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

SUMMARY RECORD OF THE FIRST (1ST) MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE HELD DURING 26TH TO 28THNOVEMBER 2018 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The firstmeetingof the Re-constitutedExpert 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 **26th to 28thOctober 2018** in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

1.0 Chairman welcomed all the members and briefed the procedure to be followed for appraisal of the projects. On behalf of the ministry, Member-secreatry briefed the provision of the EIA Notificaton, procedure to be followed during the appraisal of the projects. All the members unanimously selected Shri Jagadish Kishwan, IFS, former ADG, MoEFCC as vice-chairman. After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim. First of all, the Committee confirmed the Minutes of the 36thmeeting of earlier Expert Appraisal Committee (Industry-1) held during 9th – 10hOctober,2018.

<u>26thNovember 2018 (Narmada)</u>

1.1 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 Limitedmade 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 35.0Lakhs (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 are 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 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,	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 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. Education facility IREL is taking utmost care to provide proper education to the children of the local area/villages. Two schools, one	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 give preference to local eligible people through both	**Time Frame:** Already under progress the same will be improved / strengthened **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. **Environment Protection** Rs 450.00 Lakhs as Capital expenditure and Rs 9.00 Lakhs as Annual Recurring

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
	Plantation and Road. Due to IREL local people are facing Skin Disease and even effected by Cancer. Therefore, they all oppose the Project.	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	direct and indirect employment. Health camps, awareness campaigns, educational facilities are being taken up by IREL on regular basis.	expenditure is earmarked

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
		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 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		

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
		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		

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
		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 themedical 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,	Indian Rare Earths Ltd. (IREL), Orissa Sands Complex (OSCOM) as a Government of	Peripheral development works will be	**<u>Time Frame:</u>** Already under progress the same

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
	Kanamana – GP. He said IREL has not taken up any step for its Monazite Processing Plant as per the commitment made earlier. Hence Oppose.	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	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 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.	will be improved / strengthened **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. **Environment Protection** Rs 450.00 Lakhs as 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	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.	**Time Frame:** 0 – 3 months after obtaining EC **Budget:** **Developmental Activities** Rs 54.2 Lakhs is

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
	audience.		Apart from that Village Panchyats and Committees will also be consulted for identifying the needs and accordingly the development works will be undertaken.	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	**<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.
5	Mr.Nilakantha Das, Pattapur			
6	Mr. R. Polleya Reddy Kanamana – GP : Opposed			
7	Mr. Eju Amin Khan, Chatarpur: Oppo			

<table>
<tr><th>S. No</th><th>Issue</th><th>Proponent Response</th><th>Action Plan</th><th>Time Frame & Budget</th></tr>
<tr><td></td><td>sed</td><td></td><td></td><td></td></tr>
<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</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</td></tr>
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S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
			that Village Panchyats and Committees will also be consulted for identifying the needs and accordingly the development works will be undertaken.	and the expenditure will be made on health, education, sanitation etc.
11	A.Venkata, Bada Arjipalli: TDP & MOP should be stopped.	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 statutory agencies e.g. officials from OSPCB, MoEF&CC and AERB	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.	**<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. **Environment Protection** Rs 450.00 Lakhs as Capital expenditure and Rs 9.00 Lakhs as Annual Recurring expenditure is earmarked
12	Ramesh Chandra Sahu, Matikhalo: Opposed			
13	Muna Pradhan, Matikhalo: Opposed			
14	Arjuna Pradhan, Chamakhandi G.P.: Opposed			
15	G. Arya, Youth INTUC Ganjam Dist. President IREL did not	<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	An Environmental Monitoring Plan has been prepared and incorporated in the EIA	**<u>Time Frame:</u>** Already under progress the same will be improved / strengthened **<u>Budget:</u>**

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
	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.	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.	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	**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	-	-	
17	Mr. S. Chakrepani Reddy Takiria – Berhampur, IREL has	Employment opportunity: People from local areas have been given preference for direct employment.		

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
	not provided employment from past 35 years, which was committed during the establishment of Monazite Processing Plant of IREL. So he has Opposed	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.		
18	Mr. Ganesh SahuPuruna Chatarpur: 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.
19	Mr. Padma	It is informed that IREL is	All the	**Time Frame:**

<table>
<tr><th>S. No</th><th>Issue</th><th>Proponent Response</th><th>Action Plan</th><th>Time Frame & Budget</th></tr>
<tr><td></td><td>Charan Sahu Sarpanch - Kallipalli GP

As people are suffering from Kidney Problem therefore this project is Opposed</td><td>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>medical facilities will be further strengthened considering the needs</td><td>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><tr><td>2016-2017(up to Dec 2016)</td><td>208.97</td></tr></table></td></tr>
<tr><td>20</td><td>Mr. Santosh Kumar Sahoo, Chamakhandi:
As they have lost their Land and Forest, Hence, he is opposing the Plant.</td><td>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</td><td>Any land acquisition in mining area is / will be carried out as per the guidelines and mutual consents only.</td><td></td></tr>
</table>

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
		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.		

