Nil with respect to the SO_2, 5.6 µg/m^3 with respect to the NOx & 2.0 µg/m^3 with respect to the CO.

13.0 Ground water quality has been monitored in 8 locations in the study area are analysed and the data submitted indicated pH: 7.3 to 7.8, Total Hardness: 211 to 278 mg/l, Chlorides: 115 to 195 mg/l, Fluoride: 0.32 to 0.51 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations in the study area and analysed and the data submitted indicated pH: 6.8 to 8.1 and DO: 4.0 to 5.5 mg/l.

14.0 Noise levels are in the range of 42.40 dB(A) to 62.35 dB(A) during 1st October 2016 to 31st December 2016.

15.0 It has been reported that there are no habitations in the site & no additional land is proposed for implementing proposed expansion. No R&R is involved.

16.0 It has been reported that the following Solid wastes will be generated due to the proposed expansion project which will stored in storage yard above the ground level.

S. No.	Solid waste	Quantity (TPA)	Disposal method
1.	Slag from Ferro Silicon Manufacturing Process	250	Will be given to cast iron foundries.
2.	Slag from Silico Manganese Manufacturing Process	11,000	Will be utilised in road construction
3.	Slag from Ferro Manganese Manufacturing Process	11,000	Will be used in manufacture of Silico manganese as it contains high MnO_2.
4.	Slag from Ferro Chrome Manufacturing Process	12,000	Ferro chrome slag generated will be further processed in Zigging plant for Chrome recovery the non-chrome contents will be sent to common disposal yard within the Industrial Park.
5.	Dust from Bagfilters of SEAF and during tapping	0.05	It will be used in existing Briquetting Plant.

17.0 It has been reported that an area of 2.0 Hectares (5 Acres) is already been developed as green belt out of total plant area 6 Ha. (15 Acres) 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 Operate from the Chhattisgarh Environment Conservation Board has been obtained vide order no. 560/R.O/TS / CECB /2004 dated 30th June 2004 & amended in 18th February, 2005.

19.0 The Public hearing of the project was held on 14th December 2018 at Banjarimata Temple under the chairmanship of Shri. R.YADAV (ADM, Raigarh) for enahancement of Ferro Alloy plant production capacity i.e. Fe-Mn from 28000 TPA to 48000 TPA (OR) Si-Mn from 28000 TPA to 42000 TPA (OR) Fe-Cr from 28000 TPA to 43000 TPA (OR) new product Fe-Si of 15000 TPA. The issues raised during publichearing Industrial pollution in the area, Slag disposal, Crop damage, water drawl permission, Conservation measures for elephants, Water cess, Skin related problems to students present in nearby College, Silicosis disease, Rain water harvesting measures, Ground water availability, CER activities, Employment to local peoples, Not considered Alternate sites, Land Diversion etc. The details of issues raised in the PH are as follows:

S. No.	Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
1	Development of additional Green Belt	Greenbelt has already been developed in 5 acres of land which is in accordance with the norms. However additional greenbelt of 0.3 acres will be developed.	With in 1 year year from the date of from the date of E.C. / Financial closure	Rs. 30,000/-	Rs.11,000/-
2	Formation of CSR Coordination Committee to supervise the CSR activities	Developmental activities will be taken up in the village as per CER planning. CER co-ordination committee comprising of members of village panchayat will be formed to supervise the implementation of CER	With in 2 years from the date of from the date of E.C. / Financial closure	Rs. 50 Lakhs will be allocated for welfare activities under CER .	---

		funds.			
3	Public Hearing has not been completed within 45 days from the date of submission of documents to CECB. Hence this Public Hearing shall be stalled.	Actually this provision is only to help the Project proponent and avoid delay in process of obtaining Environmental Clearance.	----	----	----
4	Ground water availability status in the area	Ground water table in the area varies from 3 and 14 m bgl in Pre-monsoon to 2 to 6 m bgl m in post monsoon. This area falls under SAFE category as per CGWB report .	----	----	----
5	Rain water harvesting measures to be taken up	In the existing plant RWH has been implemented. Now it is proposed to construct additional RWH tanks and implement ground water recharging measures also. The roof top water will be collected in a tank and will be used to meet the plant water requirement.	With in 2 years from the date of from the date of E.C. / Financial closure	Rs. 2.2 Lakhs for RWH with in the Premises & Rs. 1.7 Lakhs for RWH in the Villages under CER	----
6	As per EIA notification , 2006 Jindal Industrial Park should have obtained Environmental clearance. Whether they have obtained Environmental clearance or not ?	O.P. Jindal Industrial Park has been established in the year 2004 which is prior to EIA notification dated 14th September, 2006. Hence it was not under the purview of Environmental clearance.	----	----	----
7	Whether CECB has issued CTE & CTO for the Industrial Park.	CECB has issued CTE and CTO is being renewed periodically. Tirumala Balaji Alloys has obtained CTE in the year 2004 and 1st CTO in 2004 and its CTO is being renewed periodically with the current CTO for existing plant valid till 31st December 2019.	----	----	----
8	In EIA it has been mentioned that Jindal Industrial Park is a notified industrial park Could not find any notification issued by Govt regarding this industrial park.	State Govt. of Chhattisgarh has issued a G.O. for conversion of lands for the Industrial purpose. Chhattigarh State Industrial Development Corporation has been taken land from State govt. of Chhattisgarh and given lease to Jindal Steel & power Ltd to develop Industrial park.	----	----	----

9	There is no mention about the industrial pollution in the area.	The existing Ambient air quality is inclusive of the emissions from the existing other industries in the area. Emissions from other industries have also been considered in the prediction of incremental concentrations along with the emissions from the expansion project and vehicular emissions. The net resultant incremental GLCs are within the National Ambient air Quality Standards. Hence there will not be any adverse impact on air environment due to the proposed expansion.	Before commissioning of the plant	Rs. 2.0 Crores will be allocated for Environmental Protection Measures	Rs. 37.6 Lakhs /Annum
10	If it is an Industrial Park then common facilities such as solid waste disposal yard, etc shall be there. Could not locate these facilities in the industrial park.	O.P. Jindal Industrial Park has common facilities like Solid waste dump yard, etc. A copy of the Industrial Park Lay-out clearly showing Solid waste dump yard is shown in Pg. No. 2.14 of Chapter # 2 of EIA report.	----	----	----
11	Does the Dumping Yard for slag disposal exist in Jindal industrial Park ? if so details to be furnished	Solid waste dump yard exist in the Jindal Industrial Park. A copy of the Industrial Park Lay-out clearly showing Solid waste dump yard is shown in Pg. No. 2.14 of Chapter # 2 of EIA report.	----	----	----
12	Disposal of chrome slag which is hazardous in nature. Whether TCLP for Chrome slag has been carried out ?	Slag generated during manufacturing of Ferro chrome will be taken to jigging plant and after crushing and screening chrome will be recovered and as per the TCLP test the remaining material after chrome recovery has chrome content within the permissible levels. This will send to Industrial Park dump yard. TCLP test will be carried out once in a year. In future if chrome content in slag will exceeds the stipulated standard; then this will be sent to nearby TSDF.	After commencement of present proposal	Rs. 15 Lakhs will be allocated for Solid waste Management	Rs. 10 Lakhs /Annum
13	Ambient air quality data published by CPCB in 2014-15 is much higher than the data presented in this EIA report.	CPCB data report not found in the PH proceedings. However if the concentrations of Ambient air quality is higher. Then the CPCB would have listed this area under Crtica lly polluted areas. Subsequently a request has been submitted to CECB for Providing AAQ data monitored by CPCB at	----	----	----

		Jindal Industrial Park, Punjipathra under NAMP program. The data shows that AAQ at Punjipathra is within the NAAQS.			
14	Source of water for the existing plant. Whether water drawl permission has been obtained for the existing plant? Are they paying water cess? Whether Water drawl permission for the expansion project is obtained ?	Ground water is the source for the existing plant. Water requirement of existing plant is 43.2 KLD. The plant commenced operation in the year 2004. During that period ground water drawl permission was not required if the ground water with drawl is less than 1000 KLD for SAFE category areas and 100 KLD for Semi Critical areas. The plant falls under Safe category. Hence water drawl permission has not been obtained for the existing plant. Water cess is being paid by the industry regularly. Source of water for expansion is also ground water. Application has been submitted to CGWB for water drawl permission and approved by CGWA vide NOC no. CGWA/NOC/IND/ORIG/2018/3738. Water for expansion will be drawn only after obtaining permission from the CGWA, New Delhi.	----	----	----
15	There is a college close by to the industrial park and the students have skin related problems.	College is situated at a distance of 0.15 Kms. in Eastern direction from the plant. 130 m wide Green belt has been developed towards college side by JSPL in the Industrial park peripherally. In the present proposal air emission control measures such as Bag filters , covered conveyers, dust suppression system will be provided. ZLD will be adopted. Solid waste disposal will be in accordance with the norms. 1/3rd of the plant area has already been covered with greenbelt. Additional 0.3 acres of greenbelt will also be developed as part of expansion proposal. The existing plant has CTO issued by CECB which is valid till 31st December 2019.	Before commissioning of the plant	Rs. 2.0 Crores will be allocated for Environmental Protection Measures	Rs. 37.6 Lakhs /Annum
16	Crop damage	In the existing plant air emission control measures such as Bag filters , covered conveyers, dust suppression system have been provided. ZLD is being adopted. Solid waste disposal is in accordance with the norms. 1/3rd of the plant area has already been covered with greenbelt. Additional	Before commissioning of the plant	Rs. 2.0 Crores will be allocated for Environmental Protection Measures	Rs. 37.6 Lakhs /Annum

		0.3 acres of greenbelt will also be developed as part of expansion proposal. The existing plant has CTO issued by CECB which is valid till 31ST December 2019. Latest stack monitoring report is enclosed as Annexure -9 of EIA report. Hence no crop damage occurs due to this industry. In the expansion also similar practices will be followed. However If any crop damage occurs due to our industry, then compensation will be paid to the affected farmers as per Govt. Rules.			
17	There is a mention about Elephant Corridor. However there is no mention about conservation measures for elephants.	As per the secondary sources there is movement of Elephants has been observed within 10 Km. radius of the plant. Conservation Plan has been prepared by Mr. HARESH CHANDRA TIWARI, I.F.S. (RETD.) and submitted to PCCF, C.G. and Recommendations / comments of the Principal Chief Conservator of Forests (PCCF), Raipur have been obtained and as per the recommendations a budget provision of **Rs. 30 Lacs** will be earmarked for the Wildlife Conservation and Management Plan for two years.	2 year (2017-18 & 2018 -19)	a budget provision of Rs. 30 Lacs will be earmarked for the Wildlife Conservation and Management Plan for two years.	----
18	Regarding Silicosis disease	Silicosis disease is normally found in people working in Silica sand mining where they are continuously exposed to crystalline silica. In this proposal Quartz is used as raw material. Hence no continuous exposure will be there in this plant. Respiratory masks will be provided to employees working in quartz handling areas. Dust suppression system will be provided. In the health check up Chest x- ray & Fluorocopy will be carried out periodically. This will give symptoms of any silicosis. A copy of the certificate issued by the Medical Officer confirming that there are no Silicosis related issues in the nearby villages is enclosed as Annexure -8 of EIA report.	With in 2 years from the date of from the date of E.C. / Financial closure	Rs. 10 Lakhs will be allocated for CER activities.	---
19	Regarding Social impact assessment	Social Impact Assessment has been carried out . CER activities were	With in 2 years from the date of	Rs. 50 Lakhs will be	---

		based on the following 1) Based on need based assessment 2) Based on Public consultation 3) Based on Wildlife conservation plan The CER budget based on the above will be spent over a period of 2 years which is inline with the implementation of the expansion project. Detailed Social Impact Assessment has been enumerated in chapter-7 & Chapter-8 of Final EIA report.	from the date of E.C. / Financial closure	allocated for CER activities.	
20	Providing Employment to local peoples.	In the existing plant out of 118 no. of total employees 70 % are from Raigrah District.	----	----	----
21	Alternate sites not considered.	The proposed expansion will be taken up in the existing plant premises only. No additional land is envisaged for the expansion project. Hence no alternative sites have been considered.	----	----	----
22	Regarding ground water Cess payment.	Company is regularly paying ground water cess to Water resources Department / CECB. A copy of the water cess returns are enclosed as Annexure -10 of EIA report.	----	----	----
23	Regarding Schedule Area.	6.0 Ha. (15 acres) of land has been taken on lease in the O.P. Jindal industrial Park from M/s. Jindal Steel & Power Limited. Expansion will be taken up in the existing plant premises only. No additional land is envisaged. Entire land for industrial park has been acquired by M/s. CSIDC Limited (Govt. of Chhattisgarh) and thereafter given to M/s. Jindal Steel and Power Limited for development of Industrial Park. Now this is become O.P. Jindal Industrial Park. Since the original land is acquired by CSIDC which is a state Govt body and gave it on lease to M/s. JSPL. No schedule area in this land. Till date there is no case also filed in any court regarding schedule area of this land.	----	----	----
24	Gram Panchayat NOC has not been obtained.	This land is acquired by C.S.I.D.C Limited and given on lease to M/s. Jindal Steel and Power Limited for development of Industrial Park. All the plots within this industrial park are taken on lease. As the land has	----	----	----

		been acquired by CSIDC, NOC from Gram Panchayat will not be required.			
25	Land Diversion has not been done .	The Entire land of this Industrial Park has been acquired by C.S.I.D.C Limited and given to M/s. Jindal Steel and Power Limited (JSPL) on lease for 99 years for development of O.P. Jindal Industrial Park and M/s. JSPL is giving these developed industrial plots on lease to other industries which are already diverted for industrial purpose. Hence land diversion is not required.	----	----	----

20.0 An amount of Rs.50 Lakhs (2.5 % of expansion Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues. The details of CER proposed are as follows:

S. No.	Major Activity Heads	Years (Rs. In Lakhs)		Total Expenditure (Rs. In Lakhs)
		1st	2nd	
A	Based on need based & Social assessment study			
1	Community & Infrastructure Development Programmes (Development of village road, rennovation of school buldings, providing Street Lights & its maintenance in panchayat area, maintenance of Temples in nearby Villages, sanitation facilities, drainage facilities in near by villages & schools.	10.0	10.0	20.0
2	Skill & Entrepreneur Development (Skills updation on welder / Fitter / wiremen etc)	5.0	5.0	10.0
3	Education and Scholarship Programmes (Providing furniture, computers, library, sports equipment etc for schools, Sponsorship for School Sport events, Merit Scholarships to School Children)	2.0	2.0	4.0
4	Medical & health related activities (Periodical Medical Camps and distribution of Medicines, Ambulance facilities to villagers)	5.0	5.0	10.0
5	Other requirements as per needs of the nearby Village Panchayat	2.0	2.0	4.0
	SUB TOTAL (A)	24.0	24.0	48.0
	Based on Public Consultation			
1.	Additional Rain water harvesting measures in nearby villages	0.7	1.0	1.7
2.	Additional 0.3 acres of greenbelt will be developed as part of expansion proposal.	0.3	--	0.3
	SUB TOTAL (B)	1.0	1.0	2.0

	TOTAL (A+B)	25.0	25.0	50.0
B	Expenditure towards implementation of Conservation plan			
1.	For the years 2018 & 2019	23.25	6.75	30.0
	TOTAL	48.25	31.75	80.0

21.0 The capital cost of the project is Rs.20 Crores and the capital cost for environmental protection measures is proposed as Rs. 2.0 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 37.6 Lakhs / annum. The employment generation is 50 people during operation of the proposed expansion and 150 people during construction, indirectly employed in contract works & transport. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S.No	Item	Capital Cost (Rs.in Lakhs)	Recurring Cost / Annum (Rs.in Lakhs)
1.	Air Emission Management		
	• Fume Extraction systems with Bag filters	80.0	10.0
	• Chimney	35.0	1.0
	• Water Sprinklers	5.0	0.1
2.	Wastewater Management • ETP (general)	5.0	1.0
3.	Solid waste Management		
	• Slag Disposal	10.0	---
	• Fe-Cr recovery & its disposal	---	5.0
	• Hazardous waste storage & disposal	5.0	5.0
	• Municipal solid waste storage & disposal	--	2.0
4.	Greenbelt development, Land scaping Noise Management	Nil	2.5
5.	Environmental Monitoring		6.0
	• AAQMS	40.0	
	• CEMS	10.0	
6.	Occupational Health & Safety	10.0	5.0
TOTAL		200.0	37.6

22.0 Greenbelt has been developed in 2.0 Ha. (5.0 acres) which is about 33% of the total acquired area. Greenbelt width varying from 5 to 30 m have been developed all around the plant. There are 4350 no. of plants have already been developed in the existing plant premises. Now additional 0.12 Ha. will be developed with greenbelt as part of expansion project. Hence additional 180 nos. will be planted.

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 Consultant: M/s Pioneer Enviro Laboratories and Consultant Private limited, Hyderabad.

Recommendations of the Committee:

25.0 After detailed deliberations, the committee recommended for grant of environmental clearance subject to following specific and general conditions:

Specific conditions:

1. The Project proponent shall obtain the permission for withdrawal of required water from the competent authority before commencement of the project.

2. The emission from all the processing stacks (Particulate Matter) below the 30 mg/N-m^3.

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.

General Conditions:

1. An amount of Rs 50 Lakhs proposed towards Corporate Environment Responsibility (CER) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.

2. Green belt shall be developed in 2.0 Ha (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.

3. The Capital cost Rs. 200 Lakhs and annual recurring cost Rs. 37.6 Lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.

4. The project proponent shall (Air Quality Monitoring):

    a. 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; 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.

    b. 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.

c. Install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference SO_2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions;

d. submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring for calibrations of CEMS 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.

5. The project proponent shall (Water Quality Monitoring):

a) install 24x7 continuous 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; 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.

b) 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; and

c) 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.

6. The project proponent shall (Air Pollution Control):

a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources;

b) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;

c) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;

d) 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;

e) use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin;

f) provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc.;

g) provide primary and secondary fume extraction system at all melting furnaces; and

h) design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

7. The project proponent shall (Water Pollution Control):

a) adhere to 'zero liquid discharge';

b) provide Sewage Treatment Plant for domestic wastewater; and

c) 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.

8. The project proponent shall (Water Conservation):

a) practice rainwater harvesting to maximum possible extent; and

b) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

9. The project proponent shall (Energy Conservation):

a) provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.

b) practice hot charging of slabs and billets/blooms as far as possible;

c) ensure installation of regenerative type burners on all reheating furnaces;

d) 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; and

e) Provide the project proponent for LED lights in their offices and residential areas.

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

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

12. 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.

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

14. 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.

15. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.

16. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Induction/ Electric Arc Furnace and Rolling Millsshall be implemented.

17. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

18. 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.

19. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

20. 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).

21. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

22. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.

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

24. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

25. Kitchen waste shall be composted or converted to biogas for further use (*to be decided on case to case basis depending on type and size of plant*)

26. The project proponent shall (Post-EC monitoring):
    a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;

b. put on the clearance letter on the web site of the company for access to the public.

c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http:/envfor.nic.in.

d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;

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

f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;

g. 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;

h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

32.15. Expansion of Integrated Cement Plant [Clinker (2.8 MTPA to 5.0 MTPA); Cement (3.6 MTPA to 6.5 MTPA); CPP (22 MW to 47 MW); and WHRB (13.2 MW to 15 MW) located at Kailash Nagar, TehasilNimbahera, District Chittorgarh, Rajasthan by **M/s JK Cement Limited Kanpur** - [Online Proposal No: **IA/RJ/IND/60653/2016**; MoEFCC File No: J-11011/243/2016-IA-II(I)]– Further consideration for **Environmental Clearance based on reply to ADS.**

1.0 **M/s J. K. Cement Works** has made online application vide proposal no. **IA/RJ/IND/60653/2016** dated 2nd November 2017along 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(b) Cement Plants under Category "A" of EIA Notification, 2006 and the proposal is appraised at Central level

2.0 The proposed expansion project of M/s J. K. Cement Works, Nimbahera located at Kailash Nagar, Tehsil –Nimbahera, District-Chittorgarh State Rajasthan was initially received in the Ministry on 25th November 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 14th meeting held on 23rd December 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 31st January, 2017 vide letter No. J-11011/243/2016-IA.II (I).

3.0 The project of M/s J. K. Cement Works, Nimbahera located at Kailash Nagar, Tehsil – Nimbahera, District-Chittorgarh State Rajasthan is for expansion of production of Clinker from 2.8 MMTPA to 5.0 MMTPA, Cement from 3.6 to 6.5 MMTPA, WHRB from 13.2 MW to 15.0 MW and CPP from 22 MW to 47 MW. The existing project was accorded Consent to Operate vide letter no. F (Tech)/ Chittorgarh (Nimbahera)/ 5(1)/ 2010 – 2011/ 8039-8041 dated 20.12.2017 which is valid up to 31.05.2022 with respect to the clinker and cement, F (Tech)/ Chittorgarh (Nimbahera)/ 5(1)/ 2010 – 2011/ 2378 – 2380 dated 25.05.2016 which is valid up to 31.03.2019 with respect to 22 MW CPP and F (Tech)/ Chittorgarh (Nimbahera)/ 5(1)/ 2010 – 2011/ 5724 – 5727 dated 28.12.2015 which is valid up to 31.07.2018 with respect to WHRB. The status of Certified compliance of Present CTO was obtained from RSPCB Regional Officer Chittorgarh on 22.09.2017. There were no non-compliances reported by Regional Officer. The proposed capacity after expansion for different products are as below:

Sl. No	Product	Existing Capacity (MMTPA)	Proposed Capacity (MMTPA)	Capacity after proposed expansion (MMTPA)
1	Clinker	2.8	2.2	5.0
2	Cement	3.6	2.9	6.5
3	CPP	22 MW	25 MW	47 MW
4	WHRB	13.2 MW	1.8 MW	4.0 MW

4.0 The total land required for the project is 170.27 Ha (including residential colony), out of which 57.77 ha is for greenbelt. The proposed expansion will be carried in the existing plant premises and no additional land is required to be acquired. No forestland involved. Water bodies existing around the project are Gambhiri Dam-7.1 km, NE; Gambhiri River-2.5 km, E; Uncha Talab-8.976km, SW; Nimbahera River-2.087km, E and Kadmali River - 2.187 km, NE and no 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 lies between 24°38’18.46” to 24°38’41.50” N latitude and 74°41’5.93” to 74° 41’1.84” E Longitude in Survey of India toposheet No. 45L/10, at an elevation of 446 m AMSL. The ground water table is ranges between 22.05m below the surface level during the post-monsoon season and 38.11m 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. The authenticated list of flora and fauna provided through the Dy conservator of forests, Chittorgarh reporting presence of schedule-I fauna in the study area (Annexure-XI of EIA).

7.0 It was reported that dry process of cement manufacture utilizing the pre-calciner technology is adopted. The basic raw materials used in the cement plant are Limestone, Red Ochre, Laterite, Flyash and Gypsum. Pet coke, Indian Coal, alternative fuels (AFR) and Imported Coal respectively are used in the process. The major raw material for manufacture of cement is limestone and is sourced from various limestone mines located at villages- Maliakhera, Karunda and Ahirpura. Limestone produced will be transported to the cement plant by tippers/ Rubber Belt Conveyor (RBC). The proposed Over Land Belt Conveyor System length is approx. 8.0 Km,

Width – 1000 mm. (Capacity – 1500 TPH), Total no. of pillars proposed are 208.

8.0 The requirement of raw material for project are Limestone (7.28 MMTPA); Red Ochre (0.537 MMTPA); Laterite (0.78 MMTPA); Gypsum (0.387 MMTPA); Dry Fly ash (0.888 MMTPA); wet fly ash (0.161MMTPA); Indian coal for CPP (1150 TPD); Pet coke for CPP (615 TPD) based on MoEF notification; Indian Coal for Cement Plant (3099 TPD);Pet coke for Cement Plant(1697 TPD) ;Imported Coal for Cement Plant(2498 TPD).Coal requirement would be fulfill by Indian as well as imported. The fuel will be mainly coal and pet coke and partially AFR fuel (like Agro Waste; Tyre Chips/carbon black, Plastic resine waste; ETP waste ; Pb-Zn slag; Pharma waste, Municipal segregated solid waste, waste mix solid and liquid; Chemical Gypsum, Jerosite & Red oxide as additive) to minimize hazardous and other waste generating from various industries.

9.0 The water requirement of the project is estimated as 4,071m^3/ day. Daily water requirement will be 3,301 m^3/day and Recycled Water – 770 m^3/day. About 2,545 KLD will be met from Ground water, 1,396 KLD from Gambhiri Dam and remaining water will be met from existing adjacent Ahirpura Limestone Mine Pit, Maliakhera Mine, Karunda Mine, Tilakhera Mine & Mangrol Mine. The permission for drawl of groundwater/surface water is obtained from CGWA vide letter No. 21-4(34)/WR/CGWA/2005-1675 on dated 28.10.2015 and dam water vide agreement between J K Cement works Nimbahera and Govt. of state of Rajasthan.

10.0 The power requirement of the project after expansion is estimated as 62.6 MW. Out of which 22 MW will be met from CPP, 15.0 MW (13.2 MW existing + 1.8 MW proposed) from WHRB, 25 MW from proposed CPP and remaining will be met from State grid as and when required.

11.0 Baseline Environmental studies were conducted during winter season i.e. from December' 2016, January'2017 and February' 2017. Ambient air quality monitoring has been carried out at eight locations during December'2016, January'2017 and February' 2017and the data submitted indicated: PM_{10} (91.2µg/m^3 to 28.9µg/m^3), $PM_{2.5}$ (56.2µg/m^3 to 15.8µg/m^3), SO_2 (13.1 µg/m^3 to 4.1µg/m^3) and NOx (28.3µg/m^3 to 8.9 µg/m^3). The results of the modeling study indicate that the maximum increment of GLC for the proposed expansion will be 8.2 µg/m^3 with respect to the PM_{10} , 5.5 µg/m^3 with respect to the $PM_{2.5}$, 8.6 µg/m^3 with respect to the NO_x and 5.1 µg/m^3 with respect to the SO_2.

12.0 Ground water quality has been monitored in eight locations in the study area and analysed. pH: 7.18 to 7.65, Total Hardness: 200mg/ l to 630mg/ l, Chlorides: 50 mg/l to 270.1 mg/l, Fluoride: 0.5 mg/l to 1.1 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from two locations. pH: 7.96 to 7.91; DO: 6.0 mg/l to 6.6 mg/l and BOD: 05mg/l to 06 mg/l. COD from 16 mg/l to 18 mg/l.

13.0 Noise levels are in the range of 66.1 to 48.8 dB (A) for daytime and 60.9 to 39.3 dB(A) for night time.

14.0 It has been reported that there is no habituation in the core zone of the project. No R&R is involved. It has been envisaged that no families to be rehabilitated.

15.0 The dust collected in the air pollution control equipment in Cement process will be

recycled back feeded to the transport system. Hence no solid waste which requires disposal is generated from the plant. Fly ash generated from CPP will be utilized in the cement manufacturing process. Solid waste generated from colony is disposed after segregating the waste into biodegradable and non-biodegradable. Bio- Degradable waste is being used as compost and Non Bio- Degradable waste is land filled within the colony premises at identified areas. Solid waste generated at STP is dried in the sand beds and is being used as compost for Green Belt development. Existing hazardous waste generated to the tune of 29.0 KL used oil during FY 2016-17, out of which 27.8 KL was sent to authorized recycler and remaining 1.2 KL used in-house.

16.0 It has been reported that the Consent to Operate from the Rajasthan State Pollution Control Board obtained vide letter no. F (Tech)/ Chittorgarh (Nimbahera)/ 5(1)/ 2010 – 2011/ 1636 – 1639 dated 26.05.2014 which is valid up to 31.05.2017 and renewal application has already been submitted. With respect to the clinker and cement, F (Tech)/ Chittorgarh (Nimbahera)/ 5(1)/ 2010 – 2011/ 2378 – 2380 dated 25.05.2016 which is valid up to 31.03.2019 with respect to ther 22 MW CPP and F (Tech)/ Chittorgarh (Nimbahera)/ 5(1)/ 2010 – 2011/ 5724 - 5727dated 28.12.2015 which is valid up to 31.07.2018 with respect to the WHRB.The status of earlier CTO was obtained from RSPCB Regional Officer Chittorgarh on 22.09.2017.

17.0 Public hearing of the project was held on 30.06.2016 at Sub Divisional Office, Nimbahera, Tehsil – Nimbahera, District – Chittorgarh (Raj.). under the chairmanship of ADM, Sh. Anurag Bhargava for the expansion project. The issues raised during public hearing are employment, development of social infrastructure, pollution issues & women empowerment etc. The statement of main issues raised by the public and response of the project proponent with action plan is as follows:

S. No.	**Issues Raised**	**Response by project proponent (after PH)**	**Budgetary provision (INR In lac)**		**Time Bound Action Plan proposed**
			Capital	**Recurring**	
1.	Jobs &Sustainable Employment self income – generating opportunities	1. Local villagers will be given employment on the basis of their eligibility. However a training camp shall be provided when new recruitment is done to enable check and select from the local pool of applicability. 2. Continued Women Income Generating Programmes through the various economic activities Cutting & Tailoring, Pickle & Sauces making, Soft Toys & Gem Jeweler, and Beautician Courses and	60.0	5.00	Year 2018-19 : Post Expansion Quarter-I Year 2018-19 : Quarter I , II , III, IV continuous ongoing programmes. Year 2018-19 : Quarter I , IV

		for making affordable price of Sanitary Pads. 3. Workshop on Mobile repairing for self employment and skill generation along with digital self employment training of online mobile payments / net banking. 4. Funding for *Shishu (projects accepted under the Mudra Scheme of the Government)* Start-ups in the 10.0 km Radius for self employment in Manufacturing or Services Sector capped at the upper limit of 50.0 thousand (not in Cash but in Tools / Implements or Machines/ as per the requirement of the respective Start-up). 5. JK Cement welcomes hardworking Farmers for their tools & implements to find self employment. No funds or cash will be given to farmers but a network and resources required towards Beej/ fertilizers& Pesticides / Animal Welfare/ tools/ Sales & promotion of Crops / self employment is and will always be supported.			Year 2018-19 : Quarter II Year 2018-19 : Quarter III
2.	Public Convenience Centre required at Nimbahera	Convenience center in Nimbahera	210.0	1.0	Year 2018-19 : Foundation , Construction , Fitting 2019-20 : Further Construction 2020-21 : Finishing

3.	Soil Fertility Depletion	Measures to improve Soil Fertility : 1. Training to improve soil fertility as depicted by the Soil report. Sample Materials to improve Soil Fertility will be provided to local farmers in the Workshop. 2. Soil Fertility Improvement demo in 2-3 sample farms nearest to the plant site.	22.5	1.5	Pre-Monsoon Every year
4.	Community Centre required at Mangrol	Mangrol residents were continuously requiring a Community centre as mention in the Public Hearing	40.0	-	Year 2018-19 : Quarter III Foundation , Construction , Fitting & Finishing
5.	Medical &Modern Health Technology & blood Bank required at Nimbahera	1. Further Modern Technology Development in the Hospital Nimbahera in CSR 2017-18.	20.0	0.25	Year 2018-19 : Quarter II
		1. Establishment/ |Contribution for the Blood bank in Nimbahera in approach of the Hospital, Nimbahera.	19.0	0.45	Year 2018-19 : Quarter III
6.	Water supply line works required at Shahabad	Laying of Water supply line works in Shahabad 4.3 km N, to solve the Water supply issues and temporary solutions of 20-25 litres tank water storage.	15.0	0.25	Year 2018-19 : Quarter III / IV or Both
7.	For improvement in survival rate of plantation eaten by stray cattle	Installation of Tree Guards at public places, where JK proposes for Green Cover. Funds for plantation and conservation plans are allocated in the Environment Protection Measures for Green Cover.	8.0	0. 50	Pre monsoon – Monsson – Post Monsoon , alongwith phases of Plantation
8.	Requires Management of Truck movement	Financial Assistance from JK Cement works for four lane of incoming road from	400.0	-	As per PWD (Government)directives

	and reduction**.**	flyover end (Chittorgarh side) in towards Nimbahera Municipal limits. This shall contribute in public convenience from truck movement towards highways and management of traffic.			
	Total		**794.5**	**8.45**	

18.0 An amount of Rs 13, 15, 80,000 (Thirteen Crore Fifteen Lacs Eighty thousand only) (more than 2.5% of the average annual profit of the corporation) has been earmarked for Enterprise Social Commitment based on public hearing issues. The details of ESC proposed are as follows:

Sl. No	**ESTIMATED BUDGET] C.S.R. SCHEMES FOR THE FINANCIAL YEAR 2017-22**						
	Enterprise Social Commitment Activities	2017-18	2018-19	2019-20	2020-21	2021-22	Total
1	**Medical & Health**						
	Organized Free Eye(Cataract) camp at Govt Hospital NBH in 2016-17 as per past practice. Nimbahera	700000	-	-		-	700000
	Organized the Free medical camps in Near by NBH Sub Division 34 Villages. Mangrol	600000	-	-		-	600000
	Further modern technology Development in the Hospital Nimbahera in CSR 2017-18.	-	500000	500000	500000	500000	2000000
	Establishment of the Blood bank in Nimbahera in approach of the Hospital, Nimbahera.	-	1500000	200000	200000	-	1900000
2	**School/ Education**						
	Construction of Three New rooms in Govt. School Phacher Ahiran(Total six room construct)	2200000	-	-	-	-	2200000
	Financial Help for Promotion of Govt. School Sports tournament 2017-18(Approx.).	100000	-	-	-	-	100000
	Construction of Two New rooms in Govt. School Lhottha Bharu village .Nimbahera	400000	-	-	-	-	400000
	To recognize and motivate the Students on Independence day function (8th to 12th class) by Distributor of Silver Medal to those who have achieved 65% and above marks in Board Exam Nimbahera	200000	-	-	-	-	200000
	Financial Help in District Corpus Fund for CSR Work in Govt. PHC & Schools.	-	-	1100000	1100000	-	2200000
3	**Livelihood Promotion/ Job Creation & Skill Generation**						
	Organise a Rural Skill developing	2300000	-	700000	700000	-	3700000

	programe for Women &Youth. Provide the various kind of training.						
	"SPARH"Sanitary napkin making Through S.H.G. (WomensEmpoverment&Health&hygiene).	2500000	-	-	2500000	-	5000000
	Adopt the 18 Agwanwadi Centers for Development as per their needs .(MOU For three Year)	650000	-	-	-	-	650000
	Local villagers will be given employment on the basis of their eligibility. However a training camp shall be provided when new recruitment is done to enable check and select from the local pool of applicability.	-	500000	500000	500000	-	1500000
	Continued Women Income Generating Programs through the various economic activities Cutting & Tailoring, Pickle & Sauces making, Soft Toys & Gem Jeweler, and Beautician Courses and for making affordable price of **Sanitary Pads**.	-	1000000	1000000	1000000	1000000	4000000
	Workshop on Mobile repairing for self employment and skill generation along with digital self employment training of online mobile payments / net banking.	-	1000000	-	1000000	-	2000000
	Funding for *Shishu (projects accepted under the Mudra Scheme of the Government)* Start-ups in the 10.0 km Radius for self employment in Manufacturing or Services Sector capped at the upper limit of 50.0 thousand (not in Cash but in Tools / Implements or Machines/ as per the requirement of the respective Start-up)	-	500000	1000000	-	-	1500000
	JK Cement welcomes hardworking Farmers for their tools & implements to find self employment. No funds or cash will be given to farmers but a network and resources required towards Beej/ fertilizers& Pesticides / Animal Welfare/ tools/ Sales & promotion of Crops / self employment is and will always be supported.	-	500000	-	500000	-	1000000
4	**Infrastructure work**						
	C.C.Road& Drainage line construction work in Phalwa village. (P.P.Mode) & Maintenance	500000	-	50000	-	-	550000
	Grave Yard shed & Boundary wall construction work in Shabad village. (P.P.Mode)	500000	-	-	50000	-	550000
	C.C. Road & Drainage line construction work in Mangrol village .(P.P.Mode)	1000000	-	-	-	-	1050000

	construction work at JhoonJiBawe JI Temple in Tillakhera Village .(P.P.Mode)	500000	-	-	50000	-	550000
	Community hall construction work in Bhawliya village (P.P.Mode).	500000	-	50000	-	-	550000
	C.C.Road& Drainage line construction work in Sand village .(P.P.Mode)	500000	-	-	50000	-	550000
	C.C.Road& Drainage line construction work in Pipliyagadiya village .(P.P.Mode)	500000	-	-	-	-	500000
	Construction of 450 Toilets in Nimbahera Urban area .With associate Govt. Schems (Swacch Bharat Abhiyan) Make ODF City in Rajasthan . (Cost per toilet 7000x400)	2800000	Continue dwith Same Budget	2800000	Continue with Same Budget	-	5600000
	Financial Assistance from JK Cement works for four laning of incoming road from the flyover end (Chittorgarh side)towards Nimbahera in Municipal limits	-	-	8000000	12000000	20000000	40000000
	Construction &Development of a Community centre.	-	4000000	-	-	-	4000000
	Public convenience Centre Nimbahera		9000000	4400000	7600000	-	21000000
	Laying of Water supply line works in **Shahabad 4.3** km N, to solve the Water supply issues and temporary solutions of 20-25 litres tank water storage.	-	15,00,000	-	-	50000	1550000
5	**Drinking Water**						
	Water Tenker Supply in Summer seasion in Nimbahera city &Nearby villages.	1000000	1000000	-	-	-	2000000
	Mukyamantri JAL SWALAMBAN YOJNA 2017-18.	1000000	-	-	-	-	1000000
	water Pipe Line work construction work in Karunda & Pipliya village (P.P.Mode)	1500000	-	50000	-	-	1550000
	Provide the New Water Pipe Line work in MaliyaKheri Village.	500000	Shahabad	-	50000	-	550000
6	**Environment**						
	As per Green Belt development plan Approved & authentic by DFO Chittorgarh Plantation in surrounding area of mines & Plant and Green & clean Nimbahera campaign.	1500000	-	4650000	-	-	61,50,000
	Plantation with 3500 thousand Herbal High breeder trees.	1000000	-	-	-	-	1000000
	Installation of Tree Guards at public places, where JK proposes for Green Cover.	-	800000	-	150000	-	950000
	As per Conservation Plan authentic and approved by DFO Chittorgarh for Peacock : • 8.9 Lacs per year for ten years	-	-	890000	890000	36,00,000	5380000

	• Alongwith 36.0 Lacs for ten years						
	As per Conservation Plan authentic and approved by DFO Chittorgarh for Leopard: 4.60 lacs per year from a corpus fund of 46.5 lacs for ten years	-	4650000		-	-	4650000
7	**Social**						
	Measures to improve Soil Fertility : 1. Training to improve soil fertility as depicted by the Soil report. Sample Materials to improve Soil Fertility will be provided to local farmers in the Workshop. 2. Soil Fertility Improvement demo in 2-3 sample farms nearest to the plant site.	-	650000	1600000	-	-	2250000
	Total	22950000	26450000	27490000	28840000	251500 00	131580000

18.0 The overall investment in the existing & proposed project for plant is assumed to be Rs. 2,667.51 Crore and the capital cost for environmental protection measures is proposed as Rs. 1484.65 Lacs. The annual recurring cost towards the environmental protection measures is proposed as Rs 121.48Lacs. The employment generation from the proposed project / expansion is 125 The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S. No.	Description of Item	Existing		(Proposed)	
		Capital Cost (In Lacs)	Recurring Cost (In Lacs)	Capital Cost (In Lacs)	Recurring Cost (In Lacs)
1	Air Pollution Control/ Noise	1804	180.0	1288.65	99.5
2	Water Pollution Control	55.0	8.0	20.0	0.60
3	Environmental Monitoring and Management	100.0	14.04	124.5	12.38
4	Green Belt Development	175.0	17.5	46.5	6.50
5	Occupational Health	62.0	68.04	5.0	2.5
Total		2196.0	287.58	1484.65	121.48

19.0 Greenbelt will be developed in 3.752 Ha and 54.02 hectare greenbelt is already developed around plant boundary green cover as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 tress per ha. As stipulated in the ToR prescribed by the Expert Appraisal Committee, New Delhi, vide their letter no. J-11011/ 243/ 2016 – IA.II (I) dated 31.01.2017.In Para iv of point no 7 described green belt over an additional area of 15 ha for the same company will be develop additional green belt by using local plant species. For additional 15 ha green belt development, every year 3.0 hectare area will be developed for plantation for next five years

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

21.0 Name of EIA consultant: M/s. Enkay Enviro Services Pvt. Ltd., Jaipur QCI Accredited (SI.No.41, at QCI list dated 16/11/2017).

22.0 The proposal was considered in the 27th meeting of Expert Appraisal Committee (Industry-I) held on 3rd – 5th January, 2018. The committee observed that the existing plant is operating with consent to operate from the state pollution control board. The project proponent informed that the plant was established before 1994 notification and subsequently expanded with consent to establishment with an investment less than 50 Crores and also established captive power plant with an investment of 80 Crs as a standalone project.

23.0 After detailed deliberations, the committee sought following information for further consideration of the proposal;

1. Detailed note on justification for not obtaining prior environmental clearance for the existing facilities including CPP under EIA Notification; and

2. Production of cement plant and power generation shall be submitted year wise against the consented capacity since inception along with substantiating evidences;

3. Detailed action plan for conservation of schedule-I species found in the area in consultation with local DFO;

4. Revised statement of Public hearing issues and commitments made along with time bound action plan and budgetary provision;

5. Revised Enterprise Social commitment based on the issues raised during the PH and social need assessment in the form of asset creation and implement in concurrence with project implementation.

6. Action plan for adoption of slip power recovery system

24.0 The project proponent submitted reply to the Additional details sought are as follows:

A. The PP informed that there are several projects functioning under name and style of J.K. Cement Limited in an around the proposed expansion project:

S. No.	Name	Distance & Direction from J.K. Cement Plant at Nimbahera
1	Ahirpura Mine	100m, NW
2	Karunda Mine	8.61km, NW
3	Tilakhera Mine	5.71km,N
4	Mangrol Mine	5.1km,N
5	Maliakhera Mine	6.59km,NW
6.	Mangrol Plant	5.1km,N

Point No. 1: Detailed note on justification for not obtaining prior to Environmental clearance for the existing facilities including CPP under EIA Notification.

Reply: The production lines were started in 1974, 1979 & 1982 as such EC was not required. The

investment incurred for expansion of existing Cement Plant in the all the years since 1994 was less than Rs50 Crore, as such, does not attract the EIA Notification S.O.60(E) dated 27.01.1994, as the investment for modification and /up gradation was less than Rs50.0Crores and was completed prior to EIA notification 2006 and & its amendments. The investment incurred for expansion in all years C.A. Certificates is enclosed as **Annexure-I.**

Year	**Investment**	**Remarks**
1999	Rs16.35 Crore	Modify old high pressure preheated cyclone to low pressure cyclone for kiln No. 1,2,3 Pre-calcinator and also upgraded pneumatic raw meal transport system to mechanical transport system from C.F. silo to preheater etc.
2004	Rs. 32.64 Crore	Modification to unlock hidden capacity in kilns, facilitate use of fly ash and added combo-cement grinding mill. Along with this efficiency of pollution control equipment
The above mention investment does not attract the EIA Notification S.O.60(E) dated 27.01.1994. as the investment for modification and /up gradation was less than Rs 50.0 Crores and was completed prior to EIA notification 2006 and & its amendments.		
2007	Rs. 80.0Crore	The total investment incurred for captive Thermal Power which is independently maintained outside the premises of existing Cement Plant (**which supplied power to two separate plants, J.K. Cement Works, Nimbahera and JK Cement works, Mangrol**), was less than Rs100 Crores as per EIA Notification 1994& its subsequent amendments. Point No.3 clause b' ***any item falling under entry no.-1,2…..19…..of Schedule I if the investment is less than Rs.100 Crore for new projects……."*** as such EC was not required.

Thus, the project is appraised for the first time for "Proposed Expansion of Integrated Cement Plant" as under and does not attract any violation of EIA Notification 2006.

Product	**Existing(MTPA)**	**Proposed(MTPA)**	**Total After Expansion (MTPA)**
Clinker	2.8	2.2	5.0
Cement	3.6	2.9	6.5
Power Generation			
CPP	22 MW	25 MW	47 MW
WHRB	13.2 MW	1.8 MW	15.0 MW

Point No. 2: Production of cement plant and power generation shall be submitted year wise against the consented capacity since inception along with substantiating evidences.

Reply: The year wise production of cement plant and power generation (uploaded) against the consented capacity for:

Particular	**Capacity**	**Issued dated**	**Valid upto**

Cement Plant Clinker	3.60 MTPA; 2.80 MTPA	20.12.2017	31.05.2022
Captive Power Plant(CPP)	22 MW	25.05.2016	31.03.2019
Waste Heat Recovery Boiler (WHRB)	13.2	28.12.2015	21.07.2018

Since inception in 1974, the production is as per obtained consent capacity only. No capacity enhanced beyond the Consented capacity is undertaken.

Point No. 3: Detailed action plan for conservation of Schedule -1 species found in the area in consultation with DFO.

Reply: The detailed action plan for conservation of schedule species found in the area in consultation with local DFO was prepared and Rs.57.0 Lacs budgetary provision for Leopard is estimated a period of 10 Years. Plantation suggested in the villages of buffer zone i.e. Arnoda, Ganeshpura, Phootwar, Khara, Pemadiyakhera, Motha and Tumba etc. The Existing budgetary provision for conservation of the Pea Fowl is 8.90 Lacs and the proposed budgetary provision is kept Rs. 25.8 Lacs for 10 Years and suggested plantation in the villages i.e. Ahirpura, Barolighta, Rampura, Ishakabad, Lakshmanpura, Borakher and Kalyanpur.

Point No. 4: Revised statement of public hearing issues and commitments made along with time bound action plan and budgetary provision.

Reply: The Time bound action plan and budgetary provision has been earmarked for Public Hearing issue total Rs. 1056 Lacs (Upto FY- 20-21) in the various heads i.e. Jobs &sustainable employment self-income- generating opportunity, Centre for woman training, Public Convention centre at Nimbahera, Soil Fertility improvement, Community centre at Mangrol, Medical & Modern Health Technology & Blood Bank at Nimbahera, Water Supply line works at Shahbad, Installation of tree guard, Management of Truck Movement and reduction, and Socio Agro Forestry. The revised summary of PH is as follows:

S. No.	**Issued Raised**	**Response by project proponent (after PH)**	**Budgetary Provision (INR in Lacs)**			**Time Bound Action Plan for proposed expansion**
1.	Jobs & sustainable employment self income-generating opportunity	• Local villagers will be given employment on the basis of their eligibility. However, a training camp shall be provided when new recruitment is done	10.0 (FY - 18-19) Training kit, training programme (manpower) refreshment, literature and visual presentation , publicity	5.0 (FY - 19-20)	5.0 (FY - 20-21)	The Same will be implemented progressively with the expansion
		• Workshop on mobile repairing for self employment and skill generation along with digital self employment training of online	2.0 (FY - 18-19) Demo kit, manpower, training kit	2.0 (FY - 19-20)	2.0 (FY - 20-21)	

		mobile payments/net banking.				
		• Funding for Shishu (projects accepted under the Mudra Scheme of the Government) start up in the 10.0km radius for self employment in manufacturing or services sector capped at the upper limit of 50.0thousand (not in cash but in Tools/Implements or Machines/ as per the requirement of the respective start up)	5.0 (FY - 18-19) 10 persons @max 50,000 each	5.0 (FY - 19-20)	5.0 (FY - 20-21)	
		• For sustainable livelihood through self help group, we will provide affordable price sanitary pad making machine & woman awareness programme for their health & hygiene.	50.0 (FY - 18-19) 10 persons @max 50,000 each	25.0 (FY-19-20)	25.0 (FY-20-21)	
		• JK Cement welcomes hard working farmers for a network and resources required towards Animal Welfare is and will always be supported.	3.0 (FY - 18-19) Awareness programme with Krishi Vibhag	3.0 (FY-19-20)	3.0 (FY-20-21)	
2.	Centre for woman training	Woman income generating Programmes through the various economic activities- Cutting & Tailoring , Pickle & Sauces making, Soft toys & Gem Jeweler and Beautician courses will be continued.	20.0 (FY-18-19) Raw material manpower, training rooms with facilities (at Mangrol) already stated in ESC)	15.0 (FY-19-20)	15.0 (FY-20-21)	The same will be implemented progressively with the expansion
3.	Public Convention centre required at Nimbahera	Public Convention centre in Nimbahera will be constructed in PP mode with Nagar Palika, Nimbahera	219.0	-	-	
4.	Soil Fertility Improvement	Measures to improve soil fertility: To be open a farmer Help Centre with block agriculture officer to facilitate Making the farmer producing organization(F.P.O.) for	25.0 (FY-18-19) Micro nutrient	15.0 (FY-19-20)	10.0 (FY-20-21)	Continuous ongoing with project & after commissioning.

		help in their farming & update the agriculture skills and financially strength their farmer self help group with association NABARD & other govt.				
5	Community Centre required at Mangrol	Mangrol residents were continuously requiring a Community centre as mention in the Public Hearing	40.0 (Stated in ESC)			Year 2018-19" to take up in Quarter III Foundation, Construction, Fitting & Finishing by 2019 end.
6	Medical & Modern Health Technology & blood Bank required at Nimbahera	1. Further Modern Technology Development in the Hospital Nimbahera. 2. Establishment/Contribution for the Blood Bank in Nimbahera in approach of the Hospital, Nimbahera	20.0 (Stated in ESC)	19.0 (Stated in ESC)		Year 2018-19: Quarter II/With the proposed project
7	Water Supply line works required at Shahabad	Laying of Water supply line works in Shahabad 4.3 km, to solve the Water supply.	20.0(Stated in ESC)			Year 2018-19: Quarter III/IV or Both /With the proposed project.
8	For improvement in survival rate of plantation eaten by stray cattle.	Installation of Tree Guards at public places, and socio-forestry plantation	8.0			Year 2018 to 2020 continuous Pre Monsoon – Monsoon – Post Monsoon, alongwith phases of Plantation /With the proposed project.
9	Requires Management of Truck movement and reduction.	Financial Assistance from JK Cement works for four lane of incoming road from flyover and (Chittorgarh side) in towards Nimbahera Municipal limits. This shall contribute in public convenience from truck movement towards highways and management of traffic.		400.0 (FY 19-20) Payment to be made in favor of Nagar Palika		As per PWD (Government) directives/With the proposed project.

10	Socio-Agro Forestry	Beautification and Up gradation of Shyama prasahad muckerjee park in Nimbahera by installation of water fountain, LED garden light and develop flora & fauna aesthetics and Benches etc. Plantation with 3500 thousand Herbal High breader trees(Panchfal Vaniki)	10.0 (Fy 18-19) 30.0 (FY 2017-19)	10.0 (Fy 18-19) 10.0 (FY 19-20)	10.0 (Fy20-21) 10.0 (FY 20-21)	-
Total			**462**	**509**	**85**	**Rs. 1056 Lacs**

Point No. 5: Revised Enterprise Social commitment based on the issues raised during the PH and social need assessment in the form of asset creation and implement in concurrence with project implementation

Reply: An amount of Rs 1,49, 00,000 under various head i.e. Centre for Woman Training, community/Centre at Mangrol Medical Health, Water Supply line works at Shahbadhas been earmarked for Enterprise Social Commitment based on public hearing issues. Rs 2,73,00,000 under various heads i.e. School/ education, Livelihood promotion/ job creation& skill generation, Infrastructure work, drinking water has been earmarked for Environmental social responsibility (ESR) based on public hearing issues.

S. No	**ESTIMATED BUDGET CER SCHEMES FOR THE FINANCIAL YEAR 2017-22**						
	Enterprise Social Commitment Activities	**2017-18**	**2018-19**	**2019-2020**	**2020-21**	**2021-22**	**Total**
1.	**Centre for Woman Training**						
	Woman income generating programmes through the various economic activities- Cutting & Tailoring, Pickle & Sauces making , Soft Toys & Gem Jewelers and Beautician Cources will be continued.		20,00,000	15,00,000	15,00,000	-	50,00,000
2.	**Community Centre required at Mangrol**						
	Mangrol residents were continuously requiring a community centre as mention in the Public Hearing	-	40,00,000		-	-	40,00,000
3.	**Medical Health**						
	Further modern technology development in the Hospital Nimbahera (Path lab equipments OT, Diagnostic centre	-	5,00,000	5,00,000	5,00,000	5,00,000	20,00,000
	Establishment of the blood bank in Nimbahera in approach of the Hospital, Nimbahera.	-	15,00,000	2,00,000	2,00,000		19,00,000
4.	**Water supply line works required at Shababad**						

	Laying of water supply line works in Shababad, to solve the water supply		20,00,000	-	-	-	20,00,000
Total			**10000000**	**22,00,000**	**22,00,000**	**5,00,000**	**149,00,000**

S. No	**ESTIMATED BUDGET CER. SCHEMES FOR THE FINANCIAL YEAR 2017-22**						
		2017-18	**2018-19**	**2019-2020**	**2020-21**	**2021-22**	**Total**
1.	**School/Education**						
	Construction of three new rooms in Govt. School Phacher Ahiran (Total six room constructed -500 sq.ft. each room)	30,00,000	--	---	--	--	30,00,000
	To recognize and motivate the student on independence day function (8th to 12th class) by distributor of silver medal to those who have achieved 65% and above marks in Board Exam Nimbahera	2,00,000	--	--	--	--	2,00,000
	Permanent water body creation by anicut/check bund.	--	--	11,00,000	11,00,000		22,00,000
2.	**Livelihood promotion / job creation &skill generation**						
	Organize a rural skill developing programme for Women &Youth. Provide the various kind of training (Handicraft, agriculture, Cattle farming, Jewllery, Tailoring, Cottage industrial training)	23,00,000	--	7,00,000	7,00,000	--	37,00,000
3.	**Infrastructure work**						
	C.C. roads & drainage line construction work in Phalwa village(P.P . mode) & Maintenance	40,00,000	40,00,000	-	-		80,00,000
	Grave Yard shed &boundary wall construction work in Shababad village (P.P.mode)	9,00,000	-	-	-		9,00,000
	Community hall construction work in Bhawliya village (P.P.mode)	5,00,000	-	50,000	-		5,50,000
	Construction & Development of a community centre in Manglore village.	-	40,00,000	-	-		40,00,000
4.	**Drinking Water**						
	Water tanker supply in summer season in Nimbahera city Nearby village.	10,00,000	10,000,000	-	-	-	20,00,000
	Mukhyamantri JAL SWALAMBAN YOJNA 2017-18		12,00,000				12,00,000

	Water pipe line work construction work in Pipaliya village (P.P.mode)	15,00,000		50,000			15,50,000
	Total	**1,34,00,000**	**1,02,00,000**	**59,00,000**	**18,00,000**	**-**	**2,73,00,000**

Therefore total is 4,22,00,000

The capital cost for environmental protection measures is proposed as Rs. 1484.65 Lacs. The annual recurring cost towards the environmental protection measures is proposed as Rs 121.48 Lacs.

S. No.	Description of Item	Existing		(Proposed)	
		Capital Cost (In Lacs)	Recurring Cost (In Lacs)	Capital Cost (In Lacs)	Recurring Cost (In Lacs)
1	Air Pollution Control/ Noise	1804	180.0	1288.65	99.5
2	Water Pollution Control	55.0	8.0	20.0	0.60
3	Environmental Monitoring and Management	100.0	14.04	124.5	12.38
4	Green Belt Development	175.0	17.5	46.5	6.50
5	Occupational Health	62.0	68.04	5.0	2.5
Total		**2196.0**	**287.58**	**1484.65**	**121.48**

Point No. 6: Action plan for adoption of slip power recovery system

Reply: The adoption of slip power recovery system for proposed line no.4-is equipped with Bag House Fan (Raw Mill, Kiln PH Fan-1, Separator Fan for Cement Mill Polycom, Separator fan for Raw Mill Polycom with range operating speed will be 65-95% and saving in KW per Hr.(KWH) will be 10-12%.

Observations of the committee:

25.0 The committee deliberated in detail on the reply to Additional Details sought and opined that the earlier expansion of cement plant and establishment of power plant did not attract the provisions of EIA Notification 1994 and its subsequent amendments due to following reasons:

- The Cement production lines were started in 1974, 1979 & 1982 and investment incurred for expansion of existing Cement Plant in the all the years since 1994 was less than Rs50 Crore; and

- The total investment (Rs. 80 Crs) incurred for captive Thermal Power which is independently maintained outside the premises of existing Cement Plant (which supplied power to two separate plants, J.K. Cement Works, Nimbahera and JK Cement works, Mangrol), was less than Rs. 100 Crores.

Recommendations of the committee:

26.0 After detailed deliberations, the committee recommended for grant of environmental clearance for the proposed expansion project subject to following specific and general conditions:

A. Specific Conditions:

1. The project proponent shall implement the conservation plan for schedule-I species (Pea fowl and Leopard) in consultation with the local forest department with the fund provisions of Rs. 82.80 Lakhs in addition to the existing fund provision of 8.90 Lakhs.

2. The project proponent shall adopt the slip power recovery system for proposed line no.4 equipped with Bag House Fan (Raw Mill, Kiln PH Fan-1, Separator Fan for Cement Mill Polycom, Separator fan for Raw Mill Polycom).

3. The project proponent shall utilize the alternate fuels to the maximum extent possible.

4. The treated water from the STP shall be recycled and reused to conserve the water.

B. General Conditions:

1. An amount of Rs 4.22 Crores proposed towards Corporate Environment Responsibility (CER) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.

2. Green belt shall be developed in 72.77 Ha with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.

3. The Capital cost Rs. 36.80 Crores (21.96 Crores for Existing+14.84 Crores for expansion) and annual recurring cost Rs 4.08 Crores per annum (Rs. 2.87 Crores for existing + 1.21 Crores for expansion) towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.

4. The project proponent shall (Air Quality Monitoring):

    a. 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 August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and 10th May, 2016 (Co-processing Cement); 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.

    b. 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.

    c. Install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions;

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

5. The project proponent shall (Water Quality Monitoring):

a) install 24x7 continuous 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 10th May, 2016 (in case of Co-processing Cement) as amended from time to time; 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.

b) 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; and

c) 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.

6. The project proponent shall (Air Pollution Control):

a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

b) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;

c) provide pollution control system in the cement plant as per the CREP Guidelines of CPCB;

d) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;

e) recycle and reuse lime fines, coal fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after agglomeration;

f) ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;

g) Provide wind shelter fence and chemical spraying on the raw material stock piles;

h) provide Low NO_X burners as primary measures and SCR /NSCR technologies as secondary measure to control NO_X emissions. Have separate truck parking area and monitor vehicular emissions at regular interval.

7. The project proponent shall (Water Pollution Control):

   a) adhere to 'zero liquid discharge';

   b) provide Sewage Treatment Plant for domestic wastewater; and

   c) provide garland drains and collection pits 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.

8. The project proponent shall (Water Conservation);

   a) practice rainwater harvesting to maximum possible extent;

   b) provide water meters at the inlet to all unit processes in the cement plants; and

   c) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

9. The project proponent shall (Energy Conservation):

   a) provide Waste heat recovery system for kiln and cooler;

   b) make efforts to achieve power consumption less than 65 units/tonne for Portland Pozzolona Cement (PPC) and 85 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker;

   c) 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;

   d) provide the project proponent for LED lights in their offices and residential areas;

   e) maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards; and

   f) maximize utilization of alternate fuels and Co-processing to achieve best practice norms.

10. 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.

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

12. 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.

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

14. The PP 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.

15. The PP shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.

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

17. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

18. 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.

19. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

20. 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).

21. The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

22. The storage of NH_3 and other hazardous chemicals at the site shall be as per the provisions of Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended from time to time.

23. 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.

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

25. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

26. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, cement bagging plants.

27. 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.

28. Kitchen waste shall be composted or converted to biogas for further use.(*to be decided on case to case basis depending on type and size of plant*)

29. The project proponent shall (post-EC Monitoring):

    a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;

    b. put on the clearance letter on the web site of the company for access to the public.

    c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http:/envfor.nic.in.

    d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;

    e. monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;

    f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;

    g. 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;

    h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

32.16. Expansion of Sponge Iron Plant located at Village Budhakhap, P.O - Karma, Dist.- Ramgrah, Jharkhand by **M/s Aloke Steels Industries Private Limited** [online proposal No. **IA/JH/IND/53261/2016;** MoEFCC File No. J-11011/205/2016-IA.II(I)] **– Further consideration for Environmental Clearance based on reply to ADS**.

1.0 **M/s Aloke Steels Industries Private Limited** has made online application vide proposal no. **IA/JH/IND/53261/2016** dated **9th January 2018** 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 application M/s Aloke Steel Industries Pvt. Ltd. located in Village-Budhakhap, P.O.-Karma, District – Ramgarh, State-Jharkhand was initially received in the Ministry on 30.04.2016 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 7th meeting held on 30th May to 1st June 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 01.08.2016 vide Lr. No. J-11011/205/2016-IA.II(I).

3.0 The project of M/s. Aloke Steel Industries Pvt. Ltd., located in Budhakhap Village, P.O.-Karma, Ramgarh District, Jharkhand State is for expansion of the existing plant for production of 0.12 MTPA of Sponge Iron by installation of new facilities for production of Steel Melting Shop for 0.108 MTPA of Billets, Rolling Mill for production of 0.09 Million tonnes of rolled product with 18 MW Power Plant and 0.27 MTPA of Ore Crushing & Beneficiation Plant. EC for the existing project was not required as the project was installed prior to EIA Notification, 2006 and the project cost was less than 100 Cr.

Name of Unit	No of Units	Capacity of Each Units	Production Capacity
Induction Furnaces	3	12 Tonne	113,6
Billet Caster	2 Strand	6x11 m radius	108,000 TPA
Rolling Mill	1		90,000 TPA
Power Plant	4 1	2MW WHRBs 10 MW AFBC Boiler	18 MW
Iron Ore Crushing & Beneficiation Plant	1	80-100 TPH	2,70,000 TPA
Slag Crushing Plant	1	8 TPH	16,200 TPA

4.0 The total land required for the project is 'Nil' (project shall be installed within existing 21.99 ha. plant area). No forest land is involved. The entire land has been acquired for the project. The Damodar river is at a distance of 1.5 Km.

5.0 The topography of the area is undulated flat and reported to lies between 23˚39'46.33" N Latitude and 85˚33'10.04" E Longitude in Survey of India topo sheet No. 73 E/6 & 73 E/10 at an elevation of 260m AMSL. The ground water table reported is 1.6 to 5.9 mbgl. during the post-monsoon season and 2.25 mbgl at Barwatola and 11.19 mbgl at Bhurkunda respectively 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 1 m. Further, the stage of ground water development is reported to be 60% and 40% in core and buffer zone respectively and there by these are designated as safe area.

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 doesn't report to form Corridor for Schedule-I fauna. The authenticated list of flora and fauna provided through the reporting presence of no Schedule-I fauna in the study area (Given in Chapter-3 in

EIA 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 are as given below:

Process	Facilities	Basic Raw Material Used	Process flow	Waste Generated
Steel Making	Induction Furnace	• Sponge Iron • Purchase scrap / Pig iron • Revert scrap	Feeding of RM → Melting in IF (adding alloys as per requirement) → Metal in Liquid form → casting →cooling → Billets.	• Slag • Bag filter dust
	Billet Caster	Liquid steel		
Rolling	15 Stand Rolling Mill	Billets	Feeding of hot billets → roughing strands → rolling → cutting & bundle → TMT Bar → dispatch	• Mill scale • Cobbles (scrap)
Power Generation	Waste Hear Recovery Boilers	DRI Gas (from existing Sponge Iron Plant)	Steam from WHRB+AFBC (char used along with coal as fuel) → TG set → Power generation	
	AFBC Boiler	• Coal • Dolo-char (From Sponge Iron Plant)		• Fly-ash
Iron Ore Beneficiation	800-1000 TPH Iron Ore Crushing & Beneficiation Plant	Iron Ore	Crushing & sizing using screens → washing in wet screens → to DRI Slurry to hydro-cyclone → dewatering →Beneficiated Iron Ore	• Tailings
Slag Crushing	Jaw & Cone crusher with magnetic separator	IF Slag	Slag → jaw crusher→ screen → magnetic separator → cone crusher → screen → magnetic separator → recovered metallic part	• Remaining slag (after metal recovery)

8.0 The water requirement of the project is estimated as 2923 m^3/day. 2923 m^3/day fresh water requirement will be obtained from Damodar Valley Corporation (DVC). Permission for drawl of

0.644 MGD ~ 2923 m^3/day from vide Lr. No. ASWA43,5/17-18 dated 17.10.2017 from Damodar Valley River Regulation Committee (DVRR) Govt. of Jharkhand.

10.0 The power requirement of the project is estimated as 18.5 MW, out of which 18 MW will be obtained from Captive generation and 0.5 MW from Grid.

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 and the data submitted indicated: PM10 (57.50μg/m^3 to 98.50 μg/m^3), $PM_{2.5}$ (25.70 μg/m^3 to 59.70μg/m^3), SO_2 (9.20 μg/m^3 to 15.10 μg/m^3) and NOx (21.10 μg/m^3 to 25.04 μg/m^3). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 0.310 μg/m^3 with respect to the PM_{10}, 0.605 μg/m^3 with respect to the SO_2 and 0.948 μg/m^3 with respect to the NOx at Project Site.

12.0 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 7.36 to 7.63, Total Hardness: 236 to 314.52 mg/l, Chlorides: 85.00 to 153.00 mg/l fluoride: 0.60 to 1.26 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 2 locations. pH: 7.45 to 7.51; DO: 5.7 to 5.9 mg/l and BOD: 10.86 to 12.05 mg/l. COD from 47.60 to 54.89 mg/l.

13.0 Noise levels are in the range of 51.30 to 57.40 dB(A)for daytime and 42.90 to 48.70 dB (A) for nighttime.

14.0 No R&R is involved. It has been envisaged that no family will be rehabilitated.

15.0 It has been reported that a total of 146980 TPA of solid waste will be generated due to the project, the same will be dumped in the earmark dump yard. It has been envisaged that an area of 7.30 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 Jharkhand State Pollution Control Board obtained vide Lr. No. PC/Air/HBG/A-25/05/B-4806dated 24.11.2015.

17.0 The Public hearing of the project was held on 13.05.2017 at Nav Prathamik Vidyalya, Vill-Budhakhap, Sub Division- Mandu, P.O- Karma, District- Ramgarh, Jharkhandunder the Chairmanship of Sri Dinesh Prasad Singh, Dy. Magistrate for setting up of 18 MW Power Plant, Steel Melting Shop of 108,000 TPA Billet Production and Rolling Mill for 90,000 TPA TMT Br production with Ore Crushing and Beneficiation Plant of 2,70,000 TPA through put and Slag Crushing Unit. The issues raised during public hearing which, inter alia, are concern over health of children, villagers and cattle due to pollution; effect on crop/ agriculture due to pollution from the plant; concern over water level going down in the area; Increase of development fund being given to the affected villages; employment to every educated person in the nearby villages

18.0 An amount of Rs. 1.35 Crores has been earmarked for Corporate Environment Responsibility calculated based on the Ministry's Office memorandum dated 1st may 2018 for public hearing issues.

19.0 The capital cost of the project is Rs. 169.50 Crores and the capital cost for environmental

protection measures is proposed as Rs. 945 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 105.50 Lakhs. The employment generation from the proposed project / expansion is 500.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/year
1	Air Pollution Control Measures	800.00	84.00
2	Water Pollution Control Measures	45.00	3.00
3.	Noise Pollution Control Measures	6.00	1.50
4.	Greenbelt Development	55.00	5.00
5.	Rain Water Harvesting	9.00	2.00
6.	Fire Fighting and safety measures	30.00	10.00
TOTAL		**945.00**	**105.50**

20.0 Greenbelt will be developed in 7.30 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 11,000 saplings will be planted and nurtured in 7.30 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 M/s Vardan Environet, Gurgaon, Haryana.

Recommendations of the committee:

23.0 The proposal was considered in the 28th meeting of EAC (Industry-I) held during 5th to 7th February 2018. After detailed deliberations, the committee advised to submit revised EIA report incorporating the following additional information.

1. Revised land use break-up including land requirement for tailing pond and balance land from area shown as vacant shall be as greenbelt.

2. Exploring the possibility of briquetting plant.

3. Scheme for 100% utilization of solid waste including hazardous waste generated from producer gas plant.

4. Revised estimation of GLCs at locations where the reported particulate matter was almost near to the permissible standards. Action plan for containing the higher concentration of particulate matter shall be furnished.

5. Revised table of issues raised during PH, commitment of PP, time bound action plan along with fund provision

6. 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.

7. Substantiating evidence for investment of existing project is less than Rs100 crore at the time of establishment for justifying that the existing project does not attract the provisions of EIA Notification 1994.

8. Hazardous waste generated in the existing and proposed expansion shall be clearly addressed.

9. The revised project and site-specific HIRA

10. Corporate Environmental Policy addressing the reporting mechanism of non-compliances to the board of directors directly.

11. The PP shall submit commitment for not using groundwater for operations.

24.0 Therefore, the proposal is deferred till the above information is submitted by project proponent.

25.0 The project was considered in the 28th meeting of EAC (Industry – 1) held on 05th – 6th February 2018, item no. 28.5. There were certain observations were made by the EAC on the proposed Project. Reply of the observations was submitted to MoEFCC on 28.03.2018. Now, the case is being reconsidered for appraisal in the 32nd Meeting of EAC (Industry – 1) on 12th June, 2018 and the point-wise reply of the observations is as follows:

#	**Observation**	**Reply**
1.	Revised land use break-up including land requirement for tailing pond and balance land from area shown as vacant shall be as greenbelt.	Revised land use breakup revised including 1 Ha. area of tailing pond and balance land converted to green belt has been incorporated in the EIA report. Refer Chapter 2 in Figure 2.3 at Page No. 22 and in Table 2.11 at Page No. 61
2.	Exploring the possibility of briquetting plant.	In this regard, MoU with M/s Narsingh Ispat Ltd was executed on dated 09.03.2018 to dispose off the Solid waste like Iron Ore Fines, Fine Iron Ore, Bag Filter dust and Slag containing ferrous percentage and MiIl Scale to use in the Sinter Plant of Narsingh Ispat. The MoU is enclosed in EIA Report as Annexure VIII at page No. 377.
3.	Scheme for 100% utilization of solid waste including hazardous waste generated from producer gas plant.	Scheme for 100 % utilization of Solid waste given in EIA Report in Chapter 4 at Item No.-4.4.6 at Page No. 175. (Producer gas plant is not present or proposed in the plant)
4.	Revised estimation of GLCs at locations where the reported particulate matter was almost near to the permissible standards. Action plan for containing the	Revised Air Quality Modeling report incorporated in the EIA Report in Chapter 4 at Item No. 4.4.2 at Page No. 153 to 165.

	higher concentration of particulate matter shall be furnished.	
5.	Revised table of issues raised during PH, commitment of PP, time bound action plan along with fund provision.	Action Plan of Public of Public Hearing with commitment of PP, time bound action plan along with fund provision is enclosed in EIA Report as **Annexure XV** Page No. 440.
6.	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.	Revised ESC programme is given in EIA Report in Chapter 7 at Item No. 7.4 at Page No. 229.
7.	Substantiating evidence for investment of existing project is less than Rs. 100 crore at the time of establishment for justifying that the existing project does not attract the provisions of EIA Notification 1994.	In this regards, Balance Sheet for Financial Year of 2005-2006 is enclosed in EIA Report as Annexure IV at Page No. 307
8.	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. 20 KL per year and 'Used Oil' will be sold to the register recycler.
9.	The revised project and site-specific HIRA	Details given in the EIA Report in Chapter 7 at Item No. 7.5 at Page No. 231
10.	Corporate Environmental Policy addressing the reporting mechanism of non-compliances to the board of directors directly.	Revised Corporate Environmental Policy is enclosed in EIA Report as Annexure IX at Page No. 378
11.	The PP shall submit commitment for not using groundwater for operations.	In this regard, an undertaking for not using ground water for operation is enclosed in EIA Report as Annexure III at Page No. 290.

Observations of the committee:

26.0 The committee observed that the area envisaged for the tailing pond is not sufficient and location of the tailing pond is also not suitable. It was also observed that the only one entry gate was provided. After detailed deliberations, the committee advised to provide one additional entry gate, removing tailing pond and management of iron ore fines by making cakes in filter press, installation of briquetting plant for recycling of dust collected in the air pollution control devises. The project proponent has agreed to the suggestions made by the committee and submitted his undertaking vide his letter dated 12th June, 2018. The details are as follows:

A. Project Cost:

S. No.	Particulars	Rs. (in Lakhs)
Existing		

S. No.	Particulars	Rs. (in Lakhs)
1	Existing Sponge Iron Plant	2975
Proposed		
2	SMS (3x12T Induction Furnace + CCM)	1600
3	Power Plant – 18 MW	6200
4	Bar Mill	4000
5	Iron Ore Crushing and Beneficiation Facility with filter press	550
6	Briquetting Plant	600
7	Slag Crushing Facility	60
8	Utilities & Central Services	1500
9	Engineering and Project Management	500
10	Contingencies	690
11	Plant cost without IDC (2 to 10)	15700
12	Interest during construction	1000
13	Margin Money for working capital	1000
14	Cost of expansion project with IDC (11 + 12 + 13)	17700
15	Enterprise Social Commitment Budget	160
Total Capital Cost (1 + 14 + 15)		20835

The cost of proposed expansion has increased from Rs. 169.50 crores to Rs. 177.0 crores due to installation of filter press and briquetting plant. The ESC budget has revised from Rs. 135 Lakhs (Rs. 1.35 crore) to Rs. 160.00 Lakhs (Rs. 1.60 crores).

B. Land Use:

S. No.	Type of Land Use	Area		
		Acres	Hectares	Percentage (%)
1	Existing Units (4 Nos. of DRI Kilns)	13.07	5.29	24.05
2	Power Plant with WHRB	3.07	1.24	5.65
3	Steel Melting Shop	2.59	1.05	4.77
4	Rolling Mill	3.98	1.61	7.32
5	Iron Ore Beneficiation Plant with Filter Press	3.50	1.42	6.44
6	Briquetting Plant	3.20	1.30	5.89
7	Slag Crushing Plant	0.32	0.13	0.59
8	Rain Water Harvesting	0.25	0.10	0.46
9	Parking	2.47	1.00	4.54
10	Storage for Cakes	1.50	0.61	2.76
11	Green Belt	20.36	8.24	37.53
Total		**54.3**	**21.9**	**100**

Area under the tailing pond has been removed as the tailings will be converted into cakes in the filter press. Briquetting unit has been added for management of iron ore fines, bag filter dust and

mill scale. Area has been earmarked for parking of trucks and for storage of cakes for disposal.

C. Solid Waste Management Plan:

To utilise Iron Ore fines, Tailings and Mill Scale, M/s. Aloke Steel Industries Private Limited shall install a Briquetting Plant of capacity 150 TPD. Press filter shall be provided for the Tailings.