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
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	**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.

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
			accordingly the development works will be undertaken.	

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. <u>MoPP</u>:

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/m^3			
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

22.0 The proposal was further considered in the 32nd meeting of EAC (Industry-I) held during June, 2018. 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.

23.0 Accordingly, the project proponent submitted the reply to ADS and details are as follows:

Point 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

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

Point 2: Bio-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.

Reply: Wastewater management plan to achieve zero liquid discharge (ZLD).Details of Waste Water Generation in the TDP process:

The total water requirement for the integrated plant is 238 m3/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 m3/day will be generated and will be sent to the existing ETP.

Disposal of treated effluent:From the TDP process total 217.853 kg/day of treated effluent will be generated, out of which 90.807 m3/day of Sodium chloride solution will be generated. The

sodium chloride content will further be enriched to 35% approx. by adopting Multi Effect Evaporator (MEE) process & can be sold to downstream chloro-alkali industry. M/s Indian Rare Earths Ltd.,(IREL), OSCOM have already contacted the near-by chloro-alkali industry M/s Grasim Industries Limited, Ganjam.

Point 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 carried out by Atomic Energy Regulatory Board has been presented. From the report, it can be seen that the Gross Alpha & Gross Beta activity levels in the post treatment effluents are within the permissible limits of Atomic Energy Regulatory Board(AERB).

Point 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 dissatisfaction and said that IREL has not fulfilled the promise made in the previous Public Hearing and not taken any steps towards 1.Education 2.Pollution problem, 3.Plantation and Road. 4.Due to IREL local people are facing Skin Disease and even effected by Cancer. Therefore, they all oppose the Project.	The response of IREL,OSCOM on the points raised i.e. on Education, Pollution problems, Plantation & Roads and Health problems are elaborated below: **1. Education facility** IREL, OSCOM has obtained special permission for admission of the local students from five of Village Panchayats & One NAC (i.e. students from Non-DAE families). Hence, about 80% of students from Non-DAE families are getting high quality education along with the students of DAE(Department of Atomic Energy) families in the Atomic Energy Central (AEC) School (CBSE) up to +2 Science level. The expenditure incurred for AEC school during the year 2016-17 was Rs.158.07 lakh which is recurring. Further, one Oriya medium school i.e., Shrama Shakti Vidya Pith (SSVP) School (CHSE) is also run by IREL, OSCOM at housing colony premises where-in 325 number of local village children (out of them 50% are girl students) are getting their education. The expenditure incurred for SSVP school during the year 2016-17 wasRs.22.07 lakh which is **recurring.** 2. **Pollution issues:** -Regular monitoring of all the discharges with respect to air emission, liquid effluent, solid wastes, noise levels, radiational aspects due to IREL operations are being carried out and trend charts have been developed and enclosed in EIA report as Annexure- 1.14 . The cost of environmental monitoring was Rs.15.5	**1.Education Facilities** - Ongoing **2.Pollution issues:** -Regular environmental monitoring is carried out through MoEF&CC / NABL Accredited Laboratory. -Health Physics Unit (HPU), of Bhaba Atomic	**Time Frame & Budget:** -Ongoing

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
		lakhs during the year 2016-17 and it is recurring. From the monitoring values & trend charts, it can be seen that all the discharges are within the permissible limits. -Regular monitoring is also being carried out by OSPCB officials and no adverse report from OSPCB is reported. -Health Physics Unit (HPU), an independent unit of Environmental Assessment Division (EAD) of Bhaba Atomic Research Center (BARC), Government of India (GoI) is stationed at OSCOM to monitor all the radiological waste discharges and related safety aspects in and around IERL, OSCOM & MoPP to check the adequacy of the containment as per AERB guidelines/ requirements. The same unit independently collects, analyses the environmental samples and send quarterly reports to AERB regularly. -The monitoring reports are regularly submitted to Statutory Authorities e.g. State Pollution Control Board, Odisha (OSPCB), MoEF&CC, Atomic Energy Regulatory Board(AERB) on monthly, quarterly, half-yearly & annual basis. -Regular inspections/monitoring from time to time is carried out by OSPCB, MoEF&CC & AERB to evaluate the environmental safeguards measures & radiation safety aspects being carried out at IREL,OSCOM as required under the rules/acts and no deviation has been raised yet. **3. <u>Plantation</u>:** After the mining activity, the mined out area is leveled to its near original topography and thereafter planted with local species like Cashew nut, date palm, Casurina etc. by adopting a systematic plantation program. **4.<u>Road development</u>** The roads in mining area as well adjacent to IREL,OSCOM, which are also used by public, are developed/repaired periodically by IREL, OSCOM. During the current year itself, IREL, OSCOM spent about Rs.1.5 lakhs for its repair and it is a continuous process. **5.<u>Health problems e.g. Skin diseases & Cancer due to IREL,OSCOM operation:</u>** -IREL has carried out Health Survey and as per the survey carried out during the year 2016, from a total of 3754 Villagers, no skin diseases or cancer has been notified due to IREL, OSCOM operations. Diseases profile report for the year 2016 is enclosed	Research Center (BARC), Government of India (GoI) is monitoring the radiological safety aspects in and around IREL as per Atomic Energy Regulatory Body (AERB) guidelines / requirements. -Deviation, if any, is raised in future by Statutory Agencies, will be complied with immediately along with time frame. **3. Plantation:** During last six years i.e. from 2011-12 to 2015-16, total 3,96,017 numbers of trees were planted in mined out area with the survival rate of about 90%. The cost of tree plantation was Rs.32.42 lakh during 2016-17 & it is recurring every year.	**<u>Time Frame & Budget:</u>** -Ongoing activity & Recurring **<u>Budget:</u>** **Developmental Activities** With respect to TDP, Rs 54.00 Lakhs is earmarked as per New CER Guidelines **Environmental Protection** Rs 450.00 Lakhs as Capital expenditure and Rs 9.00 Lakhs as Annual Recurring expenditure is earmarked with respect to TDP operation.