Item	Generation (TPA)	Utilisation		Remark
		In-House (TPA)	Reused by outside party (TPA)	
Iron Ore fines	39,500	39,500	-	Will be sent to Briquetting plant and recycled in the process.
Dolo-char	30,000	30,000	-	Will be used as fuel in the proposed AFBC Boiler
Tailing waste	2,000	-	--	Cakes, after the filter press shall be stored for disposal.
Bag Filter Dust	3,300	3,300	-	Bag filter dust will be sent to Briquetting plant and recycled in the process
Slag	16,200	1,620	14,580	Metal recovered (approx. 10 %) shall be used in process and remaining slag shall be used as aggregates in construction materials.
Mill Scale	1,800	1,800	-	Mill scale will be sent to Briquetting plant and recycled in the process.
Fly-Ash	32,000	-	32,000	Will be sold to the Cement Plants and Fly ash Bricks making units. (MoU with M/s Sri Durga Cement Company Limited has been executed by the PP for lifting fly-ash from their unit).
Coal Fines	7,500	7,500		Will be used in the proposed AFBC Boiler
Bottom Ash	8,000	--	8,000	Will be given to the Brick Kilns in the nearby areas for use in their Kiln as fuel Kiln owners use it due to the unburnt carbon present in it
Total	**145,300**	**88,720**	**54,580**	

D. Raw Material Requirement:

Change in Raw Material Requirement after the Proposed Expansion considering Briquetting of Fines:

S. No.	Item	Per MT of Product	Requirement MT per day	Requirement MT per year
Iron Ore Beneficiation Plant (627 TPD – 188,200 TPA)				
1	Iron Ore	1.14	750	225000
	TOTAL	**1.14**	**750**	**225000**
Briquetting Plant (134 TPD – 40,100 TPA)				
1	Iron Ore fines	0.87	117	35000
2	Mill Scale	0.05	6	1800
3	SMS Bag Filter Dust	0.08	11	3300
	TOTAL	**1.0**	**134**	**40,100**
Sponge Iron Plant (400 TPD – 120000 TPA)				
1	Iron Ore	1.57	627	188,200
2	Briquettes	0.33	134	40,100
3	Coal	1.6	640	192,000
4	Dolomite	0.025	10	3000
	TOTAL	**3.525**	**1411**	**423,300**
SMS – Induction Furnace (380 TPD – 113,684 TPA)				
1	Sponge Iron	1.05	400	120,000
2	Purchased scrap/pig iron	0.12	45.5	13,642
3	Revert Scrap	0.04	15.2	4,548
	TOTAL	**1.21**	**460.7**	**138,190**
Continuous Casting (360 TPD – 108000 TPA)				
1	Liquid Steel	1.05	379	113,684
	TOTAL	**1.05**	**379**	**113,684**
Rolling Mill Plant (300 TPD – 90,000 TPA)				
1	Steel Billets	1.05	316	94,737
	TOTAL	**1.05**	**316**	**94,737**
CPP (10 MW – AFBC Boiler)				
1	Coal	0.107 t/t of steam	166.7	50000
2	Char	0.064 t/t of steam	100	30000
	Total	**0.171 t/ t of**	**266.7**	**80000**

S. No.	Item	Per MT of Product	Requirement MT per day	Requirement MT per year
		steam		
CPP (8 MW – 4x2 MW WHR Boilers)				
1	DRI Gas	2778 Nm^3/ t of steam		

Recommendations of the committee

27.0 After detailed deliberations, the committee recommended for grant of environmental clearance for the proposed expansion of Sponge Iron Plant subject to following specific and general conditions:

A. Specific Conditions:

1. The project proponent shall revise the layout by removing the tailing pond, providing additional entry gate, sufficient parking area and green belt in 8.24 Ha, space for storage of filter cakes, etc.

2. The project proponent shall install the filter press/belt filter and make a filter cake of the tailing and sent to dispose to the users of the same.

3. The project proponent shall install the briquetting plant for briquetting / amalgamation of dust collected from air pollution control devices including mill scales.

4. No ground water shall be extracted during construction and operation of the project

B. General conditions:

General Conditions:

1. An amount of Rs 160 Lakhs proposed towards Corporate Environmental Responsibility shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.

2. Green belt shall be developed in 8.24 Ha 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.

3. The Capital cost Rs. 945.0 Lakhs and annual recurring cost Rs. 105.50 Lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.

4. The project proponent shall (Air Quality Monitoring):

    a. 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 414 (E) dated 30th May 2008 as amended from time to time; 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.

b. 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.

c. Install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions; and

d. 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.

5. The project proponent shall (Water Quality Monitoring):

a) install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; 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.

b) 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; and

c) 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.

6. The project proponent shall (Air Pollution Control):

a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

b) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;

c) provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;

d) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;

e) 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;

f) ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation;

g) provide wind shelter fence and chemical spraying on the raw material stock piles.

7. The project proponent shall (Water Pollution Control):

a) adhere to 'zero liquid discharge';

b) provide Sewage Treatment Plant for domestic wastewater; and

c) provide garland drains and collection pits 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.

8. The project proponent shall (Water Conservation):

a) practice rainwater harvesting to maximum possible extent; and

b) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

9. The project proponent shall (Energy Conservation):

a) provide waste heat recovery system on the DRI Kilns;

b) use dolochar generated for power generation;

c) 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; and

d) provide the project proponent for LED lights in their offices and residential areas;

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

11. 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.

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

13. 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.

14. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.

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

16. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

17. 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.

18. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

19. 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).

20. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

21. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.

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

23. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

24. 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 shall be submitted to the Ministry's Regional Office.

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

26. The project proponent shall (Post-EC monitoring):

a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;

b. put on the clearance letter on the web site of the company for access to the public.

c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http:/envfor.nic.in.

d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;

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

f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;

g. 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;

h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

32.17. Sponge Iron Plant (1,20,000 TPA), Induction furnace with CCM &LRF(1,35,000 TPA, Rolling Mill (90,000 TPA), Power Plant through WHRB of 8 MW (after Dropping 10 MW) capacity, Power Plant (8 MW) of **M/s Vikas Metaliks & Energy Limited** located at Village Bartori, Tehsil Tilda, District Raipur, Chhattisgarh [Online Proposal No**. IA/CG/IND/60150/2016**; MoEFCC File No. **J-11011/80/2008-IA.II(I)**] – **Environmental Clearance**.

1.0 M/s Vikas Metaliks & Energy Limited made online application vide proposal no. IA/CG/IND/60150/2016 dated 27th February 2018 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 proposed project of Steel Plant of M/s **Vikas Metaliks & Energy Limited** located at Bartori Village, Tilda Tehsil, Raipur District, Chhattisgarh was initially received in the Ministry

on 4thNovember 2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised in13th EAC (Industry-1) meeting held on 23rd to 24th November 2016 for prescribing ToR to the proposed project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR to the project on 7th February, 2017 vide Lr. No. J-11011/80/2008- IA II (I).

3.0 The project proponent had obtained environmental clearance vide letter no. J-11011 / 80 / 2008-IA.II(I) dated 9th June 2009 at the same location for Pelletizing Unit of 6,00,000 TPA; Blast Furnace of 1,65,000 TPA; Sponge Iron unit of 2,55,000 TPA; Induction furnace with CCM & LRF of 1,80,000 TPA; Rolling Mill of 90,000 TPA; Ferro Alloy plant (Si-Mn) of 15,000 TPA, Power Plant (WHRB : 1 8 MW& FBC : 15 MW). However, the Project Proponent could not implement any of the Units for which Environmental Clearance has been accorded, due to sluggish market conditions and non-availability of Funds. EC validity of 7 years has been expired on 8th June 2016 and could not submit the request letter to MoEFCC for Extension of validity of EC before the expiry of validity period. Fresh application has been made following the process of environmental clearance de-novo. Therefore, the certificate of compliance of earlier EC is not applicable.

4.0 The proposed Mini Integrated Steel Plant envisages manufacturing of the following products:

S.No.	Unit		Product	Plant Configuration	Production Capacity
1.	DRI Kilns		Sponge Iron	4 x 100 TPD	1,20,000 TPA
2.	Induction furnace with CCM & LRF		MS Billets / Ingots	3 x 15 MT	1,35,000 TPA
3.	Rolling Mill		TMT bars / Structural Steels	1 x 300 TPD	90,000 TPA
4.	Power Generation	WHRB	Electricity	4 x 2 MW	8 MW
		FBC Boiler (40 TPH)	Electricity	---	8 MW

5.0 The total land acquired for the proposed project will be 34.26 acres (13.86 Ha). The land is industrial. Entire land is in possession of management. No additional land is proposed. No forest land involved. It has been reported that no natural water body / stream exists in the plant area. And any modification / diversion in the existing natural drainage pattern at any stage has not been proposed.

6.0 The topography of the area is flat and reported to lies between 21º29'24.78" to21°29'51.69" North Latitude and 81°48'27.46" to 81°49'00.16" East longitude in Survey of India Topo sheet no. 64G/10 at an elevation of 297 AMSL. The ground water table reported to ranges between 2.75 to 15 m bgl below the land surface during the pre-monsoon season and 0.56 to 7.86 mbgl below the land surface during the post-monsoon season.

7.0 There are no notified National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ migratory routes for Birds with in 10 Km. radius of the plant. There are no Schedule-I fauna exists in the study area. The list of flora and fauna during study period in the study area is enclosed as Annexure – 8of EIA.

8.0 The components involved in the proposal inter alia include DRI Kiln based Sponge Iron Plant; Induction Furnace; Steel Melting Shop; Rolling Mill; WHRB; and FBC Boiler. Detailed process provided in the EIA report and list of raw material for the proposed project is given below

Raw Material		Quantity	Sources	Mode of Transport
For DRI Kilns (Sponge Iron)				
Iron ore		1,92,000	NMDC, Bailadila/ Bachheli& Open Market	By rail & road (through covered trucks)
Coal	Indian	1,56,000	SECL, Chhattisgarh / MCL Odisha	By rail & road (through covered trucks)
	Imported	1,11,000	Indonesia / South Africa / Australia	Through sea route, rail route & by road
Dolomite		6,600	Local area	By road (through covered trucks)
Limestone		9,000	Local area	By road (through covered trucks)
For Induction Furnace (MS Billets / Ingots)				
Sponge Iron		1,20,000	In plant generation	By Road (through covered trucks)
Scrap		35,600	Local area	By road (through covered trucks)
Ferro Alloys		1,350	Local area	By road (through covered trucks)
For Rolling Mill (TMT bars & Structural Steel)				
M.S. Ingots / Steel billets		99,000	In plant generation	through conveyors
Furnace oil		4950	HPCL/IOCL depots	Tankers
Coal		4,500	SECL, C.G. / MCL Odisha	By rail & road (through covered trucks)
Producer gas		8000 m^3/hr	In plant generation	---
For FBC Boiler [Power Generation 10 MW]				
Dolochar		36,000	In plant generation	through covered conveyors
Coal	Indian	50,400	SECL C.G. / MCL Odisha	By rail & road (through covered trucks)
	Imported	35,840	Indonesia / South Africa / Australia	Through sea route / rail route / by road

9.0 The targeted production capacity of the plant is Sponge Iron of 0.12 million TPA, TMT bars / Structural Steels of 0.09 million TPA & Power Generation of 16 MW. Imported Coal for would be supplied by M/s. Indermani Mineral (India) Pvt. Ltd. Imported Coal transportation will be done through Ship from Vizag port and from there to Tilda Railway Station by Rail. The coal unloaded at Tilda Railway Station will be transported to the project site by road through covered trucks, which is at 12 Kms. from the plant. Iron Ore, Iron Ore fines will be transported from Odisha by rail up to the Tilda railway station there by Road in Covered Trucks.

10.0 Water requirement for the proposed project will be 450 KLD, which will be sourced from

Ground Water. Water drawl permission from CGWA is under process. Air cooled condensers will be provided in Captive Power Plant to conserve the Water.

11.0 Total power required for the proposed plant operations will be 18.6 MW which will be met from the captive power plants of 16 MW & the balance 2.6 MW will be sourced from Grid.

12.0 Baseline Environmental Studies were conducted during winter season i.e. from 1st March to 31st May 2017. Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated: $PM_{2.5}$ (16.4 to 33.4 mg/m^3), PM_{10}(28.9 to 58.5 µg/m^3), SO_2 (7.2 to 14.5 mg/m^3), NOx (7.0 to 18.9 mg/m^3) & CO (354 to 758 mg/m^3). The results of the modeling study indicates that the maximum increase of GLC due to the proposed un-implemented units & Vehicular emissions will be 3.2 µg/m^3 with respect to the PM_{10}, 18.2 µg/m^3 with respect to the SO_2, 11.1 µg/m^3 with respect to the NOx & 2.3 µg/m^3 with respect to the CO.

13.0 Ground water quality has been monitored in 8 locations in the study area are analysed and the data submitted indicated pH: 7.4 to 8.1, Total Hardness: 176 to 324 mg/l, Chlorides: 186 to 320 mg/l, Fluoride: 0.28 to 0.51 mg/l. Heavy metals are within the limits.Surface water samples were analysed from 2 locations in the study area and analysed and the data submitted indicated pH: 7.2 to 7.9 and DO: 4.5 to 5.5 mg/l.

14.0 Noise levels are in the range of 39.25 dB(A) to 59.10 dB(A) during 1st March to 31st May 2017.

15.0 It has been reported that there are no people are residing in the project site. No R&R is involved.

16.0 It has been reported that the following Solid wastes will be generated due to the project which will stored in storage yard above the ground level. Fly ash will be stored in Silo.

S.No	Waste / By product	Quantity (TPA)	Method of disposal
1.	Ash from DRI	21,600	Will be used in own brick manufacturing unit and remaining quantity will be given to other brick manufacturers.
2.	DoloChar	36,000	Will be utilized in FBC boiler as fuel
3.	Wet scrapper sludge	54,540	Will be given to other brick manufacturers.
4.	Kiln Accretion Slag	12,720	Will be used in road construction
5.	Slag from SMS	13,500	Slag will be crushed and after recovery of iron, it will be used for road construction.
6.	Mill Scale from Rolling Mill	4,500	Will be reused in SMS
7.	Ash from Power Plant (with Indian coal)	22,680	Will be given to Cement Plants & Brick manufacturers.
8.	Ash from Power Plant (with Imported coal)	5,376	Will be given to Cement Plants & Brick manufacturers.
9.	Ash from Power Plant (with Indian coal + Dolochar)	36,180	Will be given to Cement Plants & Brick manufacturers.

10.	Ash from Power Plant (with Imported coal + Dolochar)	25,056	Will be given to Cement Plants & Brick manufacturers.

17.0 It has been reported that few Brick manufacturing units have given Expression of Interest letters for utilize the Fly ash generated from the proposed project. It has been reported that an area of 4.6 Hectares (11.3 Acres) will be developed as green belt out of total plant area 13.86 Ha. (34.26 acres) to attenuate the noise levels and arrest the dust generated due to the project development activities.

18.0 It has been reported that the Consent to Establish is yet to be obtained after receiving Environment Clearance from the Ministry.

19.0 Public Hearing of the project was held on 27thNovember 2017at project site under the chairmanship of Shri. Q.A. Khan (Upper Collector, Raipur) for production of 0.12 million TPA of Sponge Iron, 0.09 million TPA of TMT bars / Structural Steels & Power Generation of 16 MW. The issues raised during public hearing are*inter alia,* include crop damage; control of air pollution; water pollution; plantation; employment; ESC/ CSR. The Statement of main issues raised by the public and response of the project proponent with action plan is as given below.

Issue raised	**Management Response**	**Time schedule**	**Budgetary allocation**	**Recurring cost**
Raised the issue of crop damage. He said that 90% of crop is being damaged in the Siltara area. He Further said that an agreement should be made with the company that he will control the pollution	In the proposed project following environment protection measures will be provided for duly complying with norms stipulated by MOEF&CC / CECB: • ESP will be provided to DRI Kilns to bring down the particulate emission to less than 50 mg/Nm^3. • ESP will be provided to Power plant to bring down the particulate emission to less than 30 mg/Nm^3. • Fume Extraction & Cleaning system with bagfilterswill be provided to SMS and Reheating Furnace to bring down the particulate matter emission to less than 50 mg/Nm^3. • All conveyor will be covered with GI sheets to control the dust emission. • Net resultant Ground level concentrations during operation of the plant after superimposing the incremental concentrations over the maximum baseline concentrations are well within the National Ambient Air Quality Standards. • Zero liquid effluent discharge will be implemented in the proposed project. • Greenbelt will be developed in 11.3 acres of land which will further mitigate the emissions.	Implemented parallel with implementation of the plant	Rs. 25 Crores will be earmarked for Environmental protection measures for project	Rs. 100 lacs / Annum

Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
	• All these environmental protection systems will be installed and operated to comply with the norms. Hence there will not be any significant impact on crop yield			
He raised the issue of employment, he said that localpeople should be given priority in employment.	Priority for employment will be given to the land-givers and local youth based on their qualification & experience and the requirement for a particular vacancy.	---	---	---
He also said that today public hearing should be adjourned as no proper information has been given to people for public hearing.	Public Hearing notification was given by Chhattisgarh Environment Conservation Board (CECB) was published in "Dainik Bhaskar" and "Hindustan Times"on 25/10/2017.	---	---	---
and for proper measures should be taken to control the pollution and Plantation should been done.	In the proposed project following environment protection measures will be provided for duly complying with norms stipulated by MOEF&CC / CECB: • ESP will be provided to DRI Kilns to bring down the particulate emission to less than 50 mg/Nm^3. • ESP will be provided to Power plant to bring down the particulate emission to less than 30 mg/Nm^3. • Fume Extraction & Cleaning system with bagfilterswill be provided to SMS and Reheating Furnace to bring down the particulate matter emission to less than 50 mg/Nm^3. • All conveyor will be covered with GI sheets to control the dust emission. • Net resultant Ground level concentrations during operation of the plant after superimposing the incremental concentrations over the maximum baseline concentrations are well within the National Ambient Air Quality Standards. • Zero liquid effluent discharge will be implemented in the proposed project. • Greenbelt will be developed in 11.3 acres of land which will further mitigate the emissions. • All these environmental protection systems will be installed and operated to comply with the norms.	Implemented parallel with implementation of the plant	Rs. 25 Crores will be earmarked for Environmental protection measures for project	Rs. 100 lacs / Annum
He said that the water pollution be controlled and the proper measures should be taken for this.	• There will not be any effluent generation from the DRI plant, SMS & Rolling Mill as closed-circuit cooling system will be followed.	Implemented parallel with implement	Rs. 25 Crores will be earmarked for	Rs. 100 lacs / Annum

Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
	• The effluent generated will be in the form of Cooling Tower blowdown, Boiler blow down, D.M. Plant regeneration water and sanitary water. • Effluent from power plant will be treated and after ensuring compliance with SPCB norms, it will be utilized for dust suppression, ash conditioning and for greenbelt development. • Sanitary waste water will be treated in septic tank followed by sub-surface dispersion trench. • Zero liquid discharge will be followed in the proposed project.	ation of the plant	Environmental protection measures for project	
He also said that a school & hospital should be open in the village	Will be provided under the Enterprise Social Commitment (ESC) and budget for the same has been allocated.	7 Years	Rs. 3.2 Crores towards ESC	---
He advised that 15 feet wide road should be provided closed to Rly. Lines in the industrial land of the Company for the villager's	• Management has agreed for the same and will be carried out under ESC program	7 Years	Rs. 3.2 Crores towards ESC	---
He said that Priority willbe given to the land sellers in employment	• Priority for employment will be given to the land-givers and local youth based on their qualification & experience and the requirement for a particular vacancy.	---	---	---
Further he said that the details of the Project Cost and works to be done by the company under CSR Head should be disclosed.	• Project cost for the proposed project is Rs.125 Crores • Activities to be carried out under the ESC program are listed in Chapter 8 of EIA report.	7 Years	Rs. 3.2 Crores towards ESC	---

20.0 An amount of Rs.3.2 Crores (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.	Major Activity Heads	Years (Rs. In Crores)							Total Expenditure (Rs. In Crores)
		1st	2nd	3rd	4th	5th	6th	7th	
1	Community & Infrastructure Development Programmes (construction toilets in villages which are not covered under swachh Bharat, laying of village	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.80

	road, construction of over-head tank.)								
2	A Community Centre will be established in the Bartori village which will consist of the following: i. Full fledged medical centre with basic equipments ii. Vocational Training Institute with latest tools, machinery & softwares etc. for making them Industry ready. iii. Workshop centre with latest tailoring machines for training women (like tailoring, stitching etc.) iv. Computer / IT Training Centre for improving computer knowledge and making Industry ready.	0.3	0.3	0.3	0.3	0.3	0.2	0.2	1.90
3	Education and Scholarship Programmes (construction of class rooms in schools, providing computers in class rooms, development of library facility)	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.40
4	RWH in nearby villages	---	---	0.05	---	0.05	---	---	0.10
	Grand Total - @ 2.5% of Total Project Cost								3.20

21.0 The capital cost of the project is Rs.125 Crores and the capital cost for environmental protection measures is proposed as Rs. 25 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 100 Lakhs /annum. The employment generation is 200 people during operation of the proposed project and 500 people during construction of the proposed units. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S.No	Item	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Lacs)
7.	Air Emission Management • ESPs	20.0	65.0

	• Fume extraction systems with Bag filters • Dust Extraction systems with Bag filters • Chimneys • Water Sprinklers • Environment Monitoring		
8.	Wastewater Management • ETP • Settling ponds • Garland drains • Monitoring	1.00	5.0
9.	Solid waste Management • Ash handling system • Construction of Pucca Platform for storage • Hazardous & Municipal solid waste storage	3.0	20.0
10.	Greenbelt development, Land scaping Noise Management	0.50	4.0
11.	Occupational Health & Safety	0.50	6.0
TOTAL		25.0	100.0

22.0 Greenbelt will be developed in 4.6 Hectares (11.3 Acres) which is about 33% of the total acquired area. Greenbelt width varying from 5 to 45 m will be developed all around the plant 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. Total of 6,900 saplings will be planted and nurtured in 4.6 hectares with in 1 year after commencement of production.

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

25.0 The proposal was considered in the 29th meeting of Expert Appraisal committee held during 12th to 14th March, 2018. After detailed deliberations, the committee sought following information for further consideration of the proposal:

i. The project land comprises non-agricultural land and agricultural land which is yet to be converted into Non-agricultural land. The total land area breakup into agricultural and non-agricultural along with their respective khasra numbers.

ii. Stack heights to be revised for 1% sulphur content in the coal.

iii. Budget allocation towards Environmental Monitoring should be revised along with the details of CEEMS, calibration frequencies.

iv. Accidental release of pollutants shall be considered for preparation of DMP/ERP.

v. ESC details to be furnished based on SIA and Public consultation. The time period of completion of ESC shall be inline with time schedule for project completion.

vi. EIA report shall be revised as per the Annexure-III of EIA Notification, 2006.

vii. The Corporate Environment Policy should clearly state the reporting mechanism to the board of directors immediately in case of any non-compliances/deviations/violations of Environmental Clearance conditions.

viii. Ground water withdrawal permission for the proposed quantity

26.0 Following is the reply to additional information sought by Ministry vide dt. 16th March 2018.

Point No.1: The project land comprises non-agricultural land and agricultural land which is yet to be converted into Non-agricultural land. The total land area breakup into agricultural and non-agricultural along with their respective khasra numbers.

Reply: The total land acquired for the proposed project will be 34.26 acres / 13.86 Ha. Khasra nos. involved in project site are 149/5, 6, 8, 9, 10, 15, 16, 20, 21, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 36, 35, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 158/1, 158/3, 180, 181/3, 215, 217/3. Total land is in possession of management. Out of total land 34.26 acres / 13.86 Ha. of land, 31.94 acres / 12.89 Ha. is converted for Industrial Purpose and remaining 2.32 acres / 0.97 Ha. is yet to be converted for Industrial purposes.

Point No.2: Stack heights to be revised for 1% sulphur content in the coal.

Reply: Stack heights has been revised considering 1% sulphur content in the coal for DRI and FBC Power Plant. 2 no. of combined stacks each of 71 m will be provided to 2 x 100 TPD DRI Kilns. Stack of 62 m will be provided to 8.0 MW FBC Power Plant.

Point No.3: Budget allocation towards Environmental Monitoring should be revised along with the details of CEEMS, calibration frequencies.

Reply: Rs. 14.1 Lakhs/annum is earmarked for Environmental Monitoring. Following is the detailed break up of Budget allocation towards Environmental monitoring. Detailed break up of recurring cost for Environmental Monitoring is as follows:

S.No.	Monitoring Item	No. of units Proposed	Monitoring Parameters	Frequency of Monitoring	No. of Samples /annum	Cost / Sample (Rs.)	Total cost in (Rs. In lakhs)
1	Stack	10	SO_2 & NOx	Once in a month	120	6000	720000
2	Effluent	3	pH, TDS, TSS, O&G, Free	Twice in a month	72	600	432000

			Available Cl, Cu, Fe, Zn, Chromium, PO_4				
3	Ground water	1	As per IS: 10500	Once in a month	12	700	84000
4	Noise levels	6	---	Once in a month (hourly)	1728	100	172800
						Total	**1408800**
Note : CAAQMS & Continuous Weather Monitoring Station will be provided							

Capital cost earmarked for Continuous Emission Monitoring System for 5 Stacks will be Rs.25 Lakhs.

Point No.4: Accidental release of pollutants shall be considered for preparation of DMP/ERP.

Reply: In some situations, ESP may fail hence we have considered AIR quality modelling considering the APCS failure scenario and predicated the incremental concentrations of PM. For this scenario net resultants GLCs have been shown in page no. 4.9 of Ch-4 of EIA report. The net resultant conc. During operation (during APCS failure scenario) 978.1 µg/m^3, which is much higher than the NAAQS standards. The following measuring will be taken up to mitigate the impacts:

- Interlocking system will be provided and whenever APCS is not working, then raw material feed will be stopped. Consequently there will be no production in the unit till APCS is rectified.

- The unit cannot be stopped immediately and it will take some time to stop. During this period release of particulate matter will take place, hence mobile dust suppression system will be provided to suppress the particulate matter immediately to mitigate the impact of PM on surroundings.

- Depending upon the wind direction at the time of emergency, Mobile dust suppression equipment will be provided to suppress the dust within the plant and also outside the plant to reduce the impact on habitation, water body, crops etc.

- Immediately upon failure of any APCS, emergency siren will be blown to inform the employees and nearby villagers about the emergency.

- Dust masks will be provided to the employees and nearby villagers. Immediately upon hearing siren, every employee and villager must wear the dust mask.

- Mock drills will be conducted in the nearby villages for the emergency preparedness.

Point No.5: ESC details to be furnished based on SIA and Public consultation. The time period of completion of ESC shall be inline with time schedule for project completion.

Reply: As per O.M. 22-65/2017-IA.III dt. 1st May 2018 instead of ESC, Corporate Environment Responsibility (CER) has been considered

Total cost of the proposed project : Rs. 125 Crores

Expenditure earmarked towards ESC : 2.5 % of project cost (as per TOR condition)

Work out to : Rs. 3.2 Crores

Project will be implemented in 3 years, hence will be ESC will be completed in 3 years span. Following is the detailed break up of expenditure to be incurred in 3 Years.

S.No.	Major Activity Heads	Years (Rs. In Crores)			Total Expenditure (Rs. In Crores)
		1st	2nd	3rd	
A	**Based on Social Impact Assessment (SIA)**				
1	Community & Infrastructure Development Programmes (construction toilets in villages which are not covered under Swachh Bharat)	0.3	0.3	0.2	0.80
2	A Community Centre will be established in the Bartori village which will consist of the following: i. Vocational Training Institute with latest tools, machinery & softwares etc. for making them Industry ready. ii. Workshop centre with latest tailoring machines for training women (like tailoring, stitching etc.) iii. Computer / IT Training Centre for improving computer knowledge and making Industry ready.	0.3	0.3	0.4	1.00
3	Education and Scholarship Programmes (construction of class rooms in schools, providing computers in class rooms, development of library facility)	0.12	0.12	0.12	0.36
4	RWH in nearby villages	---	0.05	0.05	0.10
B	**Based on Public Hearing / Consultation**				
1	Laying of 15 feet village road within the plant site (as per request made by public during PH, construction of over-head tank.)	0.50	---	---	0.50
2	School & Hospital (Basic facilities along with ambulance) should be open in the village	---	0.20	0.24	0.44
	Grand Total				**3.20**

Point No. 6: EIA report shall be revised as per the Annexure-III of EIA Notification, 2006

Reply: Submitted Revised EIA report.

Point No. 7: The Corporate Environment Policy should clearly state the reporting mechanism to the board of directors immediately in case of any non-compliances / deviations / violations of Environmental Clearance conditions

Reply: Submitted Updated Corporate Environment Policy.

Point No. 8: Ground water with drawl permission for the proposed quantity

Reply: Ground Water drawl permission from CGWA has been obtained NOC no. CGWA / NOC / IND/ORIG/2018/3370 vide dt. 19th April 2018.

Recommendations of the committee

27.0 After detailed deliberations, the committee recommended for grant of environmental clearance for the proposed Sponge Iron Plant subject to following specific and general conditions:

A. Specific Conditions:

1. The particulate matter emission from all the process stacks shall not be more than 30 mg/Nm^3.

B. General conditions:

General Conditions:

1. An amount of Rs 3.20 Crores proposed towards Corporate Environmental Responsibility shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.

2. Green belt shall be developed in 4.60 Ha 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.

3. The Capital cost Rs. 25.0 Crores and annual recurring cost Rs. 100.00 Lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.

4. The project proponent shall (Air Quality Monitoring):

    a. 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 414 (E) dated 30th May 2008 as amended from time to time; 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.

b. 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.

c. Install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions; and

d. 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.

5. The project proponent shall (Water Quality Monitoring):

a) install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; 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.

b) 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; and

c) 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.

6. The project proponent shall (Air Pollution Control):

a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

b) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;

c) provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;

d) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;

e) 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;

f) ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation;

g) provide wind shelter fence and chemical spraying on the raw material stock piles.

7. The project proponent shall (Water Pollution Control):

a) adhere to 'zero liquid discharge';

b) provide Sewage Treatment Plant for domestic wastewater; and

c) provide garland drains and collection pits 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.

8. The project proponent shall (Water Conservation):

a) practice rainwater harvesting to maximum possible extent; and

b) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

9. The project proponent shall (Energy Conservation):

a) provide waste heat recovery system on the DRI Kilns;

b) use dolochar generated for power generation;

c) 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; and

d) provide the project proponent for LED lights in their offices and residential areas;

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

11. 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.

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

13. 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.

14. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.

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

16. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

17. 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.

18. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

19. 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).

20. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

21. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.

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

23. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

24. 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 shall be submitted to the Ministry's Regional Office.

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

26. The project proponent shall (Post-EC monitoring):

    a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;

b. put on the clearance letter on the web site of the company for access to the public.

c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http:/envfor.nic.in.

d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;

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

f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;

g. 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;

h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

32.18. Expansion of Sponge Iron Plant from 2x 100 TPD DRI Plant, 8,50,000 TPA Beneficiation Plant, 6,00,000 TP A Pellet Plant and 10MW Power Plant to 2x 100 TPD DRI (Process Modification) along with 1,20,000 TPA SMS, and 1,00,000 TPA Rolling Mill at Badtumkela, PS-Lahunipara, Dist- Sundergarh, Odisha by **M/s Vikram Private Ltd. [Online proposal No. IA/OR/IND/34730/2015;** MoEFCC File No J-11011/248/2015-IA-II(I)] **– Further consideration for Environmental Clearance based on reply to ADS.**

1.0 **M/s Vikram Private Ltd**. made online application vide proposal no. IA/OR/IND/34730/2015 dated 30th March 2018 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 expansion project of M/s Vikram Pvt Ltd located in Village-Badtumkela, Tehsil-Lahunipara, Dist-Sundergarh, State-Odisha was initially received in the Ministry on 25.01.2016 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 3rd meeting held on 28th to 29th January, 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 02.12.2016 vide Lr. No. J-11011/248/2015-IA.II(I).

3.0 The project of M/s Vikram Pvt Ltd located in Badtumkela Village, Lahunipara Tehsil, Sundergarh District, Odisha State is for enhancement of production of existing plant from 0.06 MTPA sponge Iron to 0.11 million tonnes per annum (million TPA) TMT rods. The existing project was accorded environmental clearance vide lr.no. J-11011/533/2010-IA.II(I) dated 26.12.2012. The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneshwar vide Lr. No. 101-333/EPE, dated 12.01.18. There is no non-compliances reported by Regional officer. The proposed capacity for different products for new site area as below:

Name of unit	**Product**	**Capacity of each Unit**	**Production Capacity**
Induction Furnace with LRF & CCM	Hot metal	3X12 T & 1X30 T	1,07,000 T
Rolling Mill	TMT Bars	20 TPH	1,00,000 T

4.0 The total land required for the project is 41.27 ha. No forestland involved. The entire land has been acquired for the project. No River passes through the project area (p./c). 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 flat and reported to lies between 21^0 50' 17.66'' N Latitude and 84^0 55' 38.61'' E. Longitude in Survey of India topo sheet No. F45M13 at an elevation of 155 m AMSL. The ground water table reported to ranges between 4.42 m below the land surface during the post-monsoon season and 8.12m 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 5470 ha-m. Further, the stage of groundwater development is reported to be 8.93% and 11.9% in core and buffer zone respectively and thereby these are designated as safe areas.

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 Simlipal Natioal Park is at 119 km in West direction; Khalasuni WLS at 80km in SSE direction and Badrama WLS at 71km in WNW direction. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna provided through the reporting presence of no schedule-I fauna in the study area.

7.0 M/s VPL has existing sponge Iron Plant with iron ore beneficiation plant, pelletization plant and power plant. The company will purchase pig iron; scrap and balance sponge iron and melt them along with scrap and iron recovered from plant in eddy current heat of medium frequency core less Induction Furnace. Slag being lighter will float over molten hot iron metal. Slag will be scooped out of hot metal. It will be cooled & crushed and residual iron which is about 15% of slag will be recovered using magnetic separator and recycled to IF for melting with fresh charge in Furnace crucible.

8.0 The targeted production capacity of the total project is 0.11 million TPA. The ore for the

plant would be procured from Iron Ore Mines of Koida & Barbil. The ore transportation will be done through road & rail.

9.0 The water requirement of the project is estimated as 20,880 m3 /day, out of which 275 m3/day of fresh water requirement will be obtained from the ground water.The permission for drawl of groundwater is obtained from Central Ground Water Authority vide Lr. No. 21-4(321)/SER/CGWA/2011-716 date 10.06.2011.

10.0 The power requirement of expansion project is estimated as 15 MW which will be obtained from the state power grid.

11.0 Baseline Environmental Studies were conducted during winter season i.e. from Dec 2015 to February 2016. Ambient air quality monitoring has been carried out at 8 locations during Dec 2015 to February 2016 and the data submitted indicated: PM_{10} (37.8 µg/m^3 to 66.2 µg/m^3), $PM_{2.5}$ (24.8 to 38.1 µg/m^3), SO_2 (6.2 to 9.9 µg/m^3) and NOx (7.5 to 12.9 µg/m^3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 1.09 µg/m^3 with respect to the PM_{10}.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 6.11 to 7.1. Total Hardness: 50 to 152 mg/l, Chlorides: 8.24 to 40.24 mg/l, Fluoride: 0.08 to 0.42 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 6.72 to 8.12 ; DO: 3.2 to 6.2 mg/l and BOD: 6.8 to 8.0 mg/l.

13.0 Noise levels are in the range of 49.7 to 72.8 dB(A) for daytime and 40.1 to 68.4 dB(A) for nighttime.

14.0 It has been reported that there are no people in the core zone of the project. No R&R is involved.

15.0 It has been reported that a total of 17500 tons of waste will be generated due to the project, out of which 7000 tons will be recycled and used in the process and 12500 tons will be used for land filling the low lying. It has been envisaged that an area of 0.9 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

16.0 It has been reported that the Consent to Establish /Consent to Operate from the State Pollution Control Board obtained vide Lr. No 3553/IND-I-CON-5338 dated 27.03.18 and consent is valid up to 31.03.2023.

17.0 The Public hearing of the project was held on 13.12.2017 at 11.00 AM under the chairmanship of Mr. Bhaskar Chandra Turuk (Addl Magisterate) for production of 0.11 million TPA of steel plant, under expansion. The issues raised during public hearing are:

Sl. No	Points/questions raised by Public	Commitment of Project Proponent
1	The public have expressed their concern about the Air & Water pollution and demanded to take precautionary pollution control measures as per the norms of the regulatory body	All the Stacks will be fitted with Air Pollution Control devices, in the proposed expansion project. Six Monthly Environment compliance is being submitted on regular basis to the regulatory authority, also abide to the provision of Air & Water Pollution Act.

2	Demand for employment on priority basis to local people in the company.	The company has already employed 105 persons out of total 120 persons (about 90%) from local area. The company is providing wages & Provident Fund as per rules for contractual employees. The company has not given employment as committed during the last public hearing as because the project has not been executed yet.
3	Most of the Public have demanded for peripheral development like green belt, roads, street light, free health care facility, education with corporate assistance. They have also demanded that this must be supervised through a committee.	The company is providing regular health checkups to their employees, medical facility in emergency situations, a electricity generator has been provided to the local hospital. The company has already planted 16000 saplings since last 5 years and all have survived, the company has year marked to plant trees in 32 acres of land. In case of peripheral development the company has under taken a number of activities like children's park, paying of electricity bills in nearby villages. The company will further take up such work in peripheral villages, after consultation with public.
4	Industrial hazard and safety	The proponent assured to follow the safety guidelines and norms prescribed by the government.
5	They have demanded Bonei area to be declared as an Industrial area and Government should construct ESI hospital for the benefit of local people.	-

18.0 An amount of 200 Lakhs (2.5 % of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

19.0 The capital cost of the project is Rs 62 Crores and the capital cost for environmental protection measures is proposed as Rs 320 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 32 Lakhs. The detailed CSR plan has been provided in the EMP in its page No. 167 to 168. The employment generation from the proposed project / expansion is 188.

19.0 Greenbelt will be developed in 0.9 Ha which is about 33% of the total acquired area. 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 2500 trees per hectare. Total no. of 2250 saplings will be planted and nurtured in 0.9 hectares in 3 years.

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

21.0 The proposal was considered in the 31st EAC (Industry-1) held during 7th – 9th May 2018. After detailed deliberations the committee sought the following additional information:

1. The existing and proposed facilities and capacities along with their cumulatives shall be given in tabular form.

2. Certified compliance report of the existing EC conditions from the Regional office of the Ministry.

3. Detailed plan for 100% utilisation of solid waste. Commitment that no solid waste shall be dumped with the plant premises.

4. Disaster management shall be based on HIRA. There are several hazards other than fire in LDO and FO storage tanks.

5. Criteria for selection of sampling locations and the parameters selected for analysis of air, water and soil sample.

6. Revised water balance addressing the make up water, ground water extraction and recharge proposed. Commitment that no additional water shall be withdrawn beyond the permitted quantity of 2976 m^3/day.

7. Commitment for maintaining work zone environment as per the requirement of Factory of Act.

8. Time schedule for the completion and commissioning of the facilities for which EC was granted on 2nd December 2012.

9. Details of corporate environment responsibility addressing the issues raised during the PH and issues emerged in SIA along with time bound action plan and budgetary requirement.

22.0 Therefore, the proposal is deferred for submission of reply to ADS by PP for further consideration of the proposal.

23.0 The project proponent has submitted reply to ADS and details are as follows:

Point No.1: THE EXISTING AND PROPOSED FACILITIES AND CAPACITIES ALONG WITH THEIR CUMULATIVE CAPACITY SHALL BE GIVEN IN TABULAR FORM.

Reply: Existing plant of Vikram Private Ltd is manufacturing 0.66 MTPA Sponge Iron from 2x100 TPD DRI Kilns. EC has been taken for 0.85 MTPA Beneficiation plant, 0.6 MTPA Pellet Plant and 100 MW CPP. Project work is in progress. Again the project proponent has proposed to install 0.107 MTPA Steel Making Shop and 0.1 MTPA Rolling Mill.

Point No.2: CERTIFIED COMPLIANCE REPORT OF THE EXISTING EC CONDITIONS FROM THE REGIONAL OFFICE OF THE MINISTRY.

Reply: Regional Officer, MoEF Bhubaneswar visited the plant on 12.01.2018 and certified that expansion work for which EC has been taken has not been taken up due to financial constraints and techno-economic reasons. For further expansion, the unit has taken ToR for 0.107 MTPA Steel Making Shop and 0.1 MTPA Rolling Mill. No construction activities has been started for the proposed expansion.

Point No.3: DETAILED PLAN FOR 100% UTILIZATION OF SOLID WASTES. COMMITMENT THAT NO SOLID WASTE SHALL BE DUMPED WITH THE PLANT PREMISES.

Reply: The detailed plan for 100% utilization of solid waste has been made. 0.084 MTPA fly Ash generated will be fully utilized in manufacturing of bricks in company's own brick manufacturing plant. Pellet Plant fines '0.0375 MTPA' will be recycled to Pellet Plant. '0.0074 MTPA' scrap generated from the process will be recycled to Steel Making Shop. '0.044 MTPA' dolochar will be used in own Power Plant. Iron ore tailings of ' 0.118 MTPA' will be used in own fly ash brick plant as sand substitute, concrete aggregate making and possibility is being expored to dump in abandoned mines. '0.01 MTPA' slag after iron recovery will be used in construction work.

Point No.4: DISASTER MANAGEMENT SHALL BE BASED ON HIRA. THERE ARE SEVERAL HAZARDS OTHER THAN FIRE IN LDO AND FO STORAGE TANKS.

Reply: The initial Assessment as per HIRA Guidelines has been conducted & related mitigation measures are been suggested for the probable risks. Disaster Management plan has been proposed based on HIRA. Firing on LDO and FO tanks, back firing in DRI kilns, Spillage of hot metal during transfer, electric shock hazard, burn injuries, auto-ignition in coal storage yard have been taken into account and mitigation measures have been proposed.

Point No.5: CRITERIA FOR SELECTION OF SAMPLING LOCATIONS AND THE PARAMETERS SELECTED FOR ANALYSIS OF AIR, WATER AND SOIL SAMPLE.

Reply: Meteorological conditions, settlements, accessibility and sensitive areas have been taken into consideration while selecting sampling locations for Air, Water & Noise.

Point No.6: COMMITMENT FOR MAINTAINING WORK ZONE ENVIRONMENT AS PER THE REQUIREMENT OF FACTORIES ACT.

Reply: It is the commitment of the project proponent to provide safe work zone environment to workmen as per guideline of factory act.

Point No.7: REVISED WATER BALANCE ADDRESSING THE MAKEUP WATER, GROUND WATER EXTRACTION AND RECHARGE PROPOSED. COMMITMENT THAT NO ADDITIONAL WATER SHALL BE DRAWN BEYOND THE PERMITTED QUANTITY OF 2976 M3/DAY

Reply: Water Balance has been proposed addressing use of makeup water, ground water extraction and recharge. Surface water drawal in no case will exceed 2976 cum/day as has been approved.

8) TIME SCHEDULE FOR THE COMPLETION AND COMMISSIONING OF THE FACILITIES FOR WHICH EC WAS GRANTED ON 2ND DECEMBER 2012.

The project will be completed by December 2022 and the detailed schedule has been provided to the ministry.

9) Details of Corporate Environment Responsibility addressing the issues raised during the PH and issues emerged in SIA along with time bound action plan and budgetary requirement.

2.5% of existing project cost of Rs 207 Crores and 1% of proposed project cost of Rs 68 Crores, totaling Rs 5.855 Crores will be spent towards CER activities for the locality which will be spent during construction period of the proposed project with time bound completion along with the progress of the project.

Observations of the Committee:

During the deliberations the PP informed that there is no National Park, WLS or Wild Life Corridor within 15 km radius of the project area; and the existing project has all the pollution control equipment in place. It is being operated with Electrostatic Precipitator and bag Filters. Online Monitoring System is in operation and connected to State Pollution Control Board, Bhubaneswar. The committee observed that River Brahmani flows to the South of the project boundary at a distance of 1.2 km. Further the surface contour is at a lower elevation than the river bank.

Recommendation of the Committee:

After detailed deliberation, the committee recommended for grant of Environmental Clearance for the proposed expansion of Sponge Iron Plant from 2x 100 TPD DRI Plant, 8,50,000 TPA Beneficiation Plant, 6,00,000 TP A Pellet Plant and 10MW Power Plant to 2x 100 TPD DRI (Process Modification) along with 1,20,000 TPA SMS, and 1,00,000 TPA Rolling Mill at Badtumkela, PS-Lahunipara, Dist- Sundergarh, Odisha under the provisions of EIA Notification, 2006 subject to following specific and general conditions:

A. Specific Conditions:

1. The project proponent shall adhere to the Zero Liquid Discharge and shall not discharge treated / un-treated effluent directly or indirectly into the Bhramani River or its tributaries.

2. Social Need Assessment shall be conducted and the outcome of the report shall be included in the corporate environmental responsibility. The report shall be submitted to the ministry and its regional office within six months.

3. The 100% utilization of solid waste shall be ensured.

B. General Conditions:

General Conditions:

1. An amount of Rs 5.855 Crores proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.

2. Green belt shall be developed in 0.9 Ha 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.

3. The Capital cost Rs. 320 Lakhs and annual recurring cost Rs. 32 towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.

4. The project proponent shall (Air Quality Monitoring):

   a. 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 414 (E) dated 30th May 2008 as amended from time to time; 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.

   b. 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.

   c. Install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions; and

   d. 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.

5. The project proponent shall (Water Quality Monitoring):

   a) install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; 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 systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

   b) 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; and

   c) 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.

6. The project proponent shall (Air Pollution Control):

   a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

   b) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;

   c) provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;

   d) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;

   e) 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;

   f) ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation;

   g) provide wind shelter fence and chemical spraying on the raw material stock piles.

7. The project proponent shall (Water Pollution Control):

   a) adhere to 'zero liquid discharge';

   b) provide Sewage Treatment Plant for domestic wastewater; and

   c) provide garland drains and collection pits 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.

8. The project proponent shall (Water Conservation):

   a) practice rainwater harvesting to maximum possible extent; and

   b) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

9. The project proponent shall (Energy Conservation):

   a) provide waste heat recovery system on the DRI Kilns;

   b) use dolochar generated for power generation;

   c) 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; and

d) provide the project proponent for LED lights in their offices and residential areas;

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

11. 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.

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

13. 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.

14. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.

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

16. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

17. 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.

18. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

19. 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).

20. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

21. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.

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

23. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

24. 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 shall be submitted to the Ministry's Regional Office.

25. The project proponent shall (Post-EC monitoring):

    a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;

    b. put on the clearance letter on the web site of the company for access to the public.

    c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http:/envfor.nic.in.

    d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;

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

    f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;

    g. 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;

    h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

32.19. Proposed 2x9 MVA Ferro Alloy Plant (Fe-Si: 12,780 TPA or Si-Mn: 28,620 TPA or Fe- Mn: 37,080 TPA) at Village Taraimal, Tehsil Tamnar, District Raigarh in Chhattisgarh by **M/s Sumit Ispat Private Limited** [Online proposal no. IA/CG/IND/20443/2011; MoEFFile No. J-11011/688/2009-IA.II (I)]–**Extension of validity of Environmental Clearance.**

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

32.20. Aluminium Smelter plant (0.72 MTPA) and Cpative Power Plant (1650 MW) at village Lapanga, Rengali, C.D. Block, Dist.Sambalpur, Odisha by **M/s Aditya Aluminium Ltd (A division of M/s Hindalco Industries Ltd) –** [Online Proposal No.

IA/OR/IND/2726/2012; MoEFCC File No. J-11011/136/2009-IA-I(I)] – **Further consideration for Amendment in Environmental Clearance based on reply to ADS.**

1.0 M/s Aditya Aluminium Ltd (A division of M/s Hindalco Industries Ltd) made online application vide proposal no. IA/OR/IND/2726/2012 dated 23th March 2018 seeking amendment in Environmental Clearance issued vide reference no. J-11011/136/2009-IA-II (I) dated 29.11.2012 for process optimization through enhancement of pot line current from 360 to 380 kA and allied activities; Change in Coal Source to CPP as proposed in EC; Sale of baked anodes; sale of bath material; selling of molten metal. The proposed project activity is listed at 1 (d) and3 (a) under category A of EIA notification 2006 and is appraised at Central.

2.0 Details of Earlier Environmental Clearances (ECs) area as follows:

- EC for 0.26 MTPA Aluminium smelter vide Letter No J-11011/142/ 2004-IA.II (I) dated 27 January, 2006
- EC for 650 MW Captive Power Plant vide Letter No J-13011/7/2005-IA.II (T) dated 22 November, 2005
- EC for expansion of aluminium smelter from 0.26 MTPA to 0.72 MTPA and captive coal based power plant from 650 MW to 1650 MW vide letter no J-11011/136/2009-IA.II (I) dated 29 November, 2012 and amendment in conditions vide letter dated 14 June, 2013

3.0 Latest certified Inspection/monitoring report received vide MoEF&CC, RO, Bhubaneswar Office vide letter dated 19 Dec, 2017. The regional officer reported non-compliances regarding treatment of SPL for removal of fluoride and cyanide before its disposal; 100% utilization of the fly ash; and conducting forage fluoride analysis in the trees. Reply to the observations submitted to RO. MOEFCC vide letter no. AA/E&S/EC/2017/310, dated 20.01.2018 by PP.

4.0 Aditya Aluminium, a Unit of M/s Hindalco Industries Ltd (HIL) is operating an integrated Smelter with a Captive Power Plant (CPP) at Lapanga in Sambalpur district of Odisha. The Smelter and CPP are operating at capacities of 0.36 MTPA and 900 MW (6x150 MW) respectively in existing Phase-I and will be ultimately upgraded to 0.72 MTPA and 1650 MW (11x150 MW) in proposed Phase-II. Environmental Clearance (EC) has been obtained for both the Phases.

<table>
<tr><td rowspan="2">S. No</td><td rowspan="2">Product</td><td colspan="2">EC Obtained for 0.72 MTPA Aluminium Smelter & 1650 MW CPP</td></tr>
<tr><td>PHASE-I
(presently under operation)</td><td>PHASE-II
(to be implemented)</td></tr>
<tr><td rowspan="5">1</td><td>Aluminium Smelter</td><td>0.36 MTPA (360 KTPA)</td><td>0.72 MTPA (720 KTPA)</td></tr>
<tr><td colspan="3">Products: Pig ingot, Sow, Al Slab</td></tr>
<tr><td>a) Pig ingots</td><td rowspan="2">360 KTPA</td><td rowspan="3">720 KTPA</td></tr>
<tr><td>a) Sow</td></tr>
<tr><td>b) Al Slab Production</td><td>0 KTPA</td></tr>
</table>

2	CPP-Electricity	900 MW (6x150 MW from Unit-1,2,3,4,5,6)	1650 MW (11 x 150 MW)

5.0 Meanwhile, Aditya Aluminium has identified few process optimization options which lead to marginal enhancement (5.5%) in production capacity. Further, change in coal sourcing has been proposed based on the coal availability. Though, minimal environmental impacts have been identified due to the proposals, implementation of the same requires an environmental clearance and thus, amendment in EC has been proposed. Aditya Aluminium is seeking an amendment in EC as follows:

5.1 Enhancement of Pot Amperage from 360 kA to 380 kA:

- Enhancement of input amperage will result into marginal increase (5.5%) in Aluminum Production Level, to the tune of 20 KTPA
- The enhancement in Pot Production will be implemented by considering the below mentioned aspects:
    - By increasing the Pot line operating Current
    - Optimizing Process Parameters to increase Current Efficiency
    - Optimizing the average Pots in Operation
    - Improving pot TAT and improvement in energy efficiency of pots
    - Less consumption in Sp. DC Energy Consumption from 13420±150 kWh/MT to 13060±150 kWh/MT for production of liquid aluminium
    - Increase in current is to be done as per Technology Supplier recommendations including compliance to applicable safety standards

- Resource Requirement & Impact Analysis- Pot rating enhancement:

S.No	Item	Resource Requirement/Identified Change
1	Additional Cost	No additional requirement
2	Additional Land	No additional requirement
3	Manpower/ Equipment	No additional requirement
4	Change in Product	Increase by 5.5% of Aluminum Production to the tune of 20 KTPA
5	Water Requirement	No additional requirement. Water consumption will be within the approved limit of 52.73 cusecs

6	Additional Resources	No changes in Sp. Alumina and Carbon consumption, however, additional alumina and Carbon to meet this enhanced volume • Alumina - Specific Alumina consumption will remain same, however, AA will require 36,394 MTPA of additional alumina to meet this enhanced volume. • Carbon - Additional Carbon requirement of 7,772 MTPA to meet this enhanced volume without any change in Specific Consumption. • Aluminium Fluoride - Plant's Fluoride Consumption will remain within approved limit of 10 kg/MT of Aluminium (CREP Guidelines)
7	Energy Requirement	Reduction in Sp. energy consumption
8	Source emissions	No change in specific emission • Fluoride Level – Since the increase in production capacity is very marginal (5.5%), with the existing Gas Treatment Centre, we will be able to maintain Fluoride Emission within approved limit of 0.8 kg/T, mentioned in the EC.
9	Material Handling System	No significant change
10	Solid Waste Generation	No change • Spent Pot Lining – No additional generation, as there is no increase in number of Pots
11	Wastewater	Since there is no additional requirement of water, no change in Water Pollution Load
12	Noise levels	No significant change
13	Operating Safety	Well laid EHS practices by the Unit

5.2 Change in the coal source to CPP:

Existing Practice/ as per EC	Proposal for EC Amendment	Remarks

EC: Coal from captive Talabira-II & III coal block of Ib valley and imported coal Existing practice: Coal is being procured from captive Gare Palma mines in Chhattisgarh State, Long term linkages, through e-auctions, from Washeries in the market and import as & when necessary	Coal mix options proposed: • 80-100% Indian domestic coal (from own mines, linkage & e-auction coal, coal from Washery) • 0-20% imported,	• No increase in power generation • Additional expense for transport of coal for around 100 Km Incremental environmental impacts due to usage of proposed coal mix option, specifically transportation impacts have been discussed

- Talabira-II&III coal block was jointly allocated to MCL, HIL and NLC in 70:15:15 share holding pattern and was cancelled by Hon'ble Supreme Court along with other coal blocks.

- HIL is seeking amendment in EC for change in Coal source and fuel mix for 900 MW (6x150 MW) Captive Power Plant as HIL became successful bidder and Gare Palma IV/4 and IV/5 coal mines were allocated jointly to Aditya Aluminium and Hirakud Power Plant. Allocation for Aditya 11.58 lacs TPA; and HIL has signed long-term FSA for coal linkage from MCL/CCL/SECL for 28 lacs TPA.

- Due to cancellation of coal blocks and unable to lift coal from the allocated coal mines, Aditya Aluminium (Unit of HIL) is proposing to procure 28 lacs TPA from other sources namely Domestic coal, Linkage coal, e-auction coal, from washeries in open market, and imported coal as & when required.

- Coal source plan is as follows:

Mines	Coal Quantity Planned in LTPA	%
OWN Gare Palma	11.58	29.4
Linkage By Rail	17.19	43.6
Linkage By Road	9.76	24.8
E-Auction (Road & Rail)	0.47	1.2
Open Market(Rail & Road)	0.40	1.0
Total Coal (in lacs MT)	39.40	100.0

- Plan of action for rail and road transport of the planned coal:

Road to Rail Conversion														
	FY 2017 - 2018		FY 2018 - 2019		FY 2019 - 2020		FY 2020 - 2021		FY 2021 - 2022		FY 2022 - 2023		FY 2023 - 2024	
	MT	%	MT	%	MT	%	MT	%	MT	%	MT	%	MT	%
by Rail	1770514	44	2366000	60	2514000	64	2714000	69	3793000	96	3793000	96	3952400	100
by Road	2216016	56	1586400	40	1438400	36	1238400	31	159400	4	159400	4	0	0
	3986530		3952400		3952400		3952400		3952400		3952400		3952400	

- Proposed efforts for reduced dependence on Road transport
    - Loadability of trucks enhanced 16 mt to 25 mt (Multiaxle)
    - Increased lifting of Coal from 157 to 400 rakes in FY 2017-18
    - Approx. 21 Kms electrified rail net work inside the plant
    - Installation and commissioning of Wagon Tippler
    - Aditya owned siding is within 500 mtrs from railway main line
    - Capable to accommodate 6 –7 rakes operational at a time within plant, inclusive of BOXN, BTAP and Container rakes
    - One unit of Bucket Wheel Stacker Reclaimer commissioned for safe high stacking of coal
    - Two units of dedicated locomotive engine for daily rail operations having a capacity of 800 HP each
    - Rs 150 Cr CAPEX taken to install Track hopper for handling BOBRN rakes and to be installed soon
- Summery of existing traffic is as follows:

S. No	Monitoring Location	Road	Vehicle Count (to & fro)					IRC (IRC-64-1990) Recommendations (PCUs / day)	Existing V/C Ratio	*Level of Service (LoS)
			2/3-Wheeler	4-Wheeler (LMV)	HMV Single Axial	HMV Multi Axial	Total PCUs/ day			
1	Kirei	SH10	1782.5	2175	1971	10122	16061	35,000	0.5	C
2	Badmal	SH10	1905.5	2411	2832	9645	16803	35,000	0.5	C
3	Raigarh	NH-49	876	1450	1858.5	4089	8286	15,000	0.6	C
4	Kadamdih	NH-49	622.5	1003	1447.5	4098	7183	15,000	0.5	C
5	Sambalpur	SH10	1297.5	2307	3178.5	4749	11547	35,000	0.3	B
6	Hukra Deepa Chowk (near Garepalma mines)	Road from GP Mines to Raigarh	741.5	885	408	2901	4948	15,000	0.3	B

5.3 Sale of Baked Anodes

- Existing Practice/as per EC: As per the EC letter, Baked Anode will be manufactured in the Carbon Plant and Anode butts generated from the pots shall be cleaned and recycled to the Carbon Plant.

- Proposal for EC Amendment: Anode is generated due to less rejection after plant stabilization and optimization; No additional capital investment; Propose to sell approx. 5,000 nos. of the baked anode per annum to private parties.

5.4 Sale of Bath material

- Existing Practice/as per EC: In-house consumption and excess bath material to bestored and for selling outside Parties

- Proposal for EC Amendment: Propose to sell 1,500 TPA of the generated bath material to private parties. These are generated during Pot operation as per original design and no capital investment

5.5 Sale of Molten Metal:

- Existing Practice/as per EC: In-house use in Casthouse for manufacturing Pigs and Sow Ingots/Slab.

- Proposal for EC Amendment: As per Aditya Aluminium Project planning, it is proposed to sell about 75 KTPA Molten metal to M/s APAR Industries who has proposed to set up their factory for manufacturing downstream products, close to the plant boundary. Proposed facilities involve dedicated RCC road construction (road & lighting) & Crucibles inside the Plant premise. Capital investment – Rs 3.9 Crores(Rs 3.1 Crores for road laying/civil and infrastructure facilities and remaining Rs 0.8 for other facilities)

- CPP Emissions: The incremental load due to the proposed change in coal mix will result in reduction of SO_2 emissions by 20.8 g/s (0.9%). Hence, there will be reduction in AAQ impacts due to stationary SO_2 load generation due to the proposed proposal.

- Fluoride Level: Since the increase in production capacity is very marginal (5.5%), with the existing Gas Treatment Centre, we will be able to maintain Fluoride emission within approved limit of 0.8 kg/T, mentioned in the EC.

- PAH Level : No change. It will remain within the approved limit with existing Fume Treatment Centre.

- Due to additional road traffic:Increase in vehicular emissions and fugitive dust due to vehicular load on approach roads. The maximum impact of road traffic is limited to 300 m from the centre of the road only, which is generally away from sensitive receptors (settlements, etc.).The resultant air quality will confirm to the stipulated standards.

- **Road Adequacy:**

The estimated peak traffic in terms of PCUs are compared with the stipulated standards by IRC

for traffic capacity of the existing road network. The existing road network is found adequate for the present traffic scenario. However, the roads may not be adequate with increase in population over the coming years (20-25 years). Thus, Aditya Aluminium proposes coal transport for the operating CPP capacity to be 100% by rail within next 6 years. The same arrangement will be extended further, for future expansion for 1600 MW, for which EC has already been obtained.

- **Solid Waste Generation:**
- Spent Pot Lining: No additional generation, as there is no increase in number of Pots.
- Ash Generation:Aditya Aluminium is committed to comply the Fly Ash Utilization Notification. Ash utilization is being achieved through supplying to Cement Plants, road making, low lying area filling and ash bricks manufacturing units.

- **Wastewater Generation:**
- Since there is no additional requirement of water for this enhanced production capacity, no change in Water Pollution Load.

- **Energy consumption:**
- Enhanced production capacity will resultin slight reduction in specific energy consumption. Energy conservation measures have been proposed.

Hence, from the above points, it is evident that Aditya Aluminium can implement all proposed amendment without any negative impact to environmental systems.

6.0 The proposal was considered in the 30th meeting of Expert Appraisal Committee held during **9th to 10thApril 2018.** The committee observed that the regional officer reported non-compliances regarding treatment of SPL for removal of fluoride and cyanide before its disposal; 100% utilization of the fly ash; and conducting forage fluoride analysis in the trees. Reply to the observations submitted to RO. MOEFCC vide letter no. AA/E&S/EC/2017/310, dated 20.01.2018 by PP. However reply submitted by the PP was not examined by the Regional office. The committee opined that the PP shall obtain the comments of the Regional officer on the reply submitted by PP regarding observations made by RO during his inspection.

7.0 After detailed deliberations, the committee desired to submit closure report of non-compliances of earlier EC from the regional officer of MoEFCC.

8.0 The PP submitted closure report of non-compliances of earlier EC from the regional officer of MoEFCC. The details of the report is as follows:

Sl	CONDITIONS & OBSERVATIONS
1.	Anode butts generated from the Pots shall be cleaned and recycled to the Anode Plant. The spent pot lining generated from the smelter shall be properly treated in spent pot lining treatment plant to remove fluoride and cyanide and disposed-off in secured landfill. The location and design of the land fill site shall be approved by the SPCB as per the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008. Leachate collection facilities shall be provided to the secured land fill facilities (SLF). The dross shall be recycled in the cast house. STP sludge shall be utilized as manure for greenbelt development. All the used oil and batteries shall be sold to the authorized recyclers/re-processors.

Observe made during Monitoring on 02.11.2017:
It has been found that Anode butts generated from the pots is being cleaned and recycled completely. Refractory part of the SPL is being stored under covered shed for disposal after establishment of facilities at CHW-TSDF of Ramky. The carbon part is being sold to authorized recyclers (M/s Green Energy Resources, Sambalpur). The location and design of the land fill site has been prepared as per the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and approved from SPCB, Odisha. The dross recycling is being started from July, 2017 in the in-house dross recycling unit after receipt of required clearances from CPCB & SPCB. The used oil and batteries are being sold to authorized recyclers/reprocessors. *However, PAs have not treated the SPL for removal of fluoride and cyanide before its disposal to secure area.* Therefore, it is requested to treat the SPL before disposal to secure area.

Year	Spent Pot Lining Generation (In MT)	Quantity of SPL Disposal (in MT)	Stock at the end of the year (MT)
2014-15	0	0	0
2015-16	1162.34	25.62	1136.72
2016 -17	630.79	789.69	977.82
2017-18 (Upto Oct'17)	960.43	704.39	1233.86

Reply made by project Proponent on dated 12.04.2018:

- The Spent Pot Lining (SPL) generated in the Aluminium Smelter Plant till date is 4198.49 MT (Carbon – 2326.92 MT, Refractory – 1871.57 MT). Out of 2326.92 MT of Carbon SPL, we have sent 1711.59 MT to CPCB/SPCB authorized recycler, M/s Green Energy Resources, Sambalpur for reprocessing. That means, 74% of the Carbon SPL is reprocessed and only 26% of Carbon SPL is stored in line with the Rule-8 of Hazardous and Other Waste (Management and Transboundary Movement Amendment Rules, 2016. This part of Carbon SPL will also be transferred to the authorized reprocessor soon.
- The Refractory part(12.79 MT) is supplied to CHWTSDF of M/s Ramky Enviro in Jajpur district of Odisha state for joint trial in presence of CPCB & SPCB and Industries. The trial has been completed and we understand that Protocol has been issued to M/s Ramky for safe disposal in secured landfill area. M/s Ramky is likely to lift the refractory SPL soon after fulfilling the terms & conditions specified in the Protocol.

In the above details, it is pertinent to mention that the SPL generated & stored under covered shed and concrete flooring will be utilized for reprocessing / disposal by the CPCB & SPCB authorized agencies after following the due procedures of treatment of fluoride & cyanide. Year-wise generation, utilization and storage details till date are stated below for your kind reference.

Year	Spent Pot Lining Generation	Spent Pot Lining Utilization	Quantity stored inside covered shed

	(In MT)			(In MT)			with concrete flooring (in MT)			
	Carbon	Refractory	Total	Carbon	Refractory	Total	Carbon	Stored	Refractory	Stock
2015-16	687.99	474.35	1162.34	12.83	12.79	25.62	675.16	26%	461.56	1136.72
2016-17	415.79	215	630.79	789.69	0	789.69	301.26		215	977.82
2017-18	1223.14	1182.22	2405.36	909.07	0	909.07	615.33		1182.22	1797.55
	2326.92	1871.57	4198.49	1711.59	12.79	1724.38	615.33		1858.78	2474.11

However, keeping in view of the future generation quantity & schedule of SPL in the Hindalco Industries Ltd.(HIL)-Sambalpur Cluster, HIL-Hirakud Unit has already initiated steps for incineration of SPL in the Power Plant by following the due process of obtaining approval under Hazardous and other wastes (M&TM) Amendment Rules, 2016 from CPCB and SPCB. The Central Board (CPCB) has approved the process after joint inspection with SPCB. However, recently OSPCB has asked for few more studies related to the incineration process and we are holding discussions with OSPCB for further actions in this matter. We will incinerated SPL in our Captive Power Plant, once the process is approved and necessary Protocol is issued in this regard. The letters received from CPCB in this regard are attached herewith in Annexure 2 for your kind reference.

Sir, we are sincerely trying out best for utilization SPL through environmentally sound methods under the prescribed guidelines of the Central and State Government. Our Aluminium Smelter in Lapanga is fully commissioned in 2016 and needless to mention that we take all steps to adopt the most environment friendly technology for disposal of SPL. This process is taking little more time and once established and approved by CPCB & SPCB, the SPL will be utilized completely.

Comment by Regional Office:
It has been stated that total spent pot lining (SPL) generated in the Aluminium Smelter Plant till date is 4198.49 MT (Carbon – 2326.92 MT, Refractory – 1871.57 MT). Out of 2326.92 MT of Carbon SPL, they have sent 1711.59 MT to authorized recycler, M/s Green Energy Resources, Sambalpur for reprocessing. That means, 74% of the Carbon SPL is reprocessed and only *26% of Carbon SPL is stored* in line with Hazardous and Other Waste Amendment Rules, 2016. This part of Carbon SPL will be transferred to the authorized reprocessor soon. And the Refractory part (12.79 MT) is supplied to CHWTSDF of M/s Ramky Enviro in Jajpur district of Odisha state for joint trial in presence of CPCB & SPCB and Industries. As informed that the trial has been completed by M/s Ramky for safe disposal in secured landfill area. M/s Ramky is likely to lift the refractory SPL soon after fulfilling the terms & conditions specified in the Protocol.

2	Utilization of 100% fly ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time. Observations made during Monitoring on 02.11.2017: It has been stated by the project proponent that ash generated is being utilized by means of supplying to M/s Ultratech Cements, Jharsuguda, M/s OSL, Bargarh for cement

manufacturing. It was also stated by the project proponent that they are supplying Ash to the brick manufactures and utilizing it for filling the low lying areas inside the Plant with prior approval of SPCB. The low-lying areas are filled with Ash and subsequently planted with trees for development of greenbelt. Ash is also being disposed in the ash pond through HCSD System. 100% ash utilization ensures till December, 2016. The ash utilization achieved for the year 2017 – 18 (up to September 2017) is 68.73%. *Therefore, time bound effort is required to achieve 100% fly ash utilization.*

	April 2017-2018 (September, 2018)	Quantity (in MT)
1	Total Ash Generated (MT)	798297.07
2	Total Ash Utilized (MT)	548746.78
3	% Utilization	68.73

Reply made by Project Proponent on dated 12.04.2018:
The Ash utilization in 2014-15, 2015-16, 2016-17 was 100%. In the year 2017-18, we have already initiated few action plans and in February and March'18 we have achieved close to 100% utilization. The proposed action plan are stated as below. By following the action plan we intend to achieve comply to the Fly Ash Notification, 2016 by MOEF&CC, New Delhi.

- Increase supply to Cement Plants like M/s Ultratech, Jharsuguda Unit; M/s ACC, Bargarh Unit; M/s OCL, Rajgangpur Unit by 80 to 90%.
- Installation of brick manufacturing Unit which is under installation (approx. 3 lakhs bricks per month).
- Increased Supply to the local brick manufacturing Units (expecting to be doubled).
- We have constituted a team for exploring more areas of Ash utilization like Road making, Abandoned mines/quarry filling, infrastructure projects etc. The Collector & DM, Sambalpur has been requested to provide us permission for filling of abandoned mines and voids available in the region.
- A study is being carried out by M/s Hindalco Industries Ltd. through collaboration with IIT, Mumbai/NML, Jamsedpur for utilization of Ash in making Geopolymers and tiles. Copy of the assigned study is attached herewith.

The proposed action plan for year-wise generation and utilization of Ash is stated in the following table.

Sl. Nos	Years	Cement Plants	Brick Manufacturing	Road making/ Filling of abandoned mines & voids	Remarks
1	2018-19	80%	2%	18%	100% utilization
2	2019-20	85%	4%	11%	100% utilization
3	2020-21	90%	6%	4%	100%

					utilization
4	2021-22	90%	6%	4%	100% utilization
5	2022-23	90%	6%	4%	100% utilization

Comment by Regional Office:
It has been stated by PP they have carried out study on utilization of fly ash for making Geopolymers and tiles with IIT, Mumbai and NML, Jamshedpur. They have also supply fly ash to brick manufacturing and cement-grinding unit near about the project are namely M/s Ultratech, Jharsuguda and M/s OCL, Rajgangpur. IN addition to above they have also submitted the future projection of its utilization.

3 In plant, control measures like fume extraction and dust extraction system for controlling fugitive emissions from all the materials handling/transfer points shall be provided to control dust emissions. Fugitive Fluoride emissions from the pot room and in the forage around the smelter complex and the data submitted regularly to the Ministry Regional Office at Bhubaneswar and SPCB. Further dry scrubbing system to control the emissions from the pot lines should be provided.

Observations made during Monitoring on 02.11.2017:
It was stated by the project proponent that Fume Extraction Centre (FTC) in Anode Baking furnace, Gas Treatment Plant (GTC) in potlines and bag filters in raw material handling, GAP, Anode Baking, Roding areas, bath recycling, carbon recycling area, butts recycling area, cathode sealing shop etc. in smelter area and coal handling, ash handling plant in captive power plant is installed to control fugitive dust emissions. HF analyser installed for roof top fugitive fluoride monitoring in pot rooms the concentration of hydrogen fluoride varies between 0.15 to 0.168 mg/m3. Forage fluoride around the smelter is being monitored on quarterly basis by third party analysis viz. by M/s Visiontek Consultancy Service Private Limited, Bhubaneswar, which is MOEF&CC accredited laboratory. As per third party analysis report dated 06.07.2017 the concentration of the forage fluoride are as follows :

Location	Species	Fluoride in PPM
FF-1 Gumkarma	Grass	3.5
FF-2 Ghichamura	Grass	5.2
FF-3 Bamaloi	DalbergiaSisoo	2.9
FF-4 Titlaimal	Azadiracthicaindica	5.6
FF-5 Lapanga	Albiziaprocera	6.1
FF-6 Gurupali	Grass	2.8

It is important to note here that the PAs have been conducting forage fluoride analysis in the trees viz. *Dalbergiasisoo, Azadiracthicaindica*and*Albiziaprocera,* which is neither used for fodder nor used by human for eating purposes, which has also been mentioned in the EIA report, which has been prepared by Vimta Lab. Therefore, it is requested to conduct forage analysis only in the vegetation which is commonly used as fodder. *As per recent third party analysis reports, the level of fluoride content in above plants including grass are significantly high as compared with background data (EIA data).*

	Reply made by Project Proponent on dated 12.04.2018: As advised, we have conducted Forage analysis of vegetation which are commonly used as fodder/human consumptions in different locations outside the plant boundary through MOEF accredited laboratory and the results are in the range of 0.9 to 1.7 ppm. Soil sampling was also carried out in the same location and results are in the range of 2.6 to 4.3 ppm. The analysis reports are attached in Annexure - 3 for kind perusal. Comment by Regional Office: As per submitted third party analysis report prepared by M/s Visiontech Consultancy Services Pvt. Ltd., Bhubaneswar, which is NABL accredited laboratory. As per forage analysis report vide letter No.Envlab/01/R-118 dated 23.01.2018, depicted that the value of fluoride contain range between 0.6 ppm to 1.7 ppm in all ten plant samples. In addition to above PA have also submitted third party analysis report of the soil samples collected in different nearby location vide letter No. Envlab/01/R-118 dated 23.01.2018 including project site. Submitted report depicted that value of fluoride contain in the soil samples range between 1.1 ppm to 4.3.

Observations of the committee:

9.0 During the deliberations, the project proponent informed that project area does not come within any National Park / Wildlife Sanctuary. It was informed that Hirakund Reservoir is about 35 Km and Badrama Wildlife Sanctuary is 22 Km for the plant. Further informed that the PP has deposited Rs. 6.27 Crores for wildlife management.

10.0 The committee deliberated in detail on the closure certificate of non-compliances of earlier EC and opined that the project proponent shall develop in-house facilities for treatment of SPL in 2 to 3 years.

Recommendations of the committee:

11.0 After detailed deliberations, the committee recommended for amendment in Environmental Clearance issued vide F. No. J-11011/136/2009-IA-II (I) dated 29.11.2012 for enhancement of pot line current from 360 to 380 kA and allied activities through process optimization; Change in Coal Source to CPP (44% by rail and 56% by road in 2017-18; 60% by rail and 40% by road in 2018-19; 64% by rail and 36% by road in 2020-21; 96% by rail and 4% by road in 2022-23; 100% by rail from 2023-24 onwards); sale of baked anodes; sale of bath material; sale of molten metal under the provisions of EIA Notification, 2006 subject to following additional conditions:

i. The project proponent shall develop in-house facilities for treatment of Spent Pot Lining (SPL) generated in the Aluminium Smelter. Meanwhile, Refractory part may be sent to CHWTSDF as per the provisions of Hazardous and Other Waste Amendment Rules, 2016.

ii. The PP shall ensure 100% utilization of Fly ash generated

iii. All the measures proposed during the presentation and application shall be implemented.

iv. Sale of baked anodes; sale of bath material; and sale of molten metal is permitted with permission under Hazardous and Other Waste Management Rules, 2016

v. All the conditions prescribed in the environmental clearance letter No J-11011/136/2009-IA-II (I) dated 29.11.2012 shall be strictly complied with

vi. The company shall obtain fresh environmental clearance in case of any change in the scope of the project.

32.21. Steel/Sponge Iron Manufacturing plant of (3x60 TPD) 54000 MTPA in existing steel Manufacturing unit having capacity 72 TPD of steel Ingots of **M/s Eden Steel Alloys** located at Village Mullanpur Kalan, Ambey Majra Road Mandigo bindgarh, Tehsil Sirhind, District Fatehgarh Sahib, Punjab [Online proposal no. **IA/PB/IND/59542/2016**; MoEFCC File No. J-11011/233/2016-IA-II(I)] –**Further consideration for Environmental Clearance based on reply to ADS**.

1.0 The proponent has made online application vide proposal no. **IA/PB/IND/59542/2016**, dated **19th August 2017** 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 'B' of the Schedule of EIA Notification, 2006. Since the project is located in the Critically Polluted Area of Mandigobindgarh notified by Central Pollution Control Board, the proposal is appraised at the Central Level as Category A.

2.0 The project of **M/s Eden Steel Alloys** located at Ambey Majra Road, Village-Mullanpur Kalan, Tehsil- Sirhind, District- Fatehgarh Sahib, Punjab was initially received in the Ministry on 8th October 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 12thmeeting held on 27th– 28th October 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 23rd January 2017 vide Lr. No. J-11011/233/2016/IA.II(I). Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry.

3.0 The project of M/s Eden Steel Alloys located in Ambey Majra- Mullanpur road, Village-Mullanpur Kalan, Tehsil- Sirhind, District- Fatehgarh Sahib, Punjab is running an integrated steel plant since October 2010 making steel ingots capacity of 72 TPD by using induction furnace (23,760 TPA). Now the project proponent proposes to add 3 tunnel furnaces for sponge iron manufacturing increasing their production capacity of sponge iron to 54,000 TPA, along with Char as by product of 600 TPA. EC was not applicable for the existing plant, as the production capacity was less than 30, 000 TPA. The details of the existing and proposed expansion are as follows;

Sl. No	Product	Existing Capacity (TPA)	Proposed Capacity (TPA)	Total Capacity after expansion (TPA)
1	Steel Ingot	23,760	Nil	23,760
2	Sponge Iron	Nil	54,000	54,000
3	Char	Nil	600	600

4.0 The total land is 0.885 ha. This is an existing project in industrial area of Mandi Gobindgarh. No forestland is involved. The entire land has been acquired for the project. Bhakhra Canal passes 1.41Km away from project site. There will not be any diversion in course of canal.

5.0 The topography of the area is flat and reported to lies between 30° 37'43.00'' N Latitude and 76°18'59.00''E Longitude in Survey of India Topo sheet No. 53 B/6 at an elevation of 264.m AMSL.

6.0 There is 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 The raw material is Scrap & Ferro alloys, Iron ore/Mill scale fines, Coal/ Coke fines, Bentonite, Lime.

8.0 The targeted production capacity of Sponge iron is 54,000 TPA. The raw material will be sourced from local market.

9.0 The water requirement of the project is estimated as 4.5 m^3/day. 2.5 KLD will be used for Domestic purposes, 2.0 KLD will be used in cooling process.

10.0 The existing power requirement of the unit is 2500 KW. After expansion, the power requirement will be 3000 KW. This demand will be met by sourcing the power from Punjab State Power Corporation Limited from nearby station.

11.0 Baseline Environmental Studies were conducted during post monsoon season i.e. from November 2016 to January 2017. Ambient air quality monitoring has been carried out at 8 locations during November 2016 to January 2017. and the data submitted indicated: PM_{10} (77.6µg/m^3 to 102.1µg/m^3), PM2.5 (24.7 to 40.7 µg/m^3), SO2 (4.8 to 8.9 µg/m^3) and NOx (20.4. to 31.74µg/m^3).The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 1.20, 0.10, 0.10 µg/m^3 for PM_{10}, NOx, SO_2 respectively.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.19.to 7.29., Total Hardness: 198 to 298 mg/l, Chlorides: 17 to 35. mg/l, Fluoride: ND. Heavy metals are within the limits. Surface water sample was analysed from 1 locations. pH: 7.23 DO: 6.2 mg/l and BOD: 3.8 mg/l. COD : 19.6.mg/l.

13.0 Noise levels are in the range of 50.2 to dB(A) for daytime and 37.2 to 56.8 dB(A) for night-time.

14.0 No R&R is involved.

15.0 The Municipal solid wastes are collected by municipal solid waste collection facility. Industrial wastes are segregated and managed properly. The hazardous wastes generated from the plant will be provided to Treatment Storage and Disposal Facility (TSDF) Dera Bassi Punjab.

16.0 It has been reported that the Consent to Operate from the Punjab Pollution Control Board obtained vide Lr. No. 733 dated 8/2/2013 and is valid up to 30/06/2018.

17.0 The Public hearing of the project was held on 28th March 2017 under the chairmanship of ADC, Development for production of Sponge Iron of capacity 54,000TPA. The issues raised during public hearing *inter alia* include impact of the project on environment; repair of road; and damaging of crops. An amount of 9 Lakhs for five years (3% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

18.0 The capital cost of the project is Rs 3 Crores and the capital cost for environmental protection measures is proposed as Rs. 30 Lakhs. The manpower requirement after expansion will be 40. The detailed CSR plan has been provided in the EMP in its page No. 154.

19.0 Greenbelt will be developed in 0.29 Ha which is about 33% of the total acquired area with 550 plants. Presently 200 plants already planted and another 350 saplings will be planted.

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

21.0 The project proponent has given detailed presentation along with EIA Consultant M/s Chandigarh Pollution Testing Laboratory, Mohali, Punjab.

22.0 After detailed deliberations, the committee observed that signed copy of the proceedings of public hearing is not available either in the EIA/EMP and also not available with the Project Proponent; EIA Coordinator was not present before the committee during the presentation; Slag disposal system was not envisaged; plant lay out not presented properly; etc. Therefore, the committee desired following information for further consideration of the proposal:

i. Signed copy of Public Hearing proceedings shall be submitted

ii. Revised plant lay out clearly demarcating the green belt, plant facilities, internal roads, evacuation route in case of the emergency, etc. The plan shall also have indicated with reference to the geographical features such as road, water body etc.

iii. Action plan for slag and other solid waste disposal shall be submitted.

iv. The schematic diagram and process description of proposed tunnel kiln technology shall be submitted.

v. Ground water permission for the additional water requirement shall be obtained.

vi. Material balance shall be submitted

23.0 Therefore, the proposal is deferred for submission of above information.

24.0 The proposal was considered in the 24th EAC and 28th EAC. But PP did not attend the meeting

Recommendation of the committee:

25.0 The project proponent did not attend this time also. Therefore, the committee

recommended to delist the proposal as PP did not attend to the earlier meetings as per the agenda and no communication was made.

32.22. Proposed Steel Plant [800 TPD Pellet Plant; 600 TPD DRI; 1000 TPD Induction Furnace; 17 MW Power Plant (12 MW WHRB and 5 MW FBC)] by **M/s Genext Steels Private Limited** at Village Bagodara Tehsil Baula District Ahmedabad State Gujarat [Online Proposal No. **IA/GJ/IND/70023/2017;** MoEFCC File No. J-11011/501/2017-IA.II(I)] – **Further consideration based on reply to ADS for Terms of Reference**.

1.0 **M/s Genext Steels Private Limited** has made online application vide proposal no. **IA/GJ/IND/70023/2017** dated **30th September 2017** 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.

2.0 M/s Genext Steels Private Limited has proposed to establish a Greenfield mini integrated steel project comprising of Pellet plant (800 TPD), DRI (600 TPD), Induction Furnace (1000 TPD), Rolling Mill (1000 TPD), Power Generation – 17 MW (12 MW through Waste Heat Recovery Boiler (WHRB) and 5 MW through Fluidized bed combustion (FBC) Boiler) in Village: Bagodara, Tehsil: Baula, District: Ahmedabad, State: Gujarat.

3.0 The manufacturing technology *inter alia* include manufacturing of pellets through rotary grate kilns; manufacturing of Sponge Iron through Rotary kilns; manufacturing of MS Billets through IF along with concast; manufacturing of Structural Steel TMT bars & Rolled products through Rolling Mill; power generation through WHRB & FBC Boiler.

4.0 The proposed unit will be located in Survey Nos. 661,662,664,665,1822 & 1823, Village: Bagodara, Tehsil: Baula, District: Ahmedabad, State: Gujarat.

5.0 Total land envisaged for the proposed project is 37.5 acres. Of the total area, 12.0 acre (33%) of land will be used for greenbelt development. No Forest land is involved.Agreements have been entered for total 37.5 acres of land.

6.0 There are no Reserve Forests, National Parks, Wild life Sanctuaries within 10 Km. radius of the project site. Nalsarovar Bird Sanctuary is at a distance of 12 Kms. from the proposed project site. However, ESZ of Nalsarovar Bird Sanctuary is at a distance of 1.9 Km from the proposed project site. The proposed project site does not fall in the ESZ of Nalsarovar Bird Sanctuary.

7.0 Total project cost for proposed project is approx. **Rs. 261 Crores**. Proposed employment generation from the proposed project will be **500 nos.** direct employment and **1000 nos.** indirect employment.

8.0 The targeted production capacity of the total plant is 0.33 million TPA. The ore for the plant would be procured from Rajasthan, Orissa, Chhattisgarh and Karnataka. The ore transportation will be done through by road (through covered trucks). The proposed capacity for different products for new site area as below:

S.No.	Unit		Plant configuration	Production capacity
1.	Pellet(I/o Pellets)		4 X 200 TPD	800 TPD
2.	DRI Kilns(Sponge Iron)		4 X150 TPD	600 TPD
3.	Induction Furnace with Concast (MS Billets)		4 X 25 MT	1000 TPD
4.	Rolling Mill(Structural Steel TMT bars & Rolled products)		2 X 500 TPD	1000 TPD
5.	Power Plant (Electricity)	WHRB	4 x3 MW	12 MW
		FBC	1 X 5MW	9 MW

9.0 The total power requirement for the proposed project will be 57 MW, this will be met partly from the captive power plant of 17 MW (i.e. 12 MW WHRB and 5 MW FBC based power plant), and the remaining 40 MW will be procured from the state grid i.e. Gujarat State Electricity Corporation Limited (GSECL).

10.0 Proposed raw materials and fuel requirement for project are Iron Ore, Dolomite, Scrap, Ferro Alloys, Bentonite, etc. Fuel Consumption will be mainly Coal & Furnace Oil. The details of raw material requirement and mode of transport is given below:

Raw Material	Quantity (TPD)	Source	Mode of Transport
For pellet plant			
Iron ore fines/Iron Oxide (Mill Scale)	832	Rajasthan Chattisgarh, Karnataka,Odissa	By road (through covered trucks)
Bentonite	48	Kutch (Gujarat)	By road (through covered trucks)
Imported Coal	128	South African from Kandla port (Gujarat)	By road (through covered trucks)
For DRI (Sponge Iron)			
Pellets	800	Internal	Through covered conveyors
Imported Coal	570	South African from Kandla port (Gujarat)	By road (through covered trucks)
Dolomite	48	Local/Gujarat	By road (through covered trucks)
For Steel Melting Shop (MS Billets)			
Sponge Iron	600	Internal	Through covered conveyors
M.S.Scrap	562	Bhavnagar/ Alang Imported	By road (through covered trucks)

Raw Material	Quantity (TPD)	Source	Mode of Transport
Ferro alloys	12.5	Local /Gujarat	By road (through covered trucks)
For Rolling Mill (Structural Steel, TMT Bars & Rolled products)			
Billets	1000	Internal	Through Conveyors
Imported Coal	155	South African from Kandla port (Gujarat)	By road (through covered trucks)
For FBC Boiler [Power Generation 5 MW]			
Char/Dolochar	100	Internal/local	through covered conveyors
Imported Coal	30	South African from Kandla port (Gujarat)	By road (through covered trucks)

11.0 Water consumption for the proposed project will be 1680 KLD and will be sourced from Ground Water. Water drawl permission will be obtained from the concerned Authority.

12.0 Domestic waste water will be treated Septic tank followed by sub-surface dispersion trench and there will be no wastewater generation from the pellet, DRI, SMS & Rolling Mill processes, as closed-circuit cooling system will be provided. Boiler blowdown & DM plant regeneration wastewater will be treated in Neutralization tanks and will be mixed with CT Blowdown in a Central Monitoring Basin (CMB). The treated effluent from CMB will be reused for dust suppression, ash conditioning and for greenbelt development.

13.0 The proponent has mentioned that there is no court case against the proposed site and project.

14.0 The proposal was considered in the 24th meeting of Expert Appraisal Committee (Industry-I) held during 13th – 15th November 2017. During the deliberations, the committee observed following:

i. The proposed project site is land locked, surrounded on three sides by agricultural lands as seen by the google maps presented by PP

ii. On the fourth side, the plant is bounded by a seasonal river

iii. Plant site is almost touching (140 m distance) from the main national highway connecting Ahmedabad to Rajkot and being only about 20 to 30 Km from the busy Taluka headquarters of Bawla. This is already very busy and vital highway as it connects mainland Gujrat to Saurashtra.

iv. The raw material required for the plant is planned from the Rajasthan about 500 Km from the plant and coal is planned from Kandla Port which is at 400 Km from the plant.

v. The proposed project would likely to further increase the traffic load by about 500 trucks per day. Considering 12 hours of permitted truck transportation on this road, it would mean an additional truck plying on the road in every 1.5 minutes.

vi. The proposed project demands drawl of ground water @ 1700 KLD.

15.0 The proposal was considered by the Expert Appraisal Committee (Industry-I) during its 24th meeting held on 13th to 15th November, 2017. The committee was of the opinion that the suitability of the proposed site from the environmental perspective needs to be intensively examined before taking the decision on ToR proposal. Therefore, the committee asked the project proponent the following;

i. Explore alternative sites with environmental strengths and weaknesses;

ii. Detailed traffic analysis based on the data collected on different time periods of the day;

iii. Details of competitive users for withdrawal of ground water within 5 Km;

iv. Analysis of the ground water quality and proposal for achieving ZLD; and

v. Likely impact on the surrounding agricultural land.

16.0 During the deliberations, likely inconveniences to the local people was discussed. The project proponent proposed that they will conduct the pre-ToR public hearing through the SPCB to ascertain site suitability and opinion of people likely to be affected by the proposed project site.

17.0 The committee agreed to this proposal of the PP and decided that the suggested pre-ToR public hearing to be carried out through SPCB under the chairmanship of local revenue authority.

18.0 The Committee observed that the PP could not conduct the pre-ToR Public hearing /consultation as agreed by the PP in the earlier meeting.

19.0 The proposal was further considered in the EAC meeting held on 13th March 2018. After detailed deliberations, the Committee advised to get the public consultation with concerned stakeholders conducted through State Pollution Control Board and submit the report to the Ministry for further consideration on suitability of the site.

20.0 Accordingly, PP requested State Pollution Control Board to conduct the public consultation with concerned stakeholders. State Pollution Control Board scheduled it on 07/04/2018 at 7.00 pm. For wide publicity purpose, PP advertised the schedule of public consultation in local daily newspaper “Divya Bhaskar” in Gujarati Language. Even after advertisement and personal advertising by team of PP, desired strength was not present and Sarpanch of Village Panchayat requested GPCB officer to postpone the same meeting on 20.04.2018 with at an earlier time i.e. 4.00 pm. GPCB agreed to reschedule the meeting on 20.04.2018 at 4.00 pm.

21.0 It was informed that during the consultation mostly the employment issues were raised in the meeting.

Recommendations of the committee:

22.0 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 <u>Annexure I read with additional ToRs at Annexure-2:</u>**

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

2. 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.

3. 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 1st May 2018.

4. The project proponent shall carry out detailed traffic study of the existing network and impact of the proposed project on the road network. The report shall be placed before the public during the public hearing.

32.23. Greenfield Integrated Cement Project Consisting of Clinker (2.4 MTPA), Cement (4 MTPA), Captive Power Plant (25MW) and Waste Heat Recovery Power Generation (15 MW) of **M/s Shree Cement Limited**, located near village Pedagarlapedu, Mandal Dachepalli, District Guntur, Andhra Pradesh (EC) - [F. No. J-11011/165/2014-IA-II (I)] - **Further Consideration.**

1.0 The Proposed Greenfield Integrated Cement Plant Project of M/s Shree Cement Limited located in Village Pedagarlapedu Tehsil Dachepalli District Guntur State Andhra Pradesh was initially received in the Ministry on 15-4-2014 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 meeting held on 23rd June 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 11thAugust 2014 vide Lr. No. J.11011/165/2014-IA.II (I).

2.0 Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 23rd February 2016 vide Online Application No. IA/AP/IND/26358/2014.

3.0 The project of M/s Shree Cement Ltd. located in Village Pedagarlapedu, Tehsil Dachepalli, District Guntur, AP is for setting up of a new Greenfield integrated Cement Plant for production of 2.4 Million Tons Per Annum Clinker, 4.0 Million Tons Per Annum Cement, 25 MW Captive Power Plant (CPP), 15 MW Waste Heat Recovery Power Generation (WHRS) and Residential Colony.

4.0 The total land required for the project is 142.79 ha (Plant: 100.49 ha and Residential colony: 42.30 ha), out of which 102.92 ha (72.09%) is agricultural land, grazing land is nil and 39.87 ha (27.92%) is fallow land (100% private Land)). No forestland is involved. Out of total required 142.79 ha land, 95 ha (66.53 %) has been purchased on mutual basis. Land purchase documents were submitted to MoEF&CC vide letter SCL/EC/AP/2017-18 dated 18th January 2018.No river passes through the project area. It has been reported that a village pond is exist near

the project area and modification / diversion in the existing drainage pattern at any stage has not been proposed.

5.0 The topography of the area is flat. The latitude and longitude of the site Plant Site: 16° 30' 51" N to 16 31' 25" N and 79° 43' 48" E to 79 44' 40" E; Staff colony: 16°30'46" to 16°31' 13" N and 79°44'25" to 79°44'56" E. The Survey of India Topo Sheet No. is 56P/10. The site elevation is 120 m AMSL. The ground water table reported to ranges between 10-14 m below the land surface during the post-monsoon season and 12-18 m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 364 m. Further, the stage of groundwater development is reported to be 80% and 34% in core and buffer zone respectively and thereby these are designated as safe areas.

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 Ecology Expert reporting presence of no schedule-I fauna in the study area.

7.0 The process of project: Limestone, gypsum (chemical gypsum, synthetic gypsum and Indian & imported mineral gypsum), bauxite, iron ore and fly ash and pond ash are the raw materials required for the cement plant. coal (Indian and imported) & pet coke (Indian and imported) will be used as fuel for cement plant and power generation. Pre-calciner dry process technology will be used for Clinkerization. VRM and Ball mill will be used for cement grinding. Air cooled condenser technology will be used for power generation and waste heat recovery unit will be installed with clinker unit.

8.0 The targeted production capacity of the Clinker is 2.4 Million Tons Per Annum, Cement 4.0 Million Tons Per Annum, 25 MW Captive Power Plant (CPP), 15 MW Waste Heat Recovery Power Generation (WHRS) and Residential Colony. The limestone for the plantwould be sourced from adjacent Captive Limestone Mines. The ore (bauxite, iron) transportation will be done through road and rail.

9.0 The water requirement of the project is estimated as 1350 m3/day, which will be obtained from the groundwater. The permission for drawl of groundwater is obtained from CGWA vide Letter No. 21-4 (283)/SR/CGWA/2012-1687 dated 20th September 2013.

10.0 The power requirement of the project is estimated as 35 MW, which will be obtained from the proposed CPP, WHRS and Power Grid.

11.0 Baseline Environmental Studies were conducted during winter season i.e from December 2014 to February 2015.Ambient air quality monitoring has been carried out at 8 locations during December 2014 to February 2015 and the data submitted indicated: PM10 (38 µg/m3 to 73 µg/m3), PM2.5 (18 to 41 µg/m3), SO2 (4 to 8.6 µg/m3) and NOx (9 to 13.8 µg/m3. The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 1.1 µg/m3 with respect to the PM10, 0.4 µg/m3 with respect to the SO21.4 µg/m3 with respect to the NOx.

12.0 Ground water quality has been monitored in 8 locations in the study area andanalysed. pH: 7.23 to 7.59, Total Hardness: 350 to 590 mg/l, Chlorides: 84 to 476 mg/l,Fluoride: 0.68 to

0.96 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 6 locations. pH: 7.16 to 7.51; DO: 3.9 to 4.8 mg/l and BOD: from 3.1 to 4.1 mg/l. COD from 8.4 to 9.8 mg/l.

13.0 Noise levels are in the range of 51.2 to 62.7dB(A) for daytime and 40.8 to 53.3 dB(A) for nighttime.

14.0 It has been reported that people in the core zone of the project is nil. Hence, no R&R is involved. It has been envisaged that families to be rehabilitated is nil.

15.0 It has been reported that a total of 30,000 tons/year ash will be generated from CPP, out of which 100% will be used in cement making. No solid wastes will be dumped in the earmarked dump yard. It has been envisaged that an area of 47 ha will be developed as greenbelt 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 Establish from the State Pollution Control Board will be obtained after getting EC.

17.0 The Public hearing of the project was held on 30-10-2015 for setting up of Integrated Cement Plant, Captive Power Plant and Residential Colony. Issues raised during public hearing were;land owners may cultivate the land till start of construction activity, employment and doing CSR activities. An amount of Rs.62 Crores (5% of total projectcost of plant (Rs.1234 Crores) has been earmarked for Enterprise Social Commitment based on public hearing issues.

18.0 The capital cost of the project is Rs.1234 Crores and the capital cost for environmental protection measures is proposed as Rs. 50Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. One Crore. The detailed CSR plan has been provided in the EMP in its page No. 131 to 135 of EIA report.The employment generation from the proposed project is about 500 persons during construction phase and 413persons during the operational phase.

19.0 Greenbelt will be developed in 57ha which is about 33 % of the total acquired area. A100 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 1500 to 2500 trees per hectare. Total no. of 89,000 saplings will be planted and nurtured in 57 hectares in 5 years.

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

21.0 Proposal was considered by the EAC on dt 30/3/2016 vide agenda item no. 5.3.2. and based on the presentation made and detailed deliberations, the Committee desired that the project proponent should provide the documents relating to acquisition of the land for further consideration of the project. Accordingly, documents were submitted to MoEF&CC vide letter SCL/EC/AP/2017-18 dated 18th January 2018.

Observations of the committee:

22.0 The committee observed that the land requirement for the project was 100.49 Ha and colony was 42.30 i.e. total requirement was 142.79 Ha. Out of which, the project proponent able to produce the land documents for 114.48 Ha. As per the office memorandum of ministry dated 7th October, 2014, in case of the land w.r.t. the project site is proposed to be acquired through the government intervention, a copy of the preliminary notification issued by the concerned government regarding acquisition of land or in case of the land being acquired through private negotiations with the land owners, credible document showing the intent of the land owners to sell the land for the proposed project shall be available for considering the environmental clearance.

23.0 Since, the PP could not produce the credible document showing the intent of the land owners to sell the land for the proposed project for another 28.31 Ha which are pertaining to the parts of the middle of the plant, the committee advised to submit the requisite documents for further consideration of the proposal.

32.24. Expansion of Ferro Alloys plant at Manesamudram & Malguru Villages, Hindupur Mandal, Ananthpur District, Andhra Pradesh by **M/s M.B. Smelters Private Limited** [Online proposal No. IA/AP/IND/6013/2011; MoEFCC File No. J-11011/647/2009-IA.II(I)] - **Validity of extension & amendment to EC**

1.0 **M/s M.B. Smelters Private Limited** made application vide online proposal no. IA/AP/IND/6013/2011 dated 20th April, 2018 seeking extension of validity of environmental clearance granted for the proposed expansion of Ferro Alloys plant at Manesamudram & Malguru Villages, Hindupur Mandal, Ananthpur District, Andhra Pradesh grated vide F.No.J-11011 / 647 / 2009 – IA II (I) dated 25th April 201.

The details submitted by project proponent:

2.0 Following is the plant configuration for which Environmental Clearance was obtained:

	Units	Products	Quantity (TPA)
Existing (2.5 MVA)			
	1 x 1.5 MVA 1 x 1.0 MVA	FeMn Low Carbon Ferro Alloys (SiMn or FeMn)	4270 2445
Expansion (47.5 MVA)			
Phase 1	2 x 9 MVA 2 x 2 MVA	FeMn OR SiMn Low Carbon Ferro Alloys (FeMn)	59730 2055
Phase 2	1 x 9 MVA 1 x 16.5 MVA	FeMn OR SiMn OR Si Alloys FeSi OR Si metal Slag wool from waste slag	25200 14200 20000
Total after expansion	50 MVA		

3.0 150.68 acres of land was proposed for the project for which Environment Clearance has been granted on 25th April 2011. Out of which 32.36 acre land is in possession of management and remaining 118.32 acres of land (falling in Malgur & Manesamudram Villages) was under acquisition from Andhra Pradesh Industrial Infrastructure Corporation (APIIC). APIIC could not allocate the remaining 118.32 acres of land (falling in Malgur & Manesamudram Villages). APIIC,

Anantapur vide their letter No.20/APIIC/LA/Manesamudram/2012 dated 01.11.2016 informed that the Govt. of AP has sanctioned 68.10 Acres land in Manesamudram village. This was followed by APIIC letter dated 25.01.2018. The balance payment as per APIIC demand letter has been paid on 02.02.2018 by RTGS, confirmed by Syndicate Bank and APIIC as per receipt No.8163 dated 02.02.2018. Now total land will be 100.46 acre (falling in Manesamudram village) against 150.68 acres for which EC has been accorded.

4.0 Following is implementation status of the Expansion project:

Phase	Units	Products	Quantity (TPA)	Status of Implementation
Expansion (47.5 MVA)				
Phase 1	2 x 9 MVA 2 x 2 MVA	FeMn OR SiMn Low Carbon Ferro Alloys (FeMn)	59730 2055	• 2 x 9 MVA SEAF - 60 % work has been completed and plant will come in operation by February 2019. • 2 x 2 MVA SEAF will be implemented by July 2019
Phase 2	1 x 9 MVA 1 x 16.5 MVA	FeMn OR SiMn OR Si Alloys FeSi OR Si metal Slag wool from waste slag	25200 14200 20000	• 1 x 9 MVA SEAF will be implemented by February 2020 • 1 x 16.5 MVA SEAF will be implemented by November 2020.

5.0 It was informed that due to delay in allocation of requisite land from APIIC; severe recession in the market; and sluggish market condition, the PP could not implement the expansion facilities.

6.0 Now with the allocation of land by APIIC and improvement in market condition, the company has initiated the process of implementing the units for which EC has been accorded as mentioned above by 24th April 2021.

7.0 In view of the above, it was request the following:

- Change the total extent of land from 150.68 acres to 100.46 acres comprising of Manesamudram village only.

- Extend the validity of Environment Clearance order issued earlier, to implement the remaining unimplemented units for which Environmental Clearance has been accorded.

32.25. Expansion of Steel Plant – DRI Kilns (Sponge Iron from 1,80,000 TPA to 7,57,500 TPA), Induction Furnace (MS Ingots / Billets/ Hot Charging from 2,17,800 TPA to 6,13,800 TPA), New Electric Arc Furnace (1,98,000 TPA), Rolling Mill (Hot Rolled TMT / Structural / Cold Rolled Bars/Wire Rod - 2,00,000 TPA to 6,29,000 TPA), Ferro Alloys (32,400 TPA to 81,000 TPA), WHRB based Power Plant from 8 MW to 50 MW, AFBC based Power Plant from 7 MW to 57 MW, New Galvanization Plant (1,00,000 TPA), New Oxygen Plant (4000 TPA), New I/O Beneficiation Plant (8,00,000 TPA – throughput),

New Pellet Plant (6,00,000 TPA) and Dropping Sponge Iron briquette, Coal / Coke / Chrome fines briquette, Mini Blast Furnace, Sinter Plant J.L.No. 11, Jemua Mouza, Mejia Block, Bankura District, West Bengal-722143 by **M/s Shyam Steel Manufacturing Limited** [Online proposal No. **IA/WB/IND/73003/2018**; MoEFCC File No. **J-11011/724/2007-IA-II(I)**] – **Further consideration based on reply to ADS for Terms of Reference**

1.0 The proponent has made online application vide proposal no. **IA/WB/IND/73003/2018** dated 27th Feburary **2018** along with the 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 3(a) Metallurgical industries (ferrous &non-ferrous) under category A and the proposal is appraised at Central level

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

2.0 M/s. **Shyam Steel Manufacturing Ltd.** proposed to expand the capacities of existing Steel plant by increasing the capacity of DRI Kilns (Sponge Iron from 1,80,000 TPA to 7,57,500 TPA),Induction Furnace (MS Ingots / Billets/ Hot Charging from 2,17,800 TPA to 6,13,800 TPA),New Electric Arc Furnace (1,98,000 TPA), Rolling Mill (Hot Rolled TMT / Structural / ColdRolled Bars/Wire Rod - 2,00,000 TPA to 6,29,000 TPA), Ferro Alloys (32,400 TPA to 81,000TPA), WHRB based Power Plant from 8 MW to 50 MW, AFBC based Power Plant from 7MW to 57 MW, New Galvanization Plant (1,00,000 TPA), New Oxygen Plant (4000 TPA),New I/O Beneficiation Plant (8,00,000 TPA – throughput), New Pellet Plant (6,00,000 TPA)and Dropping Sponge Iron briquette, Coal / Coke / Chrome fines briquette, Mini Blast Furnace, Sinter Plant. It is proposed to manufacture the above products based on the following technology:

- Producing Beneficiated Iron ore through Iron ore beneficiation plant
- Producing Pellet plant throught Pellet plant
- Producing Sponge Iron through DRI route.
- Producing MS Ingots / Billets through IF route
- Producting Blooms through Electric Arc Furnace route (Laddle Refining Furnace &AOD Converter)
- Producing Hot rolled TMT / Structural / Cold Rolled bars / Wire rod through Rolling mill and Hot charging route.
- Power generation through Waste Heat Recovery & FBC Boilers.

3.0 The existing plant was accorded Environment Clearance vide F.No. J-11011/724/2007 – IA II (I) dated 4th August 2008 (in name of Sova Ispat Ltd.) & 27th February 2017 (EC transferred in Name of Shyam Steel Manufacturing Ltd.). Consent to Operate was accorded by West Bengal Pollution Contol Board vide CTO No CO092326 dt 28.09.15(Sponge Iron – 1 x 100 TPD) valid upto 30th Sept. 2018, CTO No CO090298 dt 03.03.16 (Sponge Iron 1X300 TPD + 2 X100 TPD, Cement 75000 TPA, CPP WHRB + FBC 15 MW, Ferro Alloys 2 x 9 MVA) valid upto 31st March 2019, CTO No CO74292 dt 18.03.16 (Billet/Ingot - 6608 TPM 79300 TPA) valid upto 31st December 2018, CTO No CO107508 dt 09.12.16 (Billet/Ingot - 6600 TPM 79200 TPA -2nd Phase) valid upto 30th June 2021, CTO No CO090298 dt 03.03.16 (change in product mix) dated 31st March 2019.

4.0 The proposed unit is located at J.L.No. 11, Jemua Mouza, Mejia Block,Bankura District,

West Bengal.

5.0 Existing plant is located in 150 acres / 60.7 Ha. of land. Proposed expansion will be taken up partially in the Existing plant (i.e. 150 acres / 60.7 Ha) and partially in the land adjacent to the existing plant (i.e. 13.3 acres / 5.4 Ha.) which will be taken on lease from the sistern concern unit. Total land after proposed expansion will be 163.3 acres / 66.1 Ha..of the total area,54.4 Ac. / 22.0 Ha. (33%) land is allocated for greenbelt developed. No Forest land involved.

6.0 No Reserve Forest exists within the 10 Kms. Radius of the plant site. Only Gangajalghati Protected Forest (3.0 Kms.) exist within 10 Km. radius of the plant site. No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserves 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 for proposed expansion is approx. Rs. 1560 Crores. Proposed employment generation from proposed project will be 500 nos. direct employment and 1000 nos. indirect employment.

8.0 The targeted production capacity of the total plant is 0.629 million TPA. The ore for the plant would be procured from Rungta Mines, Essel Mines & other mines in Barbil & Jharkhand. The ore transportation will be done through by Rail (proposed railway siding upto site) & Road (through covered trucks). The proposed capacity for different products for new site area as below:

S. No.	Unit (Product)	Configuration for which CTE / EC Granted (J-11011/ 724/ 2007- IA II (I) dated 04.08.08, 18.04.12, 06.02.15 & 27.02.17)	Existing units commissioned / Under Implementation as per EC	Proposed Expansion	Final Configuration after Proposed Expansion
		[1]	[2]	[3]	[4] = [2] + [3]
1	Iron Ore Beneficiation Plant (Beneficiated Iron Ore)	Nil	Nil	8,00,000 TPA throughput (6,80,000 TPA – Beneficiated Iron ore)	8,00,000 TPA throughput (6,80,000 TPA – Beneficiated Iron ore)
2	Pellet Plant (Pellet)	Nil	Nil	6,00,000 TPA	6,00,000 TPA
3	DRI Kilns (Sponge Iron)	3,60,000 TPA (3X300 TPD + 3X100 TPD)	1,80,000 TPA (1X300 TPD + 3X100 TPD)	Instead of remaining 1,80,000 TPA (2 x 300 TPD), now proposed to install	7,57,500 TPA (1X300 TPD + 3X100 TPD + 5X350 TPD)

S. No.	Unit (Product)	Configuration for which CTE / EC Granted (J-11011/ 724/ 2007- IA II (I) dated 04.08.08, 18.04.12, 06.02.15 & 27.02.17)	Existing units commissioned / Under Implementation as per EC	Proposed Expansion	Final Configuration after Proposed Expansion
		[1]	[2]	[3]	[4] = [2] + [3]
				5,77,500 TPA (5 X 350 TPD)	
4	Induction Furnace (MS Ingot/Billet/ Hot Charging)	3,56,000 TPA	2,17,800 TPA (6 X 11 T)	Instead of remaining 138200 TPA, now proposed to install 3,96,000 TPA (8 X 15T)	6,13,800 TPA (6 X 11 T + 8 X 15 T)
5	Electric Arc Furnace with 30 T Laddle Refining Furnace and AOD Converter (Bloom)	Nil	Nil	1,98,000 TPA (1 x 30 T)	1,98,000 TPA
6	Rolling Mill (Hot Rolled TMT / Structural / Cold Rolled Bars/Wire Rod)	3,15,000 TPA	2,00,000 TPA (Under Implementation and will be comiissioned before 03-08-2018)	Instead of remaining 1,15,000 TPA, now proopsed to install 4,29,000 TPA (2 x 650 TPD)	6,29,000 TPA
7	Ferro Alloy Plant (FeSi/FeMn/SiMn/FeCr)	55,000 TPA	2 x 9 MVA (FeMn 32,400 TPA / SiMn 32,400 TPA / FeCr – 27,000 TPA / FeSi – 15,600 TPA)	Instead of remaining 1 x 9 MVA, now proposed to install 3 x 9 MVA (FeMn 48,600	5 x 9 MVA (FeMn 81,000 TPA / SiMn 81,000 TPA / FeCr – 67,500 TPA / FeSi – 39,000 TPA)

S. No.	Unit (Product)	Configuration for which CTE / EC Granted (J-11011/ 724/ 2007- IA II (I) dated 04.08.08, 18.04.12, 06.02.15 & 27.02.17)	Existing units commissioned / Under Implementation as per EC	Proposed Expansion	Final Configuration after Proposed Expansion
		[1]	[2]	[3]	[4] = [2] + [3]
				TPA / SiMn 48,600 TPA / FeCr – 40,500 TPA / FeSi – 23,400 TPA)	
8	Power Plant (WHRB)	32 MW	8 MW	Instead of remaining 24 MW, now proposed to install 42 MW (40 MW + 2 WM)	50 MW
9	Power Plant (AFBC)	20 MW	7 MW	Instead of remaining 13 MW, now proposed to install 50 MW (2 x 25 MW)	57 MW
10	Galvanization Plant	Nil	Nil	1,00,000 TPA	1,00,000 TPA
11	Oxygen Plant	4,000 TPA	Nil	Instead of 4,000 TPA of Earlier EC, now proposed to install 4,000 TPA	4,000 TPA
12	Cement Plant	75,000 TPA	75,000 TPA	Nil	75,000 TPA
13	Sponge Iron Briquette	60,000 TPA	Nil	Nil	Dropping Now
14	Coal / Coke / Chrome fines Briquette	90,000 TPA	Nil	Nil	Dropping Now
15	Mini Blast Furnace-165 M^3 (Pig iron)	1,20,000 TPA	Nil	Nil	Dropping Now

S. No.	Unit (Product)	Configuration for which CTE / EC Granted (J-11011/ 724/ 2007- IA II (I) dated 04.08.08, 18.04.12, 06.02.15 & 27.02.17)	Existing units commissioned / Under Implementation as per EC	Proposed Expansion	Final Configuration after Proposed Expansion
		[1]	[2]	[3]	[4] = [2] + [3]
16	Sinter Plant - 15M^2 (Sinter)	80,000 TPA	Nil	Nil	Dropping Now

9.0 The electricity load of **156.7 MW** for operating existing & expansion projects will be met from proposed captive WHRB, FBC based power plant & remaining will be supplied from Damodar Valley Corporation (DVC).It is also proposed to install 2 x 500 KVA DG set.

10.0 Proposed raw material and fuel requirement for expansion project are Iron Ore fines, Pellets, Mn ore, Dolomite, Scrap etc., Requirement would be fulfill by external purchase /in house. Fuel Consumption will be mainly Coal & Furnace Oil.

Raw Material	Quantity (TPA)	Sources	Mode of Transport
For Iron ore beneficiation plant (Beneficiated Iron ore – 6,80,000 TPA)			
Iron ore fines	8,00,000	Rungta Mines, Essel Mines & Other mines in Barbil & Jharkand	By Rail (through proposed railway siding upto site)
For Pellet plant - 600000 TPA			
I/O concentrate	6,80,000	Inhouse Generation	---
Coal & Coke fines	18000	Jharkhand	By Road (through covered trucks)
Bentonite	4500	Local market, West Bengal	By Road (through covered trucks)
Furnace Oil	6900	IOCL, West Bengal	By Tankers
Lime Powder	12000	Madhya Pradesh	By Road (through covered trucks)
For DRI Kilns (Sponge Iron) – 577500 TPA			
Pellet	600000	Inhouse Generation	---
Iron ore	324000	Barbil, Orissa, Chhattisgarh	By rail & road (through covered

Raw Material		Quantity (TPA)	Sources	Mode of Transport
				trucks)
Coal	Indian	693000	ECL, West Bengal	By rail & road (through covered trucks)
	Imported	520000	South Africa	Through sea route, rail route & by road
Dolomite		29000	Bhutan, Chhattisgarh	By road (through covered trucks)
For Steel Melting Shop (MS Ingots / Billets/Hot Charging) – 396000 TPA				
Sponge Iron		327100	Own generation	----
Scrap		140000	Local area, West Bengal	By road (through covered trucks)
Ferro alloys		6000	Own generation	By road (through covered trucks)
For Electrict Arc Furnace (Bloom) – 198000 TPA				
Hot metal		107000	Own generation	----
DRI		87000	Own generation & Local Market, West Bengal	----
Scrap		4400	Own generation & Local Market, West Bengal	----
Calcined Lime & Dolomite		24000	Bhutan, Chhattisgarh	By road (through covered trucks)
Ferro Alloys		2000	Own generation	----
Electrode paste		500	Jharkhand	By road (through covered trucks)
For Rolling Mill (Hot Rolled TMT / Structural / Cold Rolled Bars/Wire Rod) – 4,29,000 TPA				
MS Billets / Ingots		459030	Own generation	----
Furnace Oil		17,000 KL	IOCL, West Bengal	By road
For AFBC Boiler [Power Generation 50 MW]				
Dolochar		173250	In plant generation	through covered conveyors

Raw Material		Quantity (TPA)	Sources	Mode of Transport
Coal	Indian	190875	ECL, West Bengal	By rail & road (through covered trucks)
	Imported	113500	South Africa	Through sea route / rail route / by road

For Ferro Silicon unit (For 3 x 9 MVA)				
S.No.	Raw Material	Quantity (TPA)	Source	Mode of Transport
1	Quartz	25350	Chhattisgarh / Andhra Pradesh	By Rail & Road (covered trucks)
2	Pet coke	8400	Vizag	By Rail & Road (covered trucks)
3	MS Scrap	525	Inhouse Generation & Local, West Bengal	By Road (covered trucks)
4	Electrode paste	1260	Jharkhand	By Rail & Road (covered trucks)

For Ferro Manganese unit (For 3 x 9 MVA)				
S.No.	Raw Material	Quantity (TPA)	Source	Mode of Transport
1	Manganese Ore	79950	MOIL / OMC	By Rail & Road (covered trucks)
2	Pet coke	46050	Vizag	By Rail & Road (covered trucks)
3	MS Scrap	3090	Local, West Bengal	By Road (covered trucks)
4	Electrode Paste	18000	Jharkhand	By Road (covered trucks)

For Silico Manganese unit (For 3 x 9 MVA)				
S.No.	Raw Material	Quantity (TPA)	Source	Mode of Transport
1	Manganese Ore	47550	MOIL / OMC	By Rail & Road (covered trucks)
2	Mn. Slag	27000	In house generation	----
3	Quartz	11700	Chhattisgarh / Andhra Pradesh	By Rail & Road (covered trucks)
4	Pet coke	4800	Vizag	By Rail & Road (covered trucks)

For Ferro Chrome unit (For 3 x 9 MVA)				
S.No.	Raw Material	Quantity (TPA)	Source	Mode of Transport
1	Chrome Ore	1,20,000	Sukinda, Odisha Import, South Africa	By Road (Covered Trucks) From Port By Road (Covered Trucks)
2	Pet coke	47250	Chhattisgarh / Bihar	By Road (Covered Trucks)

For For Galvanizing unit (For 100000 TPA)				
S.No.	Raw Material	Quantity	Source	Mode of Transport
1.	Rerolled Steel or MS Pipe	110000	In house generation & Local Market, West Bengal	----
2.	Zinc	6000	Rajasthan	By road
3.	HCl	4320	Local area, West Bengal	By road
4.	Ammonium Zinc Chloride	420	Local area, West Bengal	By road
5.	Sodium di-chromate	2.4	Local area, West Bengal	By road
6.	Furnace oil	6.6 KL/Annum	IOCL, West Bengal	By road

11.0 Water consumption for the **proposed expansion project** will be **3050 KLD** and waste water generation from the proposed expansion project will be **487 KLD** (447 KLD from Process & 40 KLD from Domestic).

12.0 Domestic waste water will be treated Septic tank followed by sub- and there will be no wastewater generation from the I/O Beneficiation, Pellet Plant, DRI, Induction Furnace, EAF, Rolling Mill, Ferro Alloys unit, Oxygen Plant, as closed-circuit cooling system will be provided.

13.0 Boiler blowdown & DM plant regeneration wastewater will be treated in Neutralization tanks and will be mixed in a Central Monitoring Basin (CMB). Effluent from Galvanization plant will be treated in ETP.

14.0 The treated effluent from CMB will be reused for dust suppression, ash conditioning and for greenbelt development.

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

16.0 The proposal was considered in the 29th EAC (Industry-1) held during 12th to 14th March, 2018. The proposal was considered After detailed deliberations, the committee observed that the proposed layout

appears to be highly congested with multiple facilities as proposed by the project proponent.

17.0 Therefore, the Committee advised to revise the proposed layout based on the general arrangement drawings of multiple facilities including utilities, parking place, road, open areas, emergency response provision and green belt.

18.0 As per the advice of the EAC, GA drawings have been prepared for multiple facilities and accordingly we have dropped/reduced facilities as proposed.

1.	Iron ore Beneficiation	Dropped - 0.8 MTPA
2.	Pellet Plant	Dropped - 0.6 MTPA
3.	Sponge iron	Reduced from 5 x 350 TPD kilns to 3 x 350 TPD kilns
4.	WHRB	Reduced from 42 MW to 26 MW
5.	FBC Power plant	Reduced from 2 x 25 MW to 1 x 25 MW
6.	Ferro Alloys	Reduced from 3 x 9 MVA to 2 x 9 MVA
7.	Galvanization plant	Dropped - 1,00,000 TPA
8.	Sponge Iron Briquette	Dropped - 60,000 TPA
9.	Coal / Coke / Chrome fines Briquette	Dropped - 90,000 TPA
10.	Mini Blast Furnace	Dropped - 165 M^3
11.	Sinter Plant	Dropped -15M^2

19.0 The Revised Plant configuration showing dropped units and reduced capacities. The Revised Layout as per the present proposal is shown by Project Proponent.

S.No.	Unit (Product)	Configuration for which CTE / EC Granted (J-11011/ 724/ 2007- IA II (I) dated 04.08.08, 18.04.12, 06.02.15 & 27.02.17)	Existing units commissioned / Under Implementation as per EC	Proposed Expansion	Final Configuration after Proposed Expansion
		[1]	[2]	[3]	[4] = [2] + [3]
1	DRI Kilns (Sponge Iron)	3,60,000 TPA (3X300 TPD + 3X100 TPD)	1,80,000 TPA (1X300 TPD + 3X100 TPD)	3,46,500 TPA (3 X 350 TPD)	5,26,500 TPA (1X300 TPD + 3X100 TPD + 3X350 TPD)
2	Induction Furnace (MS Ingot	3,56,000 TPA	2,17,800 TPA (6 X 11 T)	3,96,000 TPA (8 X 15T)	6,13,800 TPA (6 X 11 T +

S.No.	Unit (Product)	Configuration for which CTE / EC Granted (J-11011/ 724/ 2007- IA II (I) dated 04.08.08, 18.04.12, 06.02.15 & 27.02.17)	Existing units commissioned / Under Implementation as per EC	Proposed Expansion	Final Configuration after Proposed Expansion
		[1]	[2]	[3]	[4] = [2] + [3]
	/Billet/ Hot Charging)				8 X 15 T)
3	Electric Arc Furnace with 30 T Ladle Refining Furnace and AOD Converter (Bloom)	Nil	Nil	1,98,000 TPA (1 x 30 T)	1,98,000 TPA (1 x 30 T)
4	Rolling Mill (Hot Rolled TMT/ Structural/ Cold Rolled Bars/Wire Rod)	3,15,000 TPA	2,00,000 TPA (Under Implementation)	4,29,000 TPA (2 x 650 TPD)	6,29,000 TPA
5	Ferro Alloy Plant (FeSi/FeMn/ SiMn/FeCr)	55,000 TPA	2 x 9 MVA (FeMn 32,400 TPA / SiMn 32,400 TPA / FeCr – 27,000 TPA / FeSi – 15,600 TPA)	2 x 9 MVA (FeMn 32,400 TPA / SiMn 32,400 TPA / FeCr – 27,000 TPA / FeSi – 15,600 TPA)	4 x 9 MVA (FeMn 64,800 TPA / SiMn 64,800 TPA / FeCr – 54,000 TPA / FeSi – 31,200 TPA)
6	Power Plant (WHRB)	32 MW	8 MW	26 MW (24 MW + 2 MW)	34 MW
7	Power Plant (AFBC)	20 MW	7 MW	25 MW (1 x 25 MW)	32 MW
8	Galvanization Plant	Nil	Nil	Nil	Nil
9	Oxygen Plant	4,000 TPA	Nil	4,000 TPA	4,000 TPA
10	Cement Plant	75,000 TPA	75,000 TPA	Nil	75,000 TPA
11	Sponge Iron Briquette	60,000 TPA	Nil	Nil	Dropping Now
12	Coal / Coke / Chrome fines Briquette	90,000 TPA	Nil	Nil	Dropping Now

S.No.	Unit (Product)	Configuration for which CTE / EC Granted (J-11011/ 724/ 2007- IA II (I) dated 04.08.08, 18.04.12, 06.02.15 & 27.02.17)	Existing units commissioned / Under Implementation as per EC	Proposed Expansion	Final Configuration after Proposed Expansion
		[1]	[2]	[3]	[4] = [2] + [3]
13	Mini Blast Furnace-165 M^3 (Pig iron)	1,20,000 TPA	Nil	Nil	Dropping Now
14	Sinter Plant - 15M^2 (Sinter)	80,000 TPA	Nil	Nil	Dropping Now

Comparison of Earlier proposal & Present proposal

Parameter	**As per earlier proposal submitted to MOEF&CC on 27-02-2018**	**As per Revised proposal (after ADS issued by MOEF&CC)**
Land	163.3 acres (66.1 Ha.)	163.3 acres (66.1 Ha.)
Project Cost	Rs.1560 Crores	Rs.990 Crores
Water requirement	3050 KLD	1750 KLD
Wastewater Generation	487 KLD	184 KLD
Power consumption	156.7 MW	86.5 MW
Pollution Loads		
PM	91.79 Kg/hr	59.49 Kg/hr
SO_2	1529.7Kg/hr	945.32 Kg/hr
NO_x	382.8 Kg/hr	216.69 Kg/hr

Observations of the committee:

20.0 The committee observed that the Coal / Coke / Chrome fines Briquette is also dropped, which is essential for recycling of fines, dust collected at air pollution control devices. During the deliberations, the committee agreed to install the Coal / Coke / Chrome fines Briquette for management of dust collected from APCD.

Recommendations of the Committee:

21.0 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 <u>Annexure I read with additional ToRs at Annexure-2:</u>**

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

2. 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.

3. 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 1st May 2018.

4. Certificate compliance of earlier EC conditions from the regional office of MoEFCC shall be submitted along with EIA/EMP.

5. The project proponent shall 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 by installation of briquetting plant

13th June 2018

32.26. Proposed Integrated Steel Plant of 0.7 MTPA capacity at Village- Kanakapur, Taluka & District- Koppal, Karnataka by **M/s. Mukund Ltd**. [Online Proposal No**. IA/KA/IND/51427/2016**; MoEF&CC File No. **J-11011/105/2016-IA-II(I)**] – **Environmental Clearance.**

1.0 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 10th March 2016 vide Online Application No. IA/KA/IND/51427/2016.

2.0 The proposed 700,000 Integrated Steel Plant Project of M/s Mukand Ltd. located in Village Kanakapura, Tehsil & District Koppal, State Karnataka was initially received in the Ministry on 10th March 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 its4th meeting held on 30th -31st March,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 19th May 2016 vide Lr. No. F.No.J-11011/105/2016-IA.II(I). (MUKAND LTD).

3.0 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 10th March 2016 vide Online Application No. IA/KA/IND/51427/2016. M/s Mukand Ltd made an application on 30th Mar 2018 for transfer of name to M/s Mukand Alloy Steels Private Ltd and thereafter MoEFCC Vide its letter dated 24thApril 2018 granted approval for transfer of TORs from M/s Mukand Ltd to M/s Mukand Alloy Steels Private Ltd.

4.0 The project of M/s Mukand Alloy Steels Private Ltd. located in Kanakapura Village,

Koppal Tehsil &District ,Karnataka State is for setting up of a new Integrated Steel Plant Project for production of 0.7 million tones per annum (million TPA) of Specialty Alloy Steels. The proposed capacity for different products for new site area as below:

Name of Unit	No. of Units	Capacity of Each Unit	Production Capacity
Sinter Plant	1	$75M^2$	866,910 TPA
Blast Furnace	1	$750M^3$	790,000 TPA
<u>SMS comprising:</u> Basic Oxygen Furnace Ladle Furnace Vacuum Degasser CCM	 1 2 2 2	 70 Ton 70 Ton 70 Ton Two Casting machines of 3 strands each with Section size 160 to 280 x 320.	<u>SMS Capacity:</u> 736,842 TPA
Rolling Mill	2	Two mills with Bars, Bar in Coil and Wire Rods.	700,000 TPA
Power Plant	2	15 MW	30 MW
Air Separation Plant (Oxygen/Nitrogen/Argon)	1	350 Ton	124,250 TPA
Coke Oven Plant	2	200,000TPA	400,000TPA

PRODUCTS	
Alloy Steel bar, Bar in coil, Wire Road	700,000 TPA
Pig Iron	80,000 TPA

5.0 The total land required for the project is 121.406 ha (300 Acres), out of which 89.53ha (221.22 Acres) is an agricultural land and 33.74 ha (83.375 Acres) is grazing land. The water bodies include Tungabhadra dam is about 5 km in SE away from project site.

6.0 The topography of the area is flat and reported to lies between 15° 20'07.79" to 15°19'24.96" N Latitude and 76°15'22.23" to 76°15'47.86" E Longitude in Survey of India topo sheet No. 57 A/3, at an elevation of 510 m AMSL. The ground water table reported varies between 0.82 m to 13.55 m below the land surface during the post-monsoon season and 1.82 m to 12.26 m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 5,733 ha m. Further, the stage of groundwater development is reported to be 68 % (Koppal taluka).

7.0 The National Park/WL etc are located at a distance of 30.06 KM (Daroji Sloth Bear

Sanctuary) KM. There is no national park wild life sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area does not report any kind of form corridor for Schedule-I fauna. The authenticated list of flora and fauna provided through reporting shows presence of no /schedule-I fauna in the study area.

8.0 The process of project inter alia include usage of basic Raw Materials such as Iron Ore/Sinter (Agglomerated Form of Iron Ore Fines) and Met Coke / Coal as fuel and Limestone /Quartz as Flux, the Hot Iron is produced through reduction Process in Blast Furnace which subsequently converted into Crude Steel in Basic Oxygen Furnace through Oxidation Process. The Liquid Crude Steel is then refined along with addition of various alloy elements to attain the desired properties. This liquid Steel is cast in desired section /shape in Continuous Casting Machine under controlled parameters. These Cast Blooms/Billets are reheated and Rolled in various sizes and length to dispatch to OEM's. During these Processes slag at various stations i.e. Granulated Slag from Blast Furnace, Slag from Basic Oxygen Furnace and LRF is generated. Dust from various Fume Control Systems which is used in Sinter making process. The Waste Gases generated from the Blast Furnace& Waste Heat from the Coke Oven shall be used for Power Generation.

9.0 The targeted production capacity of the Integrated Steel Plant is 0.7 million TPA. The ore for the plant would be procured from E-Auctions. The ore transportation will be done through Rail/Road.

	Raw Material / Fuel	Quantity per Annum	Unit	Source (incase of Import, please specify country and Name of the port from which Raw Material / Fuel is received)	Mode of Transport	Distance of Source from Project Site (in Kilo meters) (In case of import, distance from the Port from which raw material /Fuel is received	Type of Linkage (Linkage / Fuel Supply Agreement /e-auction /MoU / LOA /Captive /Open market/ Others)
1	Hard Coal	3,78,000	TPA	Imported (Mormugao Port)/Indigenious	Road/Rail	350Kms	Open Market
2	Soft Coal	1,62,000	TPA	Imported (Mormugao Port)/Indigenious	Road/Rail	350Kms	Open Market
3	Iron Ore/Pellets	3,70,440	TPA	Imported (Mormugao Port)/Indigenious	Road/Rail	350Kms	Open Market
4	PCI Coal	88,200	TPA	Purchase from Market	Road/Rail	350Kms	Open Market
5	Coke*	3,30,750	TPA	Purchase from Market	Road/Rail	700Kms	Open Market
6	DRI	41,303	TPA	Purchase from Market	Road/Rail	100Kms	Open Market

7	Purchased Scrap	56,413	TPA	Purchase from Market	Road/Rail	350Kms	Open Market
8	Revert Scrap	26,193	TPA	In-House Production	Road/Rail	Transport within the Plant	Others
9	Ore Fine	7,85,784	TPA	Purchase from Market	Road/Rail	100Kms	Local Market
10	Mill Scale	24,556	TPA	In-House Production	Road/Rail	Transport within the Plant	Others
11	Flue Dust	14,733	TPA	In-House Production	Road/Rail	Transport within the Plant	Others
12	Fluxes	1,96,446	TPA	Purchase from Market	Road/Rail	100Kms	Others
13	Burnt Lime	4,911	TPA	Purchase from Market	Road/Rail	100Kms	Local Market
14	LPG Bullets (Capacity: 10 MT x 4 Nos.)	6.5 MT/Day	TPA	Local Market	Road/Rail	300 Kms	Local Market

10.0 The water requirement of the project is estimated as 7,620 m^3/day, out of which 7,620 m^3/day of fresh water requirement will be obtained by drawing water from the downstream of Tungabhadra reservoir within the sanctioned capacity of 18 MLD by the Government of Karnataka's letter no. WRD.15/MTP/2013 dated 22 December 2015. For this Project no ground water shall be used.

11.0 The power requirement of the project is estimated as 69 MW, out of which 30 MW shall be met by captive power generation from waste gases of Blast Furnaces and Coke Ovens and rest of the 39 MW will be sourced from the state utility grid (KTPCL/GESCOM). Three no. of D.G. sets of 1250 KVA each will be used for power back-up.

12.0 Baseline Environmental Studies were conducted during Pre monsoon season i.e. from April 2016 to June 2016. Ambient air quality monitoring has been carried out at 8 locations during April'16 to June'16 and the data submitted indicated: PM10 (71.7 μg/m^3 to 89 μg/m^3), $PM_{2.5}$ (34.41 to 45.48 μg/m^3), SO2 (7.89 to 9.9 μg/m^3) and NOx (24.38 to 32.99 μg/m^3). The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 0.18 μg/m3 with respect to the PM_{10}.

13.0 Ground water quality has been monitored in six (6) locations in the study area and analysed. pH: 6.96 to 7.35, Total Hardness: 212 to 690 mg/l, Chlorides: 32 to 136 mg/l, Fluoride: 0.61 to 0.84 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 3 locations. pH: 7.38 to 8.02 ; /l and BOD: 6 to 8 mg/l. COD from 20 to 32 mg/l.

14.0 Noise levels are in the range of 42 to 61.3 dB(A) for daytime and 41 to 52.64 dB(A) for night-time.

15.0 It has been reported that there are no people in the core zone of the project. No/ R&R is involved. It has been envisaged that no families to be rehabilitated, which will be provided compensation and preference in the employment (only Job for 47 land losers in the upcoming factory).

16.0 It has been envisaged that an area of 47.3 ha (117 acre) 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. Solid wastes generated during the Project will be reused in the process or sold to authorized vendors. Following are the details of the Solid Non-Hazardous Waste Details:

Sr. No	Type of waste	Proposed Quantity	Disposal
1	Granulated Slag	2,45,000 TPA	Sold to Cement plants and reused in Construction of buildings, as a Replacement for sand & Cement.
2	SMS Slag	1,40,000 TPA	Reuse for Brick making/road making/sold to authorized parties.
3	Revert Scrap	26,193 TPA	Will be reused in SMS Plant
4	Mill Scale	24,556 TPA	Will be reused in Sinter Plant
5	STP Sludge	30 TPA	Disposed to Gardening manure.

17.0 The Non-Hazardous waste generated from the plant process will be sold to authorized vendors. The details of the Non-Hazardous Waste is mentioned below:

Sr. No.	Type of waste	Category	Proposed Quantity	Disposal
1	Used Oil	5.1	14 KL/Annum	Sold to HW Authorized parties.
2	Contaminated cotton rags or other cleaning materials	35.1	0.3 MT/Annum	Sold to HW Authorized parties.
3	E-Waste	E- waste Rules,2011	57 kg/Month	Sale to Authorized recyclers
4	Empty Barrels/containers/liners contaminated with hazardous chemicals/wastes.	33.1	6 TPA	Sold to Authorized parties.

18.0 As this is a New Project the Consent for Establish and Consent to Operate for the plant shall be taken from the State Government after grant of Environment Clearance from MoEF&CC.

19.0 The Public hearing of the project was held on 30 January 2018 at M/s Mukand Alloy Steels Pvt Ltd. Project Site in Sy No 67/1, 67/2, Kanakapura-Village, Koppal Taluk & District. under the chairmanship of Deputy Commissioner Koppal for production of 0.7 million TPA of Speciality Alloy Steels by setting up of New Integrated Steel Plant. The Statement of main issues raised by the public and response of the project proponent with action plan is as follows:

S. N.	Issue Raised	Response by PP	Time Bound Action Plan	Budget provision
1.	Job opportunities to the local people.	**Direct Employment** 47 Nos of Land losers are promised for Job on Company Role. **Direct Employment**	Shall be done in phase manner and completed before	-

S. N.	Issue Raised	Response by PP	Time Bound Action Plan	Budget provision
		All young deserving candidates based on qualification and skill level shall be given preference during recruitment and transparency in recruitments shall be assured	commissioning of the plant.	
		Indirect Employment Preference shall be given to local deserving candidates while awarding petty contracts.		
2.	Awareness & Monitoring of Environment	Well Qualified personnel of Company will conduct formal awareness programs across the Gram panchayat periodically	Periodic and Continuous process	10 lakhs /Annum
		Online Monitoring system for Ambient Air will be installed and will be displayed in the Main gate of the premises.	Before hot commissioning Mar-2020	100 Lakhs
		Continuous Tree Plantation		35 Lacks
3	Protection of Environment	Company is determined to install latest and efficient technology in terms of controlling pollution. Planning to install plenty of fog generator and water sprinklers across the company premises. Covering of maximum dumping and loading points of raw Materials Continuous Tree Plantation	Right from Basic Engineering. To Hot Commissioning of the Plant	498.8 Crores (EMP Budget)
4.	Ground water quality &Water availability	Water shall be allowed to guard pond after treatment through latest and efficient water treatment plants.	By Dec'18	100 lakh
		High Focus on Rain Water Harvesting.		
		The Plant will ensure zero water discharge and hence the quality of Ground water shall not be affected.		
		A Pipeline from TB Dam backwater to Village for Drinking Purpose.	By 2023.	325 lacks in 2 Phases
5.	Health of the local people was affected due to pollution from the existing industries located nearby.	Special Health awareness camp and medical camps for primary checkup will be arranged at least once in a year in nearby villages for health check-ups.	Yearly- Mar-2020 onwards	10lakhs/Annum
6	Requirement of CBSE school and facility for Skill development	School shall be considered. Facility for Skill development shall be created.	By 2023.	10 Lacks

20.0 An amount of Rs 2400 Lakhs (0.77% of Project cost) has been earmarked as Corporate Environment Responsibility (CER)based on public hearing issues. The details of Corporate

Environment Responsibility as follows:

Budget for Corporate Environment Responsibility (CER)			
PROJECT PHASE	Budget for Improvements in physical infrastructure (Rs in Lacs)	Budget for Improvements in social infrastructure (Rs in Lacs)	TOTAL (Rs in Lacs)
Phase -1 (2018 -2021)	466	128	594
Phase -2 (2021-2023)	945	861	1806
GRAND TOTAL	1411	989	2400

BREAK- UP PHASE 1 (Improvements in physical infrastructure):

Improvements in physical infrastructure						
Sr. No	PLAN & BUDGET ESTIMATION FOR THE PERIOD2018 to 2021					
	Welfare Activities	HosaKanakapura Village	Kanakapura Tanda	Hale Kanakapura Village	Ginigera Village	TOTAL BUDGET
		Budget (Rs in Lacks)	Budget (Rs in Lacks)	Budget (Rs in Lacks)	Budget (Rs in Lacks)	Budget (Rs in Lacks)
1	Development of connecting road to NH-63	150	connected	50	connected	200
2	R O Plant for drinking water	available	18	18	25	61
3	Water line from T B Dam	120	50	0		170
4	Drains Along Village Street	10	10	10	5	35
5	GRAND TOTAL					466

BREAK- UP PHASE 1 (Improvements in Social infrastructure):

Improvements in social infrastructure						
Sr. No	**PLAN & BUDGET ESTIMATION FOR THE PERIOD 2018 to 2021**					
	Welfare Activities	**Hosa Kanakapura Village**	**Kanakapura Tanda**	**Hale Kanakapura Village**	**Ginigera Village**	**TOTAL BUDGET**
		Budget (Rs in Lacks)	**Budget (Rs in Lacks)**	**Budget (Rs in Lacks)**	**Budget (Rs in Lacks)**	**Budget (Rs in Lacks)**
1	Anganwadi (Pre School)	10	10	0	0	20
2	Infrastructure Facilities for Computer Education	2	2	2	2	8
3	Establishment of Community Centres	15	5	5	15	40
4	Facilities /Infrastructures for skill development of Women	2	1	1	2	6
5	Avenue Plantation all along the Roads, Plantation at Public Places & Barren Lands	3	3	2	4	12
6	Provide 2 Ambulances for Medical EmergencyServices	22				22
7	Soil Conservation measures and	5	5	5	5	20

	Forest Management nearby site in consultation with Forest Department.					
8	**GRAND TOTAL**					**128**

BREAK- UP PHASE 2 (Improvements in physical infrastructure):

Improvements in physical infrastructure						
Sr. No	**PLAN & BUDGET ESTIMATION FOR THE PERIOD 2021 to 2023**					
	Welfare Activities	**Hosa Kanakapura Village**	**Kanakapura Tanda**	**Hale Kanakapura Village**	**Ginigera Village**	**TOTAL BUDGET**
		Budget (Rs in Lacks)	**Budget (Rs in Lacks)**	**Budget (Rs in Lacks)**	**Budget (Rs in Lacks)**	**Budget (Rs in Lacks)**
1	New school building	0	200	0	0	200
2	R O Plant for drinking water	15	0	0	30	45
3	water line from T B Dam	0	0	200		200
4	RCC roads inside villages	100	100	100	200	500
5	**GRAND TOTAL**					**945**

BREAK- UP PHASE 2 (Improvements in Social infrastructure):

Improvements in social infrastructure						
Sr. No	**PLAN & BUDGET ESTIMATION FOR THE PERIOD 2018 to 2023**					
	Welfare Activities	**HosaKanakapura Village**	**KanakapuraTanda**	**Hale Kanakapura Village**	**Ginigera Village**	**TOTAL BUDGET**
		Budget (Rs in Lacks)	**Budget (Rs in Lacks)**	**Budget (Rs in Lacks)**	**Budget (Rs in Lacks)**	**Budget (Rs in Lacks)**
1	Skill Development for the ITI persons in advance technology.	500	0	0	0	500
2	Computer Education Facility	2	2	2	2	8
3	Upgradation of primary health centre with repair works, additional constructions, medical equipment supply	0	0	0	100	100
4	Development of School Grounds and providing Indoors sports facilities	0	0	0	200	200
5	Facilities /Infrastructures for skill development of Women	2	1	1	2	6
6	Avenue Plantation all along the Roads , Plantation at Public Places & Barren Lands	5	4	3	5	17

7	Soil Conservation measures and Forest Management nearby site in consultation with Forest Department. At other part of Hill.	10	5	5	10	30
8	GRAND TOTAL					**861**

21.0 The capital cost of the project is Rs. 3129 Crores and the capital cost for environmental protection measures is proposed as Rs 150 Lakhs in construction Phase and Rs 49880 Lakhs in Operation Phase. The annual recurring cost towards the environmental protection measures is proposed as Rs 2500 Lakhs. The detailed CSR plan has been provided in the EMP in its page No.212 to 215. The Project will create direct & indirect employment opportunities within the surrounding region. Local people will be employed as per their qualification and skills. In operation phase, the proposed project would require significant workforce of non-technical and technical persons. The total manpower required for the proposed project will be around 730 permanent as well 1000 Outsourced staff during operation of the Plant.

22.0 Greenbelt will be developed in 47.35 Ha which is about 39% of the total acquired area. 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 2500 trees per hectare. Total no. of 50,000 saplings will be planted and nurtured in 47.7 hectares in first years.

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

Observations of the committee:

24.0 After detailed deliberations the committee observed that the EIA/EMP is not clear in following:

1. The details about the implementation of the ZLD and specific measures for energy conservation have not been clearly spelled out.
2. Specific water consumption per ton of steel has not been assessed quantitatively.
3. The responsibility of the implementation of oxygen plant as proposed to operate on BOO basis has not been clarified.
4. EIA report does not mention in quantitative terms, the details of ground water recharge measures.
5. Non-recovery coven plant shall be of stamp charged type and equipped with CDQ
6. Provision of secondary fume extraction system in the SMS
7. 100% recycling and reuse of iron ore fines, coal and coke fines in process by way of briquetting/agglomeration etc.
8. Guard pond shall be proposed only to cater in case of exigency but not as ETP /rainwater harvesting.
9. The approach road from the National Highway is not clear.

10. The project proposal involves diversion of an existing road passing through the middle of proposed plant area. However, no plan of action for diverting the road or providing alternative route to the people has been proposed.
11. There is an existing cart road, about 500 m long, which connects the National Highway to the proposed site in the Kasangandi village. The PP informed during deliberations that they would be using this road for transporting the material after upgrading this road. However, no specific details about the plan for upgradation of the road was not furnished. Further, there was no plan of action for acquisition of land for upgradation of link road. The traffic analysis of found to be wanting on many details.
12. The status of acquisition of land
13. The EIA /EMP has been found to be not in compliance with prescribed ToRs

Recommendations of the committee:

25.0 In view of above, after detailed deliberations, the committee recommended to return the EIA report in the present form.

32.27. Expansion of Iron Ore Pelletisation Plant (0.6 MTPA to 1.8 MTPA), Iron Ore Beneficiation Plant (3.0 MTPA), DRI Plant (0.6 MTPA), Pig Iron BF (0.6 MTPA), Sinter Plant (0.8 MTPA), SMS (1.2 MTPA), Rolling Mills (1.2 MTPA) & Captive Power Plant (125 MW) at Village- Phuljhar, Block- Bansapal, Tehsil- Telkoi, District- Keonjhar, Odisha by **M/s Ardent Steel Limited** [Online proposal No. **IA/OR/IND/74964/2018**; MoEFCC File No. J-11011/112/2013-IA-II(I) – **Prescribing Terms of Reference**.

1.0 The proponent has made online application vide proposal no. **IA/OR/IND/74964/2018** dated 14th May, 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 and the proposal is appraised at Central level

2.0 M/s. Ardent Steel Limited proposes its existing Iron Ore Pelletisation plant from 0.6 MTPA to 1.8 MTPA , Iron Ore Beneficiation Plant (3 .0 MTPA), DRI Plant (0.6 MTPA), Pig Iron Blast furnace (0.6 MTPA) Sinter plant (0.8 MTPA) , SMS (1.2 MTPA), Rolling Mills (1.2 MTPA) along with Captive Power Plant of 125 MW (WHRB -75 MW and AFBC - 50 MW) at Vill : Phuljhar, Block : Banspal of Keonjhar District. It is proposed to set up the plant for rolled steel products based on proved technology.

3.0 The existing project was accorded environmental clearance vide lr No. J-11011 / 112 / 2013-IA II(I) dated 29/03/2016. Consent to Operate was accorded by Odisha State Pollution Control Board vide Letter No. 3702, dated 27.03.2018 validity of CTO is up to 31.03.2019.

4.0 The proposed unit will be located at Village: Phuljhar, Tehsil: Telkoi, Block: Bansapal, District: Keonjhar, State: Odisha

5.0 The land area acquired for the proposed plant is Ac 432.019 out of which Government

Land: Ac. 330.411 and Private Land: Ac.101.608. The entire land has been acquired/ not acquired for the project. Of the total area, Ac.145.41 (33.66 %) land will be used for green belt development. The 10% Administrative charges for filing of acquisition / alienation proposal for expansion project amounting to Rs.2,44,55,617.00 has already been deposited before IDCO authority vide Money Receipt No.6007, dtd.19.03.2018 (IDCO Letter No.2686, dt.05.02.2018).

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. 4031.47 Crore rupees. Proposed employment generation from proposed expansion project will be 1108 direct employment and about 3000 in indirect employment.

8.0 The targeted production capacity of the project after expansion is 1.2 million TPA of rolled steel product. The ore for the plant would be procured from nearby private / government mines in Keonjhar, Barbil and Joda areas of Keonjhar District (linkages-No linkage yet). The ore transportation will be done through Road transport. (Rail / Road / Conveyor / Slurry Pipeline). The proposed capacity for different products for new site area as below:

Sl. No	**Name of unit**	**No. of units**	**Capacity of each Unit**	**Production Capacity**
1.	Iron Ore Beneficiation Plant	1	3.00 MTPA	3.00 MTPA
2.	Iron Ore Pellet Plant	2	Existing: 0.6 MTPA Expansion: 1.2MTPA	1.80 MTPA
3.	DRI Plant	4 X 500TPD	0.6 MTPA	0.60 MTPA
4.	Pig Iron (Blast Furnace)	1,750 m^3 useful volume	0.60 MTPA	0.60MTPA
5.	Sinter Plant	1,80 m^2 grate area	0.80 MTPA	0.80MTPA
6.	SMS / Arc Furnace	1,1.2 MTPA IF	1.2 MTPA	1.20 MTPA
7.	Rolling Mills	1	MTPA (Input billet)	1.20 MTPA
8.	Captive Power Plant	WHRB (25 MW x 3 Nos.) & AFBC (25 MW x 2 Nos.)	125 MW	125 MW

9.0 The electricity load of 93.8 MW will be sourced from own generation. Company has also installed 4 X2100 KVA D. G. Sets.

10.0 Proposed raw material and fuel requirement for project are Iron Ore / Fines: 26,11,800 Coal: 8,14,800 MTP, Coke: 3,14,000 MTPA, Bentonite: 12,600, Lime Stone / Dolomite: 2,80,500, Calcined Lime: 16,000 MTPA, Ferro Alloys: 18,000 MTPA, Furnace Oil: 18,000 KLPA. The requirement would be fulfilled by indigenous as well as import in respect of

metallurgical coke Fuel consumption will be mainly in the pellet plant and Rolling Mill.

11.0 Water Consumption for the proposed project will be 16184 KLD and waste water generation will be nil. The unit will operate on zero discharge principle. Domestic waste water will be treated in STP and will be reused for green belt development and industrial waste water generated will be treated ETP after being passed through oil and grease removal unit and will be reused in the process as well as for dust suppression, fire fighting and green belt development. The required quantity of Water has already been approved in –principal on the 16th meeting of High Level Clearance Authority (HLCA) on 26.09.2015 headed by the Hon'ble Chief Minister of Odisha.

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 Name of the Consultant: - Centre for Envotech & Management Consultancy Pvt. Ltd., Bhubaneswar- 751015. Sl. No. 23 (as on May. 05, 2018 in MoEF & CC website)

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:

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

2. 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.

3. 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 1st May 2018.

4. Certificate compliance of earlier EC from the Regional officer of the MoEFCC shall be submitted along with EIA/EMP.

5. The PP shall obtain and produce a letter from the concerned Divisional Forest Officer specifying the minimum width between the boundary of the forest area and the proposed plant boundary.

6. Details of pump house, pipeline route and Right of the Way from Bhaitarini river to plant site shall be provided.

7. Raw material linkage along with the distance and mode of transport shall be provided

8. Sinter cooler waste heat recovery, dry cooling of BF gas, secondary emission control system of steel melting shop, waster heat recovery of SMS shall be provided

9. Plan for 100% utilization of solid waste shall be provided.

10. Plan for implementing ZLD shall be provided.

32.28. Proposed expansion of Steel Plant (0.2 MTPA to 0.4 MTPA) and Captive Power Plant (80 MW to 200 MW) at Survey Nos. Part of 78, 86-88, 90-93, 95, 96, 106-113, 116-119 & 123-125, Pappankuppam Village, Gummidipoondi Taluk, Thiruvallur District by **M/s Kamachi Industries Limited** (Formerly known as Kamachi Sponge & Power Corporation Limited) [Online proposal No. IA/TN/IND/74872/2018; File No. J-11011/419/2008-IA-II(I)] – **Prescribing Terms of Reference.**

1.0 The project proponent submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on 05.05.2018 vide Online Application No. IA/TN/IND/74872/2018.

2.0 M/s. Kamachi Industries Limited (Formerly known as Kamachi Sponge & Power Corporation Ltd.) proposes to expand its existing manufacturing unit with steel plant (0.2 MTPA to 0.4 MTPA) and captive power plant (80 MW to 200 MW). The plant is based on sponge iron production followed by induction furnace melting, Continuous casting of billets and steel rolling mill.

3.0 The existing project was accorded environmental clearance vide lr.no. F.No. J-11011/419/2008-IA-II (I) dated 19.10.2009. Consent to Operate was accorded by Tamil Nadu Pollution Control Board vide Consent Order No. 18533 dated 11.01.2012 and validity of CTO is up to 31.03.2020.

4.0 The proposed unit will be located at Pappankuppam Village, Gummidipoondi Taluka, Thiruvallur District, Tamilnadu State.

5.0 The land area available in the existing plant is 35.82 ha (88.5 acres) and the entire area is industrial classified land. No forestland involved. The entire land has been already acquired for the project. Of the total area 35.82 ha (33.89%) land is used for green belt development.

6.0 The Pulicat Lake Bird Sanctuary is located at a distance of about 8.0 km from the site. The area also does not report to form corridor for Schedule-I fauna.

7.0 Total project cost is approx. Rs. 675 Crores. Proposed employment generation from proposed project will be 130 direct employments and 500 indirect employment.

8.0 The targeted production capacity of the steel rods is 0.4 million TPA. There is no increase in requirement of Iron Ore as there is no increase in sponge iron plant. The proposed capacity for different products for expansion project as below:

Products	**Existing (TPA)**	**Proposed (TPA)**	**After Expansion (TPA)**
Sponge Iron	1,20,000	---	1,20,000

Intermediate Product - Billets	2,05,000	2,05,000	4,10,000
Rolled Products	2,00,000	2,00,000	4,00,000
Power Plant	80 MW	120 MW	200 MW

Name of Unit	Existing	Additional	After Expansion
Induction Furnace	4 x 15 Tons (Will be converted to 2X30 Tons)*	2 x 30 Tons	4 x 30 Tons
Ladle Refining Furnace	1 x 35 Tons	-	1 x 35 Tons
AOD Station	1 x 35 Tons	-	1 x 35 Tons
Rolling Mill	2,00,000 TPA	2,00,000 TPA	4,00,000 TPA
Power Plant – WHRB	10 MW	---	10 MW
Captive Power Plant	2 x 35 MW	1 x 120 MW	2 x 35 MW& 1 x 120 MW
Oxygen Plant	50 Ton	---	50 Ton

9.0 The electricity load of 78 MW will be procured from captive power plant and has also proposed to install 2 DG Sets of 720 KVA each.

10.0 Proposed raw material and fuel requirement for project are Iron Scrap, Sponge Iron, Ferro Alloys, Copper & Nickel, Aluminium and Coal. The scrap requirement would be fulfilled by indigenous sources as well as imported. Fuel consumption will be mainly for captive power plant.

S. No.	Raw Material	Quantity (TPA)	
		Existing	Upon Expansion
	Billet shop		
1.	Sponge Iron	1,17,060	1,17,060
2.	Melting Scrap	1,13,580	3,32,140
3.	Ferro Alloys	2,400	4,800
4.	Cu & Ni	612	1,224
5.	Al	204	408
	Rolling Mill		
6.	Billets	2,05,000	4,10,000
	Power Plant		
7.	Coal	3,96,000	10,63,200
8.	Dolochar	24,000	24,000
9.	Furnace Oil	250 KL/Annum	500 KL/Annum

11.0 Water Consumption for the proposed expansion project will be 1475 KLD and wastewater generation will be 570 KLD. Domestic wastewater will be treated in the existing STP and industrial wastewater generated will be treated in ETP with RO Plant and reused in process, coal handling plant, dust suppression and green belt development.

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 – ABC Techno Labs India Private Limited, Sl. No. 4 as per recent QCI-NABET list.

Observations and recommendations of the Committee:

14.0 The Committee observed that the proposed plant site is located at a distance of 6.5 km from the Pulicat Bird Sanctuary. The PP shall obtain the certificate from the Chief Wildlife Warden regarding the location of the project w.r.t Eco sensitive zone of Pulicat Bird Sanctuary for further consideration of proposal.

32.29. Expansion Ferro Alloy Plant (1,320 TPA to 1,30,320 TPA Ferro Alloys production by installation of 3x9MVA + 2x12MVA SAFs) at Village: Pedabantupalli, Gurla Mandal, District: Vizianagaram, Andhra Pradesh by **M/s Sri Jayalakshmi Ferro Alloys Pvt. Ltd.** [Online Proposal No. **IA/AP/IND/74841/2018**; MoEFCC File No. J-11011/331/2008-IA-II(I)] – **Prescribing Terms of Reference**

1.0 The proponent has made online application vide proposal no IA/AP/IND/74841/2018dated 3rd May, 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 and the proposal is appraised at Central level

2.0 M/s Shri Jayalakshmi Ferro Alloy (P) Ltd proposes expansion of existing manufacturing unit from existing 31,320 TPA to 1,30,320 TPA of Ferro alloys production by installation of additional 5 Submerged Arc Furnace (SAF) of capacity 3x9MVA + 2x12MVA with Briquetting Plant of 1,50,000 TPA and Sinter Plant of 18,000 TPA. It is proposed to set up the plant for Ferro Alloys production based on Submerged Arc Furnace technology.

3.0 The existing project was accorded environmental clearance vide lr.no. J-11011/331/2008-IA II(I), dated 29.04.2009 and amended on 01.05.2018. Consent to Operate was accorded by Andhra Pradesh State Pollution Control Board vide lr. no. APPCB / VSP / VZN / 18930 / CFO / HO / 2017 validity of CTO is up to 30.04.2019.

4.0 The proposed unit will be located at Village: Pedabantupalli, Gurla Mandal, District: Vizianagaram, Andhra Pradesh

5.0 The land area acquired for the proposed plant is 3.64 Ha. (8.98 acres). No /forestland involved. Total land of the plant is 17.54 ha. (43.32 acres). Of the total area 5.8 ha (33%) land will be used for green belt 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 approx. 182.14 Crore rupees. Proposed employment generation from proposed project will be 600 direct employment and many as indirect employment.

8.0 The targeted production capacity of the Ferro Alloy plant is 0.130,320 million TPA along with 0.15 million TPA of Briquettes and 0.018 million TPA of Sinter Plant. The ore for the plant would be procured from the open market. The ore transportation will be done through road & rail. The proposed capacity for different products for new site area as below:

Name of Unit	**No. of Unit**	**Capacity of each unit**	**Production Capacity (Tons / Per year)**	
Submerged Arc Furnaces	2	2x9 MVA (Existing)	31,320 TPA (Existing)	
	3	3x9 MVA (Proposed)	54,000 TPA	99,000 TPA (Proposed)
	2	2x12 MVA (Proposed)	45,000 TPA	
Total after expn.	**7**		**130,320 TPA**	
Briquetting Unit	1	--	**1,50,000 TPA**	
Sinter Plant	1	--	**18,000 TPA**	

9.0 The electricity load of 56 MVA will be procured from Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL) Company has also proposed to install 1 x250 MVA DG Set.

10.0 Proposed raw material and fuel requirement for project are Manganese Ore, Coke, Dolomite, Chrome Ore, Friable, Magnesite, Quartz, Charcoal and Coal. The requirement would be fulfilled by domestic as well as from international market Fuel consumption will be mainly Furnace Oil.

11.0 Water Consumption for the proposed expansion project will be 120 KLD and waste water generation will be approx. 20 KLD. Domestic waste water will be treated in septic tank and soak pit and industrial waste water generated will be treated in ETP and reused for slag cooling and dust suppression.

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

Observations of the committee:

13.0 The committee observed that the size of SAFs are small and advised to explore the potential to implement the bigger configuration instead of small units from the environmental point of view and resource requirement. During the deliberations, the PP committed to implement 3x9 MVA +1x24MVA SAF in place of 3x9MVA +2x12 MVA.

Recommendation 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 <u>Annexure I read with additional ToRs at Annexure-2:</u>**

1. As committed, the PP shall implement 3x9 MVA +1x24 MVA SAF in place of 3x9 MVA +2x12 MVA.

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

3. 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.

4. 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 1st May 2018.

5. Certificate compliance of earlier EC conditions from the Regional officer of the MoEFCC shall be submitted along with EIA/EMP.

32.30. Expansion of Integrated Cement Plant - Clinker (4.0 to 8.0 MTPA) & Cement (4.0 to 8.0 MTPA) along with installation of WHRS (16 MW) at Village: Mohanpura, Tehsil: Kotputli, District: Jaipur (Rajasthan) by **M/s. UltraTech Cement Ltd. (Unit: Kotputli Cement Works)** – [Online proposal No. IA/RJ/IND/74775/2018; MoEFCC File No. J-11011/971/2007-IA.II(I) - **Prescribing Terms of Reference**

1.0 The proponent has made online application vide proposal no IA/RJ/IND/74775/2018 dated 26th April, 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 and the proposal is appraised at Central level

Details submitted by Project Proponent:

2.0 M/s. UltraTech Cement Ltd. (Unit: Kotputli Cement Works) has proposed an Expansion of Integrated Cement Plant - Clinker (4.0 to 8.0 MTPA) & Cement (4.0 to 8.0 MTPA) along with installation of WHRS (16 MW) at Village: Mohanpura, Tehsil: Kotputli, District: Jaipur (Rajasthan).

3.0 The existing project i.e. Cement Plant was accorded environmental clearance vide letter no. J-11011/971/2007-IA (II) dated 27th Feb., 2008; amended on 08th Nov., 2017 and CPP vide letter no. J-11011/301/2005-IA (II) dated 17th Aug., 2007. Consent to Operate was accorded by Rajasthan State Pollution Control Board vide RSPCB Order no. 2014-2015/CPM/2117 valid upto 31st Jan., 2018 (Renewed consent is awaited from RSPCB).

4.0 The plant site is located at Village: Mohanpura, Tehsil: Kotputli, District: Jaipur, State: Rajasthan.

5.0 Total existing plant area is 161.874 ha and the proposed expansion will be done within the existing plant premises. No additional land will be acquired for proposed expansion project. No forest land is involved. Of the total plant area, 54 ha (~33%) land has already been developed

under greenbelt / plantation.

6.0 No National Park / Wildlife Sanctuary / Biosphere Reserve etc. exists within 10 km radius of the plant site.

7.0 Total project cost is approx. Rs. 1500 Crores. Employment generation from the proposed expansion project will be 50 persons.

8.0 The targeted production capacity of the Clinker is 8.0 MTPA, Cement 8.0 MTPA& WHRS 16 MW. The limestone for the plant would be procured from captive limestone mines. The limestone transportation will be done via covered conveyor belt. The proposed capacity for different products is given as below:

S. No.	**Product**	**Existing Capacity (MTPA)**	**Additional Capacity (MTPA)**	**Total capacity after proposed enhancement (MTPA)**
1.	Clinker (MTPA)	4.0	4.0	8.0
2.	Cement (MTPA)	4.0	4.0	8.0
3.	CPP (MW)	46	Nil	46
4.	WHRS (MW)*	Nil	16	16

9.0 The existing power requirement is 45 MW. Additional 40 MW power will be required for proposed expansion project. Thus, the total power requirement after proposed expansion will be 85 MW which will be sourced from CPP, WHRS & Grid.

10.0 The raw materials required for the expansion project are Limestone which will be sourced from Captive mines; Laterite / Iron Ore which will be sourced from Narayani, Chittorgarh; Bauxite / Red Ochre / Al. Clay / China Clay which will be procured from Sawa, Chittorgarh; Gypsum from FCI (Khal Mines) & RSMM (Ballar Mines), Bikaner; RSMM (Gotmanglod) - Nagore and Fly ash from CPP, JPL & APCPL (NTPC), Jhajjar; RGTPP, Hissar. Fuel required for proposed project includes Petcoke / Coal.

11.0 The existing water requirement for the project is 2640 KLD. Additional 1420 KLD water will be required for proposed expansion project. Thus, the total water requirement after proposed expansion project will be 4060 KLD which is being / will be sourced from Ground Water and Mine Sump Water. No waste water is being / will be discharged from the cement plant. Domestic wastewater generated from the plant and colony is being / will be treated in STP and treated water is being / will be used for greenbelt development / plantation.

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

Recommendation of the committee:

13.0 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:**

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

2. 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.

3. 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 1st May 2018.

4. Certificate compliance of earlier EC conditions from the Regional officer of the MoEFCC shall be submitted along with EIA/EMP.

5. Detailed Rainwater harvesting scheme for compensating additional ground water extraction

6. Details of alternate fuels to used shall be provided

7. Vibration control measures shall be provided for existing and proposed plant.

8. Explore the possibility of alge cultivation in abanded quarry pits for utilizing as alternate fuel

32.31. Proposed Integrated Steel Plant (3.0 MTPA) at Village Nagarnar Tehsil Jagdalpur, District Bastar Chhattisgarh by **M/s National Mineral Development Corporation** – Amendment in Environmental Clearance for minor changes in plant configuration and product mix [Online proposal No. IA/CG/IND/6115/2009; MoEFCC File No. J-11011/681/2008-IA.II(I)].

1.0 **M/s National Mineral Development Corporation** made application vide online proposal no. IA/CG/IND/6115/2009 dated 18th May 2018 seeking amendment in Environmental Clearance for minor changes in plant configuration and product mix granted for the Integrated Steel Plant (3.0 MTPA) at Village Nagarnar Tehsil Jagdalpur, District Bastar Chhattisgarh vide MoEFCC File No. J-11011/681/2008-IA.II(I) dated 15/09/2009 and subsequent extension of validity of Environmental Clearance vide letter dated 05/12/2014.

Details Submitted by the Project Proponent:

2.0 NMDC, a Government of India Enterprise under Ministry of Steel (MoS) is the India's single largest iron ore producer and exporter, presently producing about 35 Mt/yr of iron ore. Considering the potential of steel requirement in the country as well as export potential of the finished products in open economy, M/s NMDC proposed for setting up a 3.0 MTPA Integrated Steel Plant in village Nagarnar, Tehsil Jagdalpur, District Bastar, Chhattisgarh as value addition to its iron ore mining activities.

3.0 Prior Environmental Clearance for Integrated Steel Plant at Nagarnar was granted vide letter F. No. J-11011/681/2008-IA II (I) dated 15/09/2009 and subsequent extension of validity of Environmental Clearance vide letter dated 05/12/2014. After getting Consent to Establish from Chhattisgarh Environment Conservation Board, Raipur vide letter no 3047/TS/CECB/2010 dated 28/08/2010, construction work on site was started and construction

activities for commissioning of ISP are presently under progress.

4.0 Construction of the Integrated Steel Plant of NMDC at Nagarnar is in full swing. Progress of construction of plant units are at different stages and percentage progress of various units of the steel plant are tabulated below.

S. no	Unit	% Progress
1	Raw Material Handling System	78
2	Coke Oven Battery & CDCP	91
3	By-Product Plant	71
4	Sinter Plant	95
5	Blast Furnace	92
6	Steel Melting Shop	78
7	Hot Strip Mill	75
8	Lime & Dolo Plant	40
9	Oxygen Plant	99
10	Power and Blowing Station	79

5.0 The proposed Integrated Steel Plant was envisaged during 2008. During the period, a detailed Techno-economic feasibility study was conducted based on the available technologies at that time. However, at the time of project realization in 2010 and onwards, it was observed that the latest state of the art & environment friendly technology being offered by various parties are of slight different configuration of their standard modular design. Accordingly, some of the units of Integrated Steel plant proposed to be modified. The proposed change in the configurations is as follows:

Sl. No	Unit	As per EC	Revised	Remarks
1	Coke Oven	2X67 Ovens	2X67 Ovens	No Change
2	Sinter Plant	1X460 m^2	1X463.5 m^2	As per technology supplier's design
3	Blast Furnace	4500 m^3	4506 m^3	As per technology supplier's design
4	Pig Caster	5100 TPD	5100 TPD	No Change
5	Steel Melting Shop	2X175 T BOF	2X175 T BOF	No Change
6	Thin Slab Caster coupled with HSM	2x1 strand	2x1 strand	No Change
7	Hot strip mill with finishing train	2.896 MTPA	2.896 MTPA	No Change
8	Oxygen Plant	2X1000 TPD	2X1250 TPD	For oxy-fuel consumption to enhance energy effectiveness
9	Lime Plant Dolo Plant	2X500 TPD 300 TPD	2X500 TPD 300 TPD	No Change
10	Power Blowing Station (gas based)	3X30 MW Turbines 2X250 TPH	2X40 MW Turbines 3X160 TPH	Technical Requirement

Sl. No	**Unit**	**As per EC**	**Revised**	**Remarks**
		Boilers	Boilers	

6.0 In addition to above, NMDC is also proposing for minor changes in Product Mix. The primary product of the integrated steel plant shall be Hot Rolled Coils from HSM as proposed during previous EC. However, due to changing market demand and considering future scenario, NMDC is now proposing to change the specifications (Changes in Length/ Width/ Size as per BIS) in the HR Coils.

7.0 The final product from the Integrated Steel plant shall remain 2.896 MTPA of Hot Rolled Strips and 2,72,800 TPA of Pig Iron. A slight change in recovery of by-products from Coke Oven Gas is also proposed. The revised product mix is given below:-

Sl. No.	Item	Annual Production (T)		Remarks
		As per EC	Present Proposal	
A.	Crude Steel	3,000,000	3,000,000	No Change
B.	Pig Iron	272,800	272,800	No Change
C.	Finished HR Coils	2,896,000	2,896,000	No Change (Minor Changes in Specifications as per BIS)
		• HR Plates – (IS 2062, IS 5986, IS 8500, IS 3039) -400,000 TPA • HR Plates – (IS 2002 & IS 2041) - 400,000 TPA • API-5L quality plates upto x80 - 500,000 TPA • LPG cylinders (IS 6240)- 200,000 • HR coils (IS 10748, IS 1079) - 946,000 TPA • High Carbon Steel (1100-1650) and other alloy steel- 50,000 TPA • Automotive Steel-1250-1524 - 50,000 TPA • Automotive Steel-1525-1650 - 50,000 TPA • Silicon Steel (DIN 46400-3) - 100,000 TPA • HR Sheets (IS 3196) - 200,000 TPA	• HR coils/sheet/plates up to 550 MPa yield strength (IS 2062, IS 5986, IS 3039, IS 3196, IS 8500) - 500,000 TPA • Boiler low/moderate temperature pressure vessels/quality plates (IS:2002:1992, reaffirmed 2007, ASTM-A285 & IS:2041:1995, reaffirmed 2000) - 300,000 TPA • API-5L quality pipes up to X-80 -500,000 TPA • LPG Cylinder (IS: 6240:1999 reaffirmed 2004, G3116) - 300,000 TPA • Commercial (IS:10748:2004, BS-1449, ASTM-A569) - 150,000 TPA • Draw Quality (D) DD & EDD Quality (IS:1079:1994, reaffirmed 1998) - 920,000 TPA • HR Coils- Auto Grades E34/E38/BSK 46/Fe 410, E55, Dual Phase, IF, TRIP,	

			Silicon Steel (IS:3024:2006, DIN 46400-part1, part2, part3) - 230,000 TPA	
D. By-products				
1	Ammonium Sulphate	24090	0	Not Considered
2	Crude Tar	70080	91454	Minor increase
3	Naphthalene	2452	2492	Minor increase
4	Sulphur	260	389	Minor increase

8.0 The pollution loads estimated for 3 MTPA integrated steel plant at Environmental Clearance stage are compared with the pollution load after the proposed amendment. A slight decrease in overall pollution load on ambient air is anticipated because of considering latest technologies and pollution control equipment actually considered during execution of project to comply with the revised norms. Predicted GLC values before and after the present proposal (GLC values in $\mu g/m^3$ (24hrs. avgs) is as follows:

Sl. No.	Scenario	PM	SO_2	NOx
1	Max GLC as per EC	14.3	4.5	6.5
2	Max GLC after present proposal	10.7	4.1	5.9
3	Difference	-3.6	-0.4	-0.6

9.0 No additional impact on surface water resources is envisaged as no additional water is required to be drawn by the proposed plant. No impact on ground water resources is envisaged from drawl of water since no ground water will be drawn for the proposed plant. An Effluent Treatment Plant (ETP) has been proposed for Coke Oven By-products Plant based on Membrane Bio Reactor technology followed by RO has been proposed here. The RO reject shall be sent to lined solar evaporation pond or utilized in BF Slag granulation Plant / Pig Casting Machine. All other units of the steel plants are provided with separate pre-treatment systems comprising of settling ponds, UF and RO systems. A centralized zero liquid discharge facility has been proposed for the ISP. RO reject water from various units of the steel plant shall be collected & treated in centralized ZLD plant. No effluents shall be discharged outside the plant boundary. Therefore, no impacts on surface or ground water quality are expected.

10.0 No additional land is acquired for the present amendment. All ferrous & non ferrous wastes generated during plant operations shall be utilized within the plant in Sinter Plant/BOF. BF/BOF Slag shall be sold to cement manufacturers or used for road construction. All hazardous waste shall be disposed in secured landfill/ handed over to authorized Landfill operators for disposal as per statutory norms. No additional impacts on land are anticipated as compared with the EC stage.

11.0 The total project cost is estimated around Rs 15525 Crores. Out of which, the cost of Environment Protection and Enhancement measures is around Rs 1016 Crores. The budget allocation for the EMP remains same.

Observations of the committee:

12.0 The committee observed that the instant proposal is for modification in the configuration of Sinter plant, Blast Furnace, oxygen plant and power blowing station without increase in the

overall capacity of the project. The project proponent committed to plant about one lakh plants in the surrounding area as there is no additional space available within the plant premises for carrying additional plantation.

Recommendations of the Committee:

1. Specific water consumption shall be less than 4.5 M3 per ton of long product within the one year from the commission.

2. The PP shall plant one lakh plants in the vicinity of the plant.

3. The emissions from bag houses shall be limited 30 mg /Nm^3.

32.32. Proposed Integrated Steel Plant (Iron Ore Beneficiation & Pellet Plant – 1.2 MTPA; DRI Plant – 0.6 MTPA; Blast Furnace – 0.4 MTPA; SMS-Steel Billets – 0.7 MTPA; Rolling Mill – 0.65 MTPA; Coke Oven – 0.2 MTPA; Sinter Plant – 0.4 MTPA; Oxygen Plant-400 TPD) along with 100 MW Captive Power Plant [25 MW – FBC Based Power Plant, 4X12.5 MW-WHRB & Turbine, 13 MW- Using BF gas and 12 MW using Coke Oven Gas] at Village Dogori, Ameri Akberi and Udgeon, Tehsil Bilha, Dist Bilaspur, Chhattisgarh by **M/s Jayaswal Neco Industries Limited** [Online Proposal No. IA/CG/IND/73184/2013; MoEFCC File NO. 11011/302/2011 –IA II (I)] – **Extension of validity of Environmental Clearance**.

1.0 **M/s Jayaswal Neco Industries Limited** made application vide online proposal no. IA/CG/IND/73184/2013 dated 28th April 2018 seeking extension of validity of environmental clearance for the proposed Integrated Steel Plant (Iron Ore Beneficiation & Pellet Plant – 1.2 MTPA; DRI Plant – 0.6 MTPA; Blast Furnace – 0.4 MTPA; SMS-Steel Billets – 0.7 MTPA; Rolling Mill – 0.65 MTPA; Coke Oven – 0.2 MTPA; Sinter Plant – 0.4 MTPA; Oxygen Plant-400 TPD) along with 100 MW Captive Power Plant [25 MW – FBC Based Power Plant, 4X12.5 MW-WHRB & Turbine, 13 MW- Using BF gas and 12 MW using Coke Oven Gas] at Village Dogori, Ameri Akberi and Udgeon, Tehsil Bilha, Dist Bilaspur, Chhattisgarh granted vide F.No. J-11011/302/2011 –IA II (I), Dated 06.06.2013.

2.0 It was informed that PP has made an application for extension of validity of the EC as the validity was mentioned in the letter as 5 years and therefore, requested to extend the validity for another 5 years.

3.0 He informed that the implementation of the project is in progress in phased manner and the first phase is likely to be completed by December 2018.

4.0 After deliberations, the committee recommended the ministry to issue the clarification on validity of EC as per amendment in the EIA Notification dated 14th September 2016 where in the validity was increased from 5 years to 7 years.

32.33. Expansion of Sponge Iron Plant into Steel Plant by installation of Sponge Iron Plant (2X100 TPS, 60,000 TPA) Ferro Alloys (Fe-MN & Si-MN, 2 x 9 MVA, 30,000 TPA) and Captive Power Plant (8 MW) at Jamuria Industrial Estate, Ikra, Jamuria, Burdwan, West Bengal by **M/s Calstar Sponge Limited** [Online Proposal No. IA/WB/IND/73025/2011;

MoEFCC File No. J-11011/655/2009-IA.II(I)] - Extension of validity of Environmental Clearance.

1.0 M/s Calster Sponge Limited made application vide online proposal no. IA/WB/IND/73025/2011 dated 27th April, 2018 seeking extension of validity of environmental clearance granted for the proposed expansion of Sponge Iron Plant into Steel Plant by installation of Sponge Iron Plant (2X100 TPS, 60,000 TPA) Ferro Alloys (Fe-MN & Si-MN, 2 x 9 MVA, 30,000 TPA) and Captive Power Plant (8 MW) at Jamuria Industrial Estate, Ikra, Jamuria, Burdwan, West Bengal File No. J-11011/655/2009-IA.II(I) dated 20th May 2011 as per clause 9 of EIA Notification, 2006.

2.0 M/s Calster Sponge Limited was accorded EC from MoEF for expansion of the unit vide letter No-J-11011/655/2009-IA II (I), dated 20th May 2011, by installing 2x100 TPD DRI Kilns, CPP-4MW(WHRB), CPP 4 MW (FBC) & 2x9 MVA Fe-Mn & Si-Mn Plant. CTE has been accorded from WBSPCB and erections are not completed and commissioning has not been done due to unfavorable steel market, financial crisis of the company and unavailability of raw material and mean while validity EC is expiring when things are in half way.

3.0 As steel market has improved and company is now stable to carry out the project. The project is being operated with company's fund and M/s ITC ltd, Raipur has been appointed as consultant for carrying out the project. The order for procurement of materials is under processing and some of the civil and construction work has already been started. The implementation schedule is attached below:

Sl NO	ORDERING	CIVIL &OTHER SITE WORK TO BE COMPLETED	COMMISSIONING
1	2 x 100 TPD DRI	January 2018 To May 2018	May 2019 To June 2019
2	8 MW CPP	April 2019 To December 2020	December 2020 To January 2021
3	2 x 9 MVA FERRO ALLOY	April 2019 To December 2020	December 2020 to January 2021

4.0 It was informed that 25% of the physical work relating to DRI plant and 20% of the work relating to the CPP was completed.

Recommendations of the Committee:

5.0 After detailed deliberations, the committee recommended for extension of validity of the environmental clearance for another three years i.e. up to 19th May 2021.

32.34. Expansion of Integrated Steel Plant from 0.5 MTPA to 0.7 MTPA by **M/s Rungta Mines Limited** located at Village Chaliyama in Saraikela Ditrict Kharswan of Jharkhand. [Online Proposal No**. IA/JH/IND/56904/2016;** MoEF&CC File No. J-11011/305/2012-IA-II(I)] – **Environmental Clearance – Further Consideration based on ADS.**

1.0 The proponent has made online application vide proposal no. **IA/JH/IND/56904/2016**, dated 25th May 2017 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' of the Schedule of EIA Notification, 2006 and is appraised at the Central Level.

2.0 The proposal for expansion of Integrated Steel Plant from 0.5 MTPA to 0.7 MTPA by **M/s Rungta Mines Limited** located at Village Chaliyama in SaraikelaDitrictKharswan of Jharkhand was initially received in the Ministry on 30th June 2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The proposal was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 9th meeting held on 27th to 29th July 2016 and recommended for grant of prescribing ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry had prescribed ToRs to the project on 18th October 2016 vide File No. J-11011/305/2012-IA-II(I).

3.0 M/s Rungta Mines Limited (RML) operating Sponge Iron Unit at Village Chaliyama in Saraikela District Kharswan of Jharkhand since 2007 comprising of 7 Nos. X 100 TPD DRI Kilns with No Objection Certificate (NoC) vide letter no. N-346 dated 25.05.2005 from Jharkhand State Pollution Control Board. Thereafter, RML obtained Environmental Clearance from Ministry vide J-11011/305/2012-IA-II(I) dated 4th November 2008 and further commissioned 2,00,000 TPA Steel Melting Plant and Captive Power Plant of 39 MW capacity. From total capacity of CPP, 14 MW CPP is utilizing the heat energy of the flue gas for steam generation by installing Waste Heat Recovery Boiler (WHRB) for each Kiln replacing the Heat Exchanger and 25 MW coal based AFBC which is under operation. Further, M/s RML was proposed for expansion of Integrated Steel plant from 0.2 MTPA to 0.5 MTPA and obtained prior environmental clearance on 1st April 2016. It was reported that some of the facilities which were envisaged in the EC were under construction and some are yet to start.The status of compliance of earlier environmental compliance was obtained from Regional Office Ranchi vide letter no. 103-498/ROR-2016/1375 dated 24.07.2017.

4.0 Now, it is again proposed to expand the Integrated Steel Plant from 0.5 MTPA to 0.7 MTPA in the existing premises. The details of the existing plant, proposed expansion is given below:

Sl. No.	Plant/ facility	Units	Present sanctioned capacity as per EC dated 01.04.2016	Additional Proposed Capacity	Total Capacity
1	DRI plant	MTPA	0.450	0.17	0.62
2	Mini blast furnace	MTPA	0.383	0.075	0.458
3	Steel melting shop, IF (15T x 8 nos.) LRF (20T x 1 nos.,30 T X 2 no.) EAF (30 T X 1 no.)	MTPA	0.50	0.193	0.693
4	Billets/ Slab/ Bloom caster	MTPA	0.30	0.379	0.679
5	Continuous Casting Machine		3x3 strand	1 strand	3X4 strand
6	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ others)				

Sl. No.	Plant/ facility	Units	Present sanctioned capacity as per EC dated 01.04.2016	Additional Proposed Capacity	Total Capacity
a	Mill-1	MTPA	0.20	0.02	0.22
b	Mill-2	MTPA	0.30 (Flat/ Round/ Structural)	0 (adding facility for TMT/ wire rod/ other)	0.22
c	Mill-3	MTPA	0	0.22	0.22
7	Captive power plant	MW	119	39	158
a	WHR based CPP	MW	32	21	53
b	AFBC/CFBC based CPP	MW	87	18	105
8	Pelletisation Plant	MTPA	2 nos. X 1.2	0.24	2.64
9	Coal Washery	MTPA	1.26	No change	1.26
10	Oxygen Plant (1x30 T)	m^3/annum	69,30,000	4,20,000	7,350,000
11	Lime Plant (1X90 T)	m^3/annum	29,700	1,800	31,500
12	Vacuum Degassing	Tonnes	30	No change	30
13	Ferro Alloy Plant (9MVA+ 18 MVA)				
a	Ferro Manganese OR	MTPA	-	9 MVA=0.018 18 MVA= 0.036	0.054
b	Silico Manganese OR	MTPA	-	9 MVA = 0.0144 18 MVA= 0.0288	0.0432
c	Ferro Chrome OR	MTPA	-	9 MVA = 0.0144 18 MVA= 0.0288	0.0432
d	Ferro Silicon	MTPA	-	9 MVA = 0.0064 18 MVA= 0.0128	0.0192
14	Briquette Plant				
	For ferro chrome OR	MTPA	-	0.088	0.088
	For ferro manganese	MTPA	-	0.112	0.112
15	Sinter Plant (2X24 sq.m)	MTPA	-	0.532	0.532
16	Coke Oven plant (4 batteries X 70,000 TPA)	MTPA	0	0.28	0.28
17	Producer Gas Plant	NM3/hr	0	51,000	51,000

5.0 The total land required for the expansion project is 592.16 acres (239.643 ha), out of which 173.33 acres (70.149 ha) is government land and 418.83 acres (169.498 ha) is Private Land. No forestland is involved. The entire land has not been acquired for the project. 294.175 acres (119.05 ha) private land has been purchased. 63.14 acres (25.55 ha) Government land in Chaliyama and Bankasai village has been acquired. Private land of 124.655 acres ((50.447 ha) is under process of purchase and Government land 110.19 acres (44.593 ha) in Chaliyama, Banksai and Kuju village is pending in various Govt. offices. No river passes through the project area. It has been reported that natural water body exist around the project and modification/ diversion in the existing natural drainage pattern at any stage has not been proposed.

6.0 The topography of the area is flat and reported to lie between 22°34'17" to 22°35'49" N Latitude and 85°53'07" to 85°54'49" E Longitude in Survey of India topo sheet No. 73 F/14 15 73-J/2 &3, at an average ground elevation of 198 m above mean sea level. The ground water table reported during post monsoon season and 6 to 10 m below ground during pre-monsoon season. Further, the stage of groundwater development is reported to be 8.40 % in study area and thereby this is designated as safe area.

7.0 Dalma Wildlife Sanctuary located at a distance of 49 km in NE and Simpli Pal National Park is at 83 km in SSE from the site. No national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. are reported in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. List of flora and Fauna is provided through site Specific Conservation plan prepared and submitted to Divisional Forest Officer, Saraikela – Kharsawan who forwarded it to Conservator of Forest, Jamshedpur vide letter no. 1717 dated 12.07.2017.

8.0 The process of manufacturing will be steel through the pelletisation /DRI –IF-EAF as well as Blast Furnace route. There will be installation of Blast furnace (0.458 MTPA), expansion of sponge iron plant (from 0.45 to 0.62 MTPA), sinter plant (0.532 MTPA), coke oven plant (0.28 MTPA), SMS (0.50 to 0.693 MTPA), Billet caster (0.3 MTPA to 0.679 MTPA), CCM (3x3 strand to 3x4 strand), Rolling mill (0.50 to 0.66 MTPA with revised configuration), WHRB based CPP (32 to 53 MW), AFBC/CFBC based CPP (87 to 105 MW), producer gas (51000 NM3/hr) Oxygen plant (6930000 to 7350000 Nm3/annum), Lime plant (29700 to 31500 m3/annum), Pelletisation Plant (2.64 MTPA), Coal washery (1.26 MTPA), Ferro Alloys Plant (9MVA+ 18 MVA). The major raw materials to be used for existing as well as expansion phase will be 3.35 million TPA iron ore, 1.26 million TPA coal. Of the various solid wastes generated in the plant, 100% recycling/ reusing will be done for sponge iron plant dust, char, sinter plant dust, blast furnace slag, blast furnace sludge & flue dust, SMS slag & flue dust, rolling mill rejects & mill scales and coke oven dust. Ash will be generated from producer gas plant and captive power plant which will be disposed as per Fly Ash Notification.

9.0 The targeted production capacity of the crude steel from SMS is 0.70 million TPA. The iron ore for the plant would be procured from company's own mines located in Odisha/ Jharkhand. Limestone, quartzite, dolomite will be purchased from Raurkela and manganese ore will be sourced from own mines located in Odisha. The ore transportation will be done through rail followed by road.

10.0 The water requirement for the expansion project is estimated to be 1778 m^3/hr and sourced

from Kharkai River. The permission for drawl of water from Kharkai River for 5000 m^3/day from River Kharkai and additional quantity 432 m^3/day through an agreement made on 11.05.2016.

11.0 The power requirement for the expansion project is estimated to be around 143 MW and the total requirement including expansion will be met from the captive power plant comprising of WHRB (53 MW) and AFBC/CFBC (105 MW). Balance power will be sold through grid.

12.0 Baseline Eenvironmental studies were conducted during post monsoon season i.e. from October to December 2016. Ambient Air Quality monitoring has been carried out at 8 locations during October to December 2016 and the data submitted indicated: PM_{10}(40.2 to 83.4 μg/m^3), $PM_{2.5}$ (22.1 to 48.9 μg/m^3), SO_2(BDL to 20.0 μg/m^3) and NO_x(BDL to 29.8 μg/m^3). The results of the modeling study indicated that the maximum increase of GLC for the proposed expansion project is 1.49 μg/$m^3$with respect to PM10, 0.27 μg/m^3 for PM2.5 and 6.6 μg/m3 for SO_2.

13.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.2-7.8;Total hardness: 160 - 464 mg/l; Chloride: 29-116 mg/l;Fluoride: 0.71- 1.86 mg/l; Heavy metal are well within the limits. Surface water samples have been monitored in 8 locations in the study area. pH: 7.4-8.1, DO: 6.8 to8.5 mg/l, BOD: 5-10 mg/l and COD: 10-23 mg/l.

14.0 Noise level are in the range of 50.7 dB(A) to61.68 dB(A) for day time and 39.88 to 58.68 dB(A) for night time.

15.0 It has been reported that there are no people in the core zone of the project. No R&R is involved. No family is to be rehabilitated. Land losers will be given preference in employment.

16.0 It has been reported that a total of 1.2 million tons of waste will be generated due to the existing and expansion phase of the project, out of which 0.31 million tons will be reused used in sinter plant, 0.11 million tons per annum char shall be used in AFBC based power generation. 0.40 MTPA fly ash will be utilize in cement plant/ Brick manufacturing unit, 0.12 million tons per annum BF Slag will be utilized in cement manufacturing, 0.093 million tones ash will be utilized in low land filling, 0.094 MTPA reject shall be backfilled in mines and balance 0.073 million tons per annum will be land filled. It has been envisaged that an area of 195.41 acres (33%) will be developed as green belt in the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

17.0 It has been reported that the Consent to operate from the Jharkhand State Pollution Control Board has been obtained vide letter No. JSPCB/HO/RNC/CTO-1047382/2017/154 dated 20.02.2017 and consent is valid up to 31.03.2020.

18.0 The Public Hearing of the project was held on 14.06.2017 at the ground of Utkramit Madhya Vidyalya, Village Chaliyama under the Chairmanship of Shri Kunj Bihari Pandey (Additional District Magistrate, District SaraikelaKharswan) for expansion of integrated steel plant from 0.50 to 0.70 million TPA. The issues raised during public hearing inter alia include employment opportunity; provision of health care & water supply facility; pollution control measures; compensation to the land losers; etc. An amount of 4 crores and recurring expenditure during the Steel production is Rs. 53.55 lakhs/year.

19.0 The capital cost of the project is Rs. 2189.97 Crores and the capital cost for environmental

protection measures is proposed as Rs. 35.34 Cr. The annual recurring cost towards the environmental protection measures is proposed as Rs. 7.31 Cr. per annum. The detailed CSR plan has been provided in the EMP in its page No. chapter 8 page 8-9 to 8-11. The total employment generation from the existing and proposed project / expansion is 1830.

20.0 The total employment generation from the existing and proposed project / expansion is 1830.

21.0 Green belt will be developed in 195.41 acres (79.08 ha) which is about 33 % of the total area. A 10-m wide green belt, consisting of at least 3 tiers around boundary will be developed as green belt and green cover as per CPCB/MOEF&CC guidelines. Local and native species will be planted with a density of 2500 trees per ha. Till date, the company has planted about 42,700 trees covering trees, shrubs, herbs etc. in and around the plant area. These are Haldu, Bull Oak, Shisham, Gulmohar, Jasmine, Mango, Karanj, Siris, Jamun, China Rose, etc.

22.0 The proponent has mentioned that there is no court case or litigation pending on the project or related activity.

23.0 The EIA consultant for the present proposal is M/s Min Mec Consultancy Private Limited. It was reported that the M/s Min Mec is preparing and presenting reports as per the High Court of Delhi orders in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016.

24.0 The committee observed several non-compliances in compliance of earlier EC conditions; encircling of Chailama village by proposed expansion; thoroughfare access to river from the Bankasite Village; air pollution; increase in traffic load; fly ash management; in adequate green belt development, etc.

25.0 After detailed deliberations, the committee sought following information for further consideration of the proposal

i. The PP shall clarify in writing that there is no court case or litigation is pending against the project.

ii. Certificate of closure of non-compliances of the earlier EC conditions from the Regional office of MoEFCC.

iii. Site plan design for the proposed expansion should be reviewed and amended considering the likely impacts on the nearby villages, Chaliyama and Banksia villages.

iv. Standard operating procedures for the Environmental Monitoring and regular calibration of monitoring equipment shall be included in the Environmental Management Plan.

v. System for reporting of non-compliance of EC conditions to the Board of Directors as a part of Corporate Environmental Policy including periodicity, hierarchical system of reporting of non-compliance to the board of directors; board resolution for environmental policy of the company.

vi. Time bound action plan for fly ash utilisation.

vii. Green belt should be completed within the current planting season. The green belt should have at least three rows trees along the boundaries of the plant.

viii. PP shall use large capacity trucks (30Tonnes) for transportation of raw material and finished products.

ix. PP shall construct a dedicated road from National Highway to the Plant.

x. Existing approach road to the Plant premises shall be widened to double of its present width.

xi. In addition to the existing gate, additional gates shall be provided. Further traffic should be arranged in such a way that the traffic in the village shall be normalised.

xii. The natural drainage within plant premises should not be disturbed.

xiii. All the points raised in the Public Hearing by the locals should be considered and addressed appropriately by the project proponent. The PP shall formulate an action plan giving details of activities, financial outlays and time lines for completion of each activity in the form of a project. The PP shall specifically respond to the request of the locals for providing access from Banksia village to the River.

xiv. Reasons for high fluoride levels in the base line data.

xv. Detailed plan of action for mitigating the impact of increased traffic density due to proposed expansion.

xvi. The Environmental Policy with hierarchical system or Administrative order of the company to deal with the environmental issues and 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 shall be submitted within 3 months from the date of EC.

26.0 The project proponent has submitted reply to ADS on 24th August 2017. The reply *inter alia* includes:

i. Confirmation that there is no litigation / court case pending against the project as on 13.09.2017;

ii. The project was monitored by MOEF&CC (RO), Ranchi on 14.06.2017 and issued a list of non-compliances vide letter no. RML/CSP/MOEF(RO)/17-18/1397 dated 05.08.2017, immediate action and completed the inadequacies and the compliance of the same is submitted vide our letter no. RML/CSP/MOEF(RO)/17-18/1397 dated 05.08.2017 to Regional Office, MOEF&CC, Ranchi.

iii. The layout map has been revised including addition of Brick plant within plant boundary; provision of dedicated truck parking within plant boundary; existing Main Gate -1, near Chaliyama village; One additional gate has been proposed from main road near Bankasai

village i.e. Gate No. 2; and A third gate i.e. Gate no. 3 is proposed from main road near Kuju Village. These two gates will provide access from the main road.

iv. Standard operating procedures (SOP) for the Online Monitoring Equipment and their calibration will be included the environment management plan of the unit.

v. System for reporting of non-compliance of EC conditions to the Board of Directors as a part of Corporate Environmental Policy is there. The non-compliances are being reported to Board of Directors and corrective as well as preventive action are taken.

vi. Fly ash is being generated from the CPP at present. As on date 3,12,378 tonnes of fly ash is stored within the plant premises due to lack of utilisation. Fly ash utilization plan is as follows:

Source	Quantity, T/ annum	Utilisation in	Quantity (T)	% utilised	Time schedule
1. Existing 0.2 MTPA steel plant (backlog)	312378*	Brick Manufacturing	15000	4.8%	Start : Dec 2017
(to be disposed in 2 years)		NHAI&SH road	297378	95.2%	It has been taken up and pursued with authorities of NHAI, SH and District Administration
Sub Total	312378		312378	100%	
2. Annual production (Existing 0.2 MTPA steel)	134000	Brick plant	15000	11.2%	2. Annual production (Existing 0.2 MTPA steel)
		NHAI/SH road	119000	88.8%	
Total			134000	100%	Total
3. Proposed 0.7 MTPA steel plant (inclusive of existing)	404229	Brick plant	15000	3.71%	3. Proposed 0.7 MTPA steel plant (inclusive of existing)
		NHAI/SH road	389220	96.29%	

Total			404229	100%	Total

vii. Total plant area existing as well as proposed is 592.16 acres. The plantation has to be carried out in 33% of the area (195.41 acres)

viii. The available capacity most commonly found in that area are between 14 to 18 wheelers which have a capacity of 21 to 27 T. Thus, maximum possible reduction in number of trucks can be 26%.

ix. Based on the discussion during presentation, the construction of dedicated road from NH to Plant through Banksai Village is agreed to. Road shall be constructed within 12 months at a cost of Rs. 1.57 Crores

x. Existing approach road to the plant premises will be doubled. The cost for construction of road from NH to Plant gate no. 1 will be Rs. 3 Cr. The width of road will be increased from 9 m to 14-16 m.

xi. Confirmed that the natural drainage within plant premises shall not be obstructed. The rain water flows from the eastern side of plant to the Kharkai river in west. Along the internal roads of the plant, storm water drains will be provided for direct flow of the rainwater from east side of plant into Kharkhai in west. The roads will have culverts to ensure free flow. The eastern wall will have bottom holes for allowing rain water from higher elevation to pass through the plant.

xii. All the points raised in the Public Hearing by the locals are addressed with financial time line for completion of each activity. Discussion has been held with the villagers and it has been agreed we will provide access over bridge from Bankasai village to Kharkai River. The village head has suggested to conduct Gram Sabha for official concurrence on the matter, to which the Company has agreed. Any further suggestions forthcoming during Gram Sabha shall be accordingly implemented.

27.0 The project proponent along with EIA consultant made detailed presentation on the reply to ADS. The committee satisfied with the reply made by PP except regarding action plan for utilization of the fly ash and non-compliances pointed out by Regional office of MoEFCC.

28.0 The proposal was further considered in the 22nd meeting of Expert Appraisal committee held during 11th to 13th September 2017. After detailed deliberation the committee, in agreement with the PP, deferred the proposal for submission of the action plan for utilization of the fly ash and closure of non-compliances pointed out by Regional office of MoEFCC.

29.0 Answer to both the points was uploaded and hard copy submitted to MOEF&CC vide letter No. RML/CSP/MoEF/18-19/ 836 dated 24.05.2018.

Reply to Point No. 1: Action Plan for utilization of the fly ash for existing and proposed expansion project was submitted. 100% utilization of Fly ash generated from the existing plant of 0.20 MTPA capacity shall be from 2018-19. Flyash shall be used in brick manufacturing by the company's own and other brick manufacturing plants and National Highways/State Highway. Brick

manufacture plant of company is under commissioning within plant premises and shall be operational by July 2018. Other brick manufacturers have been taking fly ash since April 2017. Work orders have been given to contractors such as M/s Rajeev Sekhar Construction Private Limited Jamshedpur and M/s Rajeev Singh & Company for utilization of fly ash in road construction of State Highways.

Reply to Point No. 2: Chaliyama Steel Plant was monitored on 19.02.2018 by MOEF&CC (Regional Office), Ranchi. The monitoring report has been sent to MoEF& CC, New Delhi by MoEF& CC, Regional Office, Ranchi vide letter no. 103-498/ROR-201612219 dated 22.05.2018 for closure of non-compliances.

Observations of the committee:

30.0 The committee deliberated in detail on the non-compliances reported by RO, Ranchi based on RO inspection on 14.06.2017. The reply of the PP and observations of the RO on the reply were also discussed.

31.0 The committee was informed that a Show-cause notice was issued to the PP by CPCB on 6th June 2018. It was considered necessary that the reply of PP to this notice should be filed and the notice should be closed.

Recommendations of the committee:

32.0 In view of above, the committee recommends that the EC may be granted to the PP subject to the closure of the aforesaid notice by CPCB dated 6th June 2018 and the EC, as when granted, is recommended to be subject to the following specific and general conditions:

A. Specific conditions:

1. The PP shall comply with the commitments made in compliance of earlier EC conditions by December 2018 which will be verified by the RO.

2. The PP shall further strengthen the environmental cell with at least four qualified persons (as committed by the pp during the presentation) within a period of six months from the of date issue of EC.

3. 100 % utilization of the solid waste shall be achieved.

4. The entire greenbelt shall be developed during the first year of the implementation of the proposed expansion.

5. The PP shall construct dedicated road from NH to Plant through Banksai Village within 12 months from the date of issue of EC and existing approach road to the plant premises shall be doubled.

6. The PP shall not obstruct the natural drainage within plant premises. Along the internal roads of the plant, storm water drains shall be provided for direct flow of the rainwater from east side of plant into Kharkhai in west. The roads shall have culverts to ensure free

flow. The eastern wall shall have bottom holes for allowing rain water from higher elevation to pass through the plant.

7. The PP shall provide access over bridge from Bankasai village to Kharkai River in consultation with the local Panchayat.

B. General Conditions:

1. An amount of as per the Office Memorandum of the Ministry vide F.No. 22-65/2017.IA.III dated 1st May 2018 towards Corporate Environmental Responsibility (CER) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.

2. Green belt shall be developed in an area of 79.08 Ha (195.41 Acers) 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.

3. The Capital cost Rs. 35.34 Crores and annual recurring cost Rs. 7.31 Crores towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.

4. The project proponent shall (Air Quality Monitoring):

    a. 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(Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008(Sponge Iron)as amended from time to time; 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.

    b. monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

    c. Install system carryout to Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions;

    d. install cameras at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings;

    e. provide sampling facility at process stacks and at quenching towers as per CPCB guidelines for manual monitoring of emissions;

f. 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.

5. The project proponent shall (Water Quality Monitoring):

a) install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; 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.

b) 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; and

c) 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.

6. The project proponent shall (Air Pollution Control):

a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards;

b) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;

c) provide secondary emission control system at SMS Converters;

d) provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;

e) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;

f) 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;

g) use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin;

h) provide facilities for spillage collection for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility);

i) install land-based APC system to control coke pushing emissions;

j) also monitor CO, HC and O_2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber;

k) provide vapour absorption system in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens;

l) in case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NOx control facility shall be provided to meet the prescribed standards;

m) the coke oven gas be subjected to desulphurization if the sulphur content in the coal exceeds 1%;

n) provide wind shelter fence and chemical spraying on the raw material stock piles; and

o) design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

7. The project proponent shall (Water Pollution Control):

a) provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;

b) adhere to 'zero liquid discharge';

c) provide Sewage Treatment Plant for domestic wastewater;

d) provide garland drains and collection pits 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;

e) provide tyre washing facilities at the entrance of the plant gates;

f) introduce CO_2 injection in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning; and

8. The project proponent shall (Water conservation):

a) practice rainwater harvesting to maximum possible extent;

b) not use treated water from ETP of COBP for coke quenching;

c) provide water meters at the inlet to all unit processes in the steel plants; and

d) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

9. The project proponent shall (Energy Conservation):

a) provide TRTs to recover energy from top gases of Blast Furnaces;

b) provide CDQ for coke quenching for both recovery and non-recovery type coke ovens;

c) practice waste heat recovery from Sinter Plants coolers and Sinter Machines;

d) use torpedo ladle for hot metal transfer as far as possible. If not use ladles covers for open top ladles;

e) use hot charging of slabs and billets/blooms as far as possible;

f) provide waste heat recovery systems in all units where the flue gas or process gas exceeds 300°C;

g) explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed;

h) restrict Gas flaring to < 1%;

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;

j) provide LED lights in their offices and residential areas; and

k) ensure installation of regenerative type burners on all reheating furnaces.

10. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter. (*to be decided on case to case basis depending on type and size of plant*)

11. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.

12. Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke.

13. In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery.

14. Tar Sludge and waste oil shall be blended with coal charged in coke ovens (applicable only to recovery type coke ovens).

15. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.

16. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.

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

18. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.

19. 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

20. 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.

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

22. 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.

23. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.

24. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.

25. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

26. 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.

27. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

28. 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).

29. The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management &Transboundary Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens.

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

31. 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.

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

33. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

34. Kitchen waste shall be composted or converted to biogas for further use. (*to be decided on case to case basis depending on type and size of plant*)

35. The project proponent shall (Post-EC monitoring):

    a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;

    b. put on the clearance letter on the web site of the company for access to the public.

    c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http:/envfor.nic.in.

    d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;

    e. monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;

    f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;

    g. 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;

h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

32.35. Proposed Integrated Cement Plant with Captive Limestone Mine for production of Clinker (2.0 MTPA), Cement (2.5 MTPA) and Limestone (3.0 MTPA) at village Niduzuvvi, Mandal Yerraguntla, District Kadapa in Andhra Pradesh by **M/s Teja Cement Limited** [Online Proposal No. **IA/AP/IND/3574/2011**; MoEFCC File No. J-11011/234/2010-IA.II(I)] – **Extension of validity of Environmental Clearance.**

1.0 M/s. Teja Cement Limited made an application vide online proposal no. **IA/AP/IND/3574/2011** dated 14th May 2018 seeking extension of validity of the environmental clearance granted for the proposed integrated Cement Plant with Captive Limestone Mine for production of Clinker (2.0 MTPA), Cement (2.5 MTPA) and Limestone (3.0 MTPA) at village Niduzuvvi, Mandal Yerraguntla, District Kadapa in Andhra Pradesh vide MoEFCC File No. J-11011/234/2010-IA.II(I) dated 13th May 2011.

Details submitted by the Project Proponent:

2.0 Environmental Clearance was granted on 13th May 2011 for establishment of Greenfield Cement Plant along (60 Ha) with Captive Limestone Mines (267.20 Hectares) for the following capacities:

CLINKER	2.0 MTPA	Phase I:1.0 MTPA Phase II: 1.0 MTPA
CEMENT	2.5 MTPA	Phase I:1.25 MTPA Phase II: 1.25 MTPA
LIMESTONE	3.0 MTPA	Phase I:1.5 MTPA
		Phase II: 1.5 MTPA

3.0 The progress made so far as follows:

- Land levelling and clearing completed.
- Levelling work for approach road formation is ongoing.
- Site office & Guesthouse is operational.
- LOI awarded to KHD Humboldt Wedag for Rs.140 Crores, dt.20.04.2018 for Plant and Machinery
- LOI awarded to Galacon Infrastructure for Rs. 81 Crores for civil construction dt.20.04.2018.
- Contract awarded for Compound wall for Rs. 2.1 Crore the plant area dt.04.04.2018.
- Though this is a proved limestone terrain by virtue of cluster of cement industries India Cements Ltd. - Chilamkur towards North West, India Cements Ltd. – Yerraguntla towards North East, Zuari Cements (Heidelberg) towards South East, Bharathi Cements towards South East, in order to assess depth wise grade, a comprehensive Geological prospecting of the entire mining area has been completed as per UNFC specifications to assess the

quality and quantity of the limestone through NRDCS a reputed agency in geological prospecting.

4.0 The details of work completed and expenditure incurred so far is as follows:

Sno	Details	Cost incurred/Orders Raised (Rs in crores)
1	1. Land Acquisition 2. Land levelling and clearing completed 3. Site office & Guesthouse is operational	48
2	Contract awarded for Compound wall for the plant area dt.04.04.2018	2.1
3	LOI awarded to KHD Humboldt Wedag for Rs.140 Crores, dt.20.04.2018 for Plant and Machinery	140
4	LOI awarded to Galacon Infrastructure for 81 Crores for civil construction dt.20.04.2018.	81
5	Mining lease was executed	-
6	Mining Lease Dead Rents	0.225
7	Public hearing Advertisement expenses	0.009
8	APPCB Deposit	0.08
9	IBM Bank Guarantee	0.09
10	Holtec Consulting – DPR and Layout	0.17
11	Marketing Survey by Holtec Consulting	0.01
12	Prospecting Expenditure paid to NRDCS	0.075
13	Auditors Fee	0.018
14	Company Secretary Fee	0.02
15	Authorized Capital Fees to Registrar of Companies	0.15
16	ERCOM Engineers – DPR and Layout	0.086
17	Mine Lease Extension paid to Mines Department	0.01
18	Consultant for MOEF Extension - BS Envi-Tech Pvt. Ltd.	0.01
19	Miscellaneous Expenditure	0.08

5.0 It was informed that PIL (W.P No. 130 of 2018) has been filed against Teja Cement Ltd. in the Hon'ble High Court of Telangana and Andhra Pradesh after submitting our application for Extension of validity of Environmental Clearance.

Observations and recommendations of the committee:

6.0 The committee learnt that a writ petition was filed against PP in the High Court of Hyderabad and Original Application under section 18(1) of NGT Act 2010 before Southern Bench of NGT at Chennai. The committee deliberated upon the issue. It was found that one of the matters appealed about pertaining to the land on which the proposed for the project for which EC was given earlier in 2011. Further there was request to conserve the water body by keeping safe buffer between the boundary of the project site and the water body. The committee felt that proper clarification from the PP regarding both issues is necessary along with supporting documents. In view of this the committee recommended that the PP shall submit detailed clarification on the issues raised in the aforesaid petition/application for further consideration of the proposal.

32.36. Proposed Expansion of Non-ferrous Metal Extraction Plant (Lead & Tin Production Capacity: Lead - 60,000 MTPA Tin – 3,200 MTPA By-Product and their capacities: Sulphuric Acid -52,000 MTPA Zinc Oxide- 15,000 MTPA Copper Matte- 2600 MTPA Silver/Gold – 25 MTPA Other Minor Non-ferrous metals – 2000 MTPA) at Sy No.: 151/1, 151/2, 151/3, 151/4, 147, 148 & 150 Routhusuramala village, Thottambedu mandal, Chittoor district, Andhra Pradesh by **M/s AXORA RESOURCES LIMITED** [Online proposal No. IA/AP/IND/75027/2018] – **Prescribing Terms of Reference.**

1.0 M/s. Axora Resources limited made online application vide proposal no. IA/AP/IND/75027/2018 dated 18th May, 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 and the proposal is appraised at Central level

2.0 M/s Axora Resource Limited proposed to install an expansion of existing manufacturing unit for battery breaking and lead recycling plant. It is proposed to set up the plant for Extraction of Non-ferrous Metals.

3.0 The existing project was accorded Consent to Establish vide Order No. CTR-1233/PCB/ZOK/CFE/2017 dated 06.01.2018 from Andhra Pradesh State Pollution Control Board and validity of NOC is up to 7 years from the date of issue i.e. 05.01.2025.

4.0 The proposed unit will be located at Sy No.: 151/1, 151/2, 151/3, 151/4, 147, 148 & 150 Routhusuramala village, Thottambedu mandal, Chittoor district, Andhra Pradesh.

5.0 The land area required for the total plant is 14.455 Ha (35.72 acres). The proposed expansion project will be set up on 7.13 Ha (17.62 acres) of land. The entire land is under the process of acquisition for the project. Of the total area 4.77 ha (33%) land will be used for green belt development.

6.0 The Kambakam Reserve Forest is located at a distance of 7.5 km from the site.

7.0 Total project cost is approx 560 Crore rupees. Proposed employment generation from proposed project will be 905 in total. 605 direct employment and 300 indirect employment.

8.0 The targeted production capacity of the Lead - 60,000 MTPA and Tin – 3,200 MTPA. The ore for the plant would be imported. The proposed capacity for different products for new site area as below:

Main Product: Lead & Tin
Production Capacity:
Lead - 60,000 MTPA
Tin – 3,200 MTPA
By-Product and their capacities:
Sulphuric Acid -52,000 MTPA
Zinc Oxide- 15,000 MTPA

9.0 The electricity load of 10 MW. 4 MW shall be sourced from Waste Heat Recovery system and the rest will be sourced from Southern Power Distribution Corporation.

10.0 Proposed raw material and fuel requirement for project are:

SL. NO.	RAW MATERIALS	ANNUAL REQUIREMENT IN MT/YEAR	SOURCE
MAIN RAW MATERIALS			
1.	Lead Ores And Concentrates	1,10,000	Import
2.	Tin Concentrates	6,000	Import
OTHER IMPORTANT RAW MATERIALS			
1.	Quartz Stone	10,000	Indigenous Supplier
2.	Coke	9,160	Indigenous Supplier
3.	Graphite Electrode	24	Indigenous Supplier
4.	Coal Powder	13,800	Indigenous Supplier
5.	Oxygen	23,558	To be produced In - house
6.	Lime Stone	240	Indigenous Supplier
7.	Heavy Oil	6,000	Indigenous Supplier

11.0 Water Consumption for the proposed project will be 3250 kld. Domestic waste water will be treated in STP and industrial waste water generated will be treated in ETP and reused totally.

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 June, 2018.

Observations and recommendations of the committee:

14.0 The committee observed that the prefeasibility report was lacking in the identification and addressing the specific environmental issues in the proposed project. The committee advised to submit revised pre-feasibility report inter alia including specific environmental issues in the proposed project, specific ToR proposed for the project; aspect-impact analysis of the process including HIRA shall be submitted. Therefore, the proposal is returned in the present form

32.37. Expansion of integrated steel plant [Augmentation of Power Generation Capacity though WHRB (attached to DRI) from 100 MW to 150 MW, Pellet Plant of capacity 1.5 MTPA, SAF of 14 x 11 MVA capacity for production of Pig Iron, Change of route of Steel making] located at Village: Hathneora, District: Janjgir - Champa Chhattisgarh by **M/s Prakash Industries Limited** [Online Proposal No. IA/CG/IND/75026/2018; J-11011/522/2008-IA II(I)] - **Prescribing Terms of Reference.**

2.0 M/s. Prakash Industries Ltd. has proposed for Augmentation of capacity for Co-generation of Power through WHRB (attached to DRI) from 100 MW to 150 MW and Pellet Plant of Capacity 1.5 MTPA, SAF of 14 x 11 MVA capacity for production of Pig Iron and Change of route of steel

making (1.0 MTPA: through IFD – AOD route). It is proposed to manufacture these products based on the following technology

- Augmentation to enhance Power Generation capacity of the co-generation captive power plant through WHRB.
- Producing Pellet through Pellet plant
- Producing Pig Iron through Submerged Arc Furnace.
- Producing Ingots/Billets/Blooms through IFD – AOD route.

3.0 The existing plant was accorded Environment Clearance vide F.No. J-11011/522/2008 – IA II (I) dated 3rd November 2010. Consent to Operate was accorded by Chhattisgarh Environment Conservation Board vide No. 3124/TS/CECB/2016 dt. 29.08.2016 for Sponge Iron - 0.8 MTPA, WHRB Power Plant - 37 MW, FBC Power Plant - 162.5 MW, Steel Manufacturing (Ingots/Billets/Blooms) - 0.94 MTPA, vide no. 4648/TS/CECB/2017 dt. 28.11.2017 for Sponge Iron (5th Kiln) – 0.2 MTPA, WHRB based plant – 10 MW and vide letter no. 39/TS/CECB/2018 dt. 03.04.2018 for 9 x 7.5 MVA Ferro Alloys.

4.0 The proposed unit is located at Village Hathneora District Janjgir-Champa, Chhattisgarh in the existing premises.

5.0 Existing plant is located in 601.47 acres / 243.4 Ha. of land. Proposed expansion will be taken up in the existing plant premises only. Of the total area, 200.5 Ac. / 81.14 Ha. (33%) land is allocated for greenbelt developed. No Forest land involved.

6.0 No Reserve Forest exists within the 10 Kms. 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 project. Hasdeo river (06. Kms.) and Son Nadi (8.0 Kms.) are present within 10 Kms. of project site. NH# 200 is passing at a distance of 2.0 Kms. from the project site. The area also does not report to form corridor for Schedule – I fauna.

7.0 Total project cost for proposed expansion is approx. Rs. 697.40 Crores. Proposed employment generation from proposed project will be 1232 nos. direct employment and 1000 nos. indirect employment.

8.0 The Iron ore fines for the plant would be procured from In-house generation through screening, Company's own mines and from NMDC iron ore mines. The ore transportation will be done through by Rail & Road (through covered trucks).

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

S. No.	**Details of Unit**	**Capacity as per EC Dtd. 03.11.10**	**Capacity in operation**	**Capacity under installation**	**Capacity to surrender**	**Present Proposal**	**Capacity to be installed after present proposal**
1	Sponge Iron	2.0 MTPA	1.0 MTPA	0.4 MTPA	---	---	0.6 MTPA

S. No.	Details of Unit	Capacity as per EC Dtd. 03.11.10	Capacity in operation	Capacity under installation	Capacity to surrender	Present Proposal	Capacity to be installed after present proposal
2	Captive Power Plant						
	a) Co-generation Power Plant (WHRB)	100 MW	47 MW	20 MW	---	50 MW	83 MW
	b) Coal based power plant	187.5 MW	162.5 MW	25 MW	---	---	---
	c) BF gas based power plant	20 MW	---	---	20 MW	---	---
	Total	307.5 MW	209.5 MW	45 MW	20 MW	50 MW	83 MW
3	Ingots/Billets/ Blooms						
	a) Through Induction Furnaces (IFD) route	1.0 MTPA	0.94 MTPA	0.06 MTPA	---	---	0.06 MTPA (through IFD route)
	b) Through Blast Furnace – Electric Arc furnace route	0.5 MTPA	---	---	0.5 MTPA	1.0 MTPA (through IFD-AOD route)	1.0 MTPA (through IFD-AOD route)
	c) Through Blast Furnace – LD Converter route	0.5 MTPA	---	---	0.5 MTPA		
	Total	2.0 MTPA	0.94 MTPA	0.06 MTPA	1.0 MTPA	1.0 MTPA (through IFD-AOD route)	2.0 MTPA (through IFD route & IFD-AOD route)
4	TMT/Wire Rod Mill	0.6 MTPA	---	---	---	---	0.6 MTPA
5	Blast Furnace	1.0 MTPA	---	---	1.0 MTPA	---	---
6	Ferro Alloys Plant	9 x 7.5 MVA	9 x 7.5 MVA	---	---	---	---
7	Sinter Plant	1.45 MTPA	---	0.2 MTPA (2 x 0.1 MTPA)	1.05 MTPA	---	0.2 MTPA (2 x 0.1 MTPA)
8	Oxygen Plant	800 TPD	---	8 (2 x 4.0 TPD)	388 TPD	---	404 TPD (1 x 4 TPD & 1 x 400 TPD)
9	Pellet Plant	---	---	---	---	1.5 MTPA	1.5 MTPA

S. No.	Details of Unit	Capacity as per EC Dtd. 03.11.10	Capacity in operation	Capacity under installation	Capacity to surrender	Present Proposal	Capacity to be installed after present proposal
10	Submerged Arc Furnaces (for making Pig Iron)	---	---	---	---	14 Nos of 11 MVA (0.3 MTPA)	14 Nos of 11 MVA (0.3 MTPA)

10.0 The electricity load of 145.8 MW for operating proposed expansion projects will be met from existing captive power plant. (Coal Based + WHRB).

11.0 Proposed raw material and fuel requirement for expansion project are Iron Ore fines, Bentonite, Anthracite Coal or Coke breeze, Dolomite, Quarts etc., Requirement would be fulfill by external purchase / in house.

For Pellet Plant

S.No.	Raw Material	Specific Consumption (T/T)	Quantity (MTPA)	Sources	Mode of Transport
1	Iron Ore Fines	1.03 (96.9%)	1545000	In-house generation through screening, Company's own mines and from NMDC iron ore mines.	By rail & road (through covered trucks)
2	Bentonite	0.008 Min (0.75%)	12000	Kutch & Bhuj (Gujrat)	By rail & road (through covered trucks)
3	Anthracite Coal or Coke breeze	0.015 (1.43%)	22500	Open market and coke producers	By road (through covered trucks)
4	Dolomite / Limestone	0.01 (1%)	15000	Open market	By road (through covered trucks)

For SAF (Pig Iron)

S.No.	Raw Material	Specific Consumption (T/T)	Quantity (MTPA)	Sources	Mode of Transport
1	Mill Scale	0.7	2,10,000	Will be made available from company's continuous casters, company's Rolling Mills as well as market.	---
2	Iron Ore Sinter	1.0	3,00,000	Will be made available from company's Sinter plant	---

S.No.	Raw Material	Specific Consumption (T/T)	Quantity (MTPA)	Sources	Mode of Transport
3	Quartz	0.03	9,000	This shall be locally available within 150 kms radius of Champa plant.	By road (through covered trucks)
4	Dolomite/ Limestone	0.35	1,05,000	Dolomite will be available around Champa and Lime Stone will be made available from Katni (MP)	By road (through covered trucks)
5	Pearl Coke (65% Fc.)	0.23	69,000	This will be available from the Jharia/Dhanbad area.	By road (through covered trucks)
6	Steam Coal (45% Fc)	0.52	1,56,000	Will be made available from Korba & Korea-Rewa area of SECL.	By rail & road (through covered trucks)
7	Flur Spar (Caf2)	0.04	12,000	Will be made available from Rajasthan	By rail & road (through covered trucks)
8	Electrode Paste	0.015	4,500	Will be made available from M/s Hindalco, M/s Electro Carbon Ltd., M/s Eastern Electrodes Ltd. Belgavi, Begusarai	By road (through covered trucks)

For Induction Furnaces

S.No.	Raw Material	Specific Consumption (T/T)	Quantity (MTPA)	Sources	Mode of Transport
1	Sponge Iron	0.81	8,10,000	Will be made available from Company's DRI Kilns	---
2	Pig Iron	0.15	1,50,000	Will be made available captively.	
3	Scrap	0.04	40,000	Will be made available from Company's Rolling Mills as well as market	By road (through covered trucks)

12.0 Water consumption for the proposed expansion project will be 5400 KLD and no waste water discharge from the proposed expansion project. Domestic waste water will be treated in Septic tank followed by sub-surface dispersion trench and there will be no wastewater discharge from the WHRB Power Plant (DRI based), Pellet Plant, Induction furnaces & SAF for manufacturing Pig Iron as closed circuit cooling system will be adopted.

13.0 The proponent has mentioned that there is case pending in High Court of Chhattisgarh vide Case No. W.P. (C) No. 3770 of 2011. Stay order is issued on the same.

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

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

2. 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.

3. 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 1st May 2018.

4. Certificate compliance of earlier EC conditions from the regional officer of MoEFCC shall be submitted along with EIA/EMP

32.38. Integrated Limestone Mine Area 251.9 Ha, Clinkerization Plant (3X3.3 MTPA), Cement Plant (3 MTPA), Captive Power Plant (99 MW) including coal based Thermal Power Plant & Waste Heat Recovery System), Berthing Jetty of length 820mx28m (Capacity 15 MTPA) and conveyor corridor (10.2 Km.) of **M/s Lakhpat Cement Works Limited** at Villages Koriyani, Kapurasi, Maldo, Mudhvay, Taluka Lakhpat, District Kutch, Gujarat - [Proposal No. IA/GJ/IND/69706/2017; File No. IA-J-11011/494/2017-IA-II(I)] **– Amendment in Terms of Reference for increase the cement grinding capacity from 3 MTPA to 10 MTPA and Material Handling Capacity of Berthing Jetty from 15 MTPA to 19 MTPA.**

1.0 M/s Lakhpat Cement Works Limited made application vide online proposal no. IA/GJ/IND/69706/2017 dated 16th May 2018 seeking amendment in Terms of Reference issued for the proposed project mentioned above vide MoEFCC File No. IA-J-11011/494/2017-IA-II(I) dated 19th April, 2018 for increase the cement grinding capacity from 3 MTPA to 10 MTPA and Material Handling Capacity of Berthing Jetty from 15 MTPA to 19 MTPA.

2.0 Considering change in business plan due to absence of firm, long term linkage of fly ash/slag (Major component of raw material) at our proposed grinding units, M/s.Adani Cementation Limitedpropose to increase the Cement Grinding Capacity at "Lakhpat Cement Works'' from 3 million MTPA to 10 million MTPA and Material Handling capacity of Berthing Jetty from 15 million MTPA to 19 million MTPA, keeping other component of the proposal unchanged. The details of integrated project proposal are as follows:

Sl. No.	**Plant/Activity**	**Area (In Ha.)**	**Commodity**	**Capacity**	
				As per TOR	**Amendment Request**

1	Limestone Mine	251.9	Limestone	12 MTPA	No Change
2	Cement Plant and Captive Power Plant (TPP & WHRB)	198.32	Clinker	10 MTPA	No Change
			Cement	3 MTPA	10 MTPA
			Power	99 MW	No Change
3	Captive Jetty (820m x 28m)	4.05 (Backup Area)	Clinker	8 MTPA	5 MTPA
			Cement	3 MTPA	10 MTPA
			Limestone	1 MTPA	No Change
			Coal/Petcoke/Fly Ash/Slag/Gypsum/etc.	3 MTPA	No Change

3.0 After detailed deliberations, the committee recommended for amendment in the ToR with following additional ToR:

1. The PP shall explore the possibility of sharing various common infrastructure facilities with other project proponents, including upcoming projects, in the surrounding areas to reduce the stress on the natural resource in the area. The PP shall have to submit the details of efforts made with other project proponents along without come of such efforts (including the various facilities to be shared) in the EIA/EMP report.

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 PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO and other parameters relevant to the project shall be collected. The monitoring stations

shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

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

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

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

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

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

viii. Soil Characteristic as per CPCB guidelines.

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

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

xi. Socio-economic status of the study area.

7. Impact Assessment and Environment Management Plan

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

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

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.

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

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

vi. Measures for fugitive emission control

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

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

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

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

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

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

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

8. Occupational health

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

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

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

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

9. Corporate Environment Policy

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

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

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

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

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

11. 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).

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

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

vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.

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

ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCBshall 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.

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ANNEXURE-2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

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

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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(PM_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

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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.

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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

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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 gaseousemission, 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. Capitalcost of the project, estimated time of completion

vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of is acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest, eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)

viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population

ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.

x. Likely impact of the project on air, water, land, flora-fauna and nearby population

xi. Emergency preparedness plan in case of natural or in plant emergencies

xii. Issues raised during public hearing (if applicable) and response given

xiii. CSR plan with proposed expenditure.

xiv. Occupational Health Measures

xv. Post project monitoring plan

LIST OF PARTICIPANTS OF EAC (I) IN 32ND MEETING OF EAC (INDUSTRY-I) HELD ON 11TH TO 12TH JUNE, 2018

S. No	Name and Address	Position	Attendance			Signature
			11TH	12TH	13TH	
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P	P	
Members						
2.	Dr. Nitin Endaly Representative of Central Pulp and Paper Research Institute	Member	A	A	A	
3.	Director, Central Leather Research Institute	Member	A	A	A	
4.	Dr.Siddarth Singh, Representative of Indian Meteorological Department	Member	A	A	A	
5.	Representative of Central Ground Water Board	Member	A	A	A	
6.	Dr. G. Bhaskar Raju	Member	P	P	P	
7.	Prof. Naresh Chandra Pant	Member	A	A	A	
8.	Dr. Jagdish Kishwan, IFS(Retired)	Member	P	P	P	
9.	Dr.G.V.Subrahmanyam	Member	A	A	A	
10.	Prof.Arun Pandey	Member	A	A	A	
11.	Shri Santosh Raghunath Gondhalekar	Member	A	P	P	
12.	Shri Ashok Upadhyay	Member	P	P	P	
13	Mr. R.P. Sharma	Member	P	P	P	
14.	Shri Sharath Kumar Pallerla, Scientist 'F' / Director, MoEF&CC	Member Secretary	P	P	P	
15.	Shri RajasekharRatti, Scientist 'C', MoEF&CC	Dy. Director	P	P	P	