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
		herewith as **Annexure-A**. The Diseases Profile Report of local village population for last five years (i.e., from 2011-2015) have already been submitted with EIA report. -Mobile Health Camps are also conducted in local villages by IREL,OSCOM through local NGOs like HEAVEN and People's Rural Education Movement (PREM) etc. in coordination with District Administration, Gram Panchayats. The survey reports indicate that no skin diseases or cancer has been notified due to IREL, OSCOM operations. The survey reports of the mobile health camps are enclosed herewith as **Annexure-B**. The relevant information in this connection are enclosed herewith as **Annexure-C** and **Annexure-D**. -IREL, OSCOM is taking up all the measures for environmental safeguard and the pollution levels are within the stipulated norm. -Subsequently, after the Public Hearing, District Authority constructed an Expert Committee vide letter No.04/L.A.Sec dated 4.1.2017 on the allegation against Water Pollution Aspect and Kidney Diseases in the periphery of M/s Indian Rare Earths Ltd Comprising of 1. Regional Officer, State Pollution Control Board, 2. Executive Engineer, Rural Water Supply and Sanitation, 3. Sub Divisional Medical Officer, Chatrapur The committee collected 20 water samples in the nearby areas, tested and mentioned vide report No.7563 dated 8.12.2017 that the water quality of the IRE periphery is within the norms and the cause of Kidney disease is not due to the water problem (copy enclosed as **Annexure-E**). It is, therefore, submitted that as all the pollution levels are within the level, IREL,OSCOM operation do not contribute anything towards Skin or Cancer diseases in the area.	**4. Road development** It is a continuous process. **5.Health problems e.g. Skin diseases & Cancer due to IREL,OSCOM operation:** -As detailed in Response Column, there is no evidence of skin diseases & cancer due to IREL,OSCOM operation. However, as a part of social responsibility, the Medical Department of IREL,OSCOM is providing free medical treatment to daily ailments & preventive health care to the local villages population -Besides that, based on the needs and demands of the local villagers, preventive health care & health check-up/survey are also	**Time Frame & Budget:** Ongoing activity & Recurring **Time Frame & Budget:** Continuous process **Time Frame & Budget:** Ongoing activity & Recurring

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
			conducted time to time in different villages through various Health Camps e.g. Homeopathic Medical Camps, Orthopedic Camps, Special Camps for Women etc.	
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.	In this respect, the matter has already been addressed in S.No.1.	As addressed in S.No.1.	As addressed in S.No.1.
3	Mr. Krushna Chandra Nayak, Chatarpur. Not able to present due to disturbance of the audience.	No issue raised.	--	--
4	Mr.Dhuryodhana Nahak Chamakhandi: He opposed the establishment of Technology Demonstration Plant (TDP) of M/s Indian Rare Earths Limited	No issue raised.	--	--
5	Mr.Nilakantha Das, Pattapur: Opposed			
6	Mr. R. Polleya Reddy Kanamana – GP : Opposed			
7	Mr. Eju Amin Khan, Chatarpur: Opposed			

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
8	Mr. S. Mohan Rao, Badaputi: Opposed			
9	Mr.Gurudev Behera, Badaputty, Due to IREL, the local people are facing serious health problem, hence they strongly opposing the establishment of TDP.	Already addressed above in S.No.1, point No 5.	As addressed in S.No.1.	As addressed in S.No.1.
10	M. Dasudu, Sana Arjipali Ward Member:Opposed	No issue raised.	--	--
11	A.Venkata, Bada Arjipalli: TDP & MOP should be stopped.	MoPP & TDP could not be stopped as these units are having national importance. MoPP caters to the strategic requirement & country's energy and security needs. Proposed TDP is a value addition project for two minerals i.e. Ilmenite & Zircon for producing value added products. All the necessary statutory compliances with respect to MoPP are being complied with and the same will be fulfilled during TDP operation also.	--	--
12	Ramesh Chandra Sahu, Matikhalo: Opposed	No issue raised.	--	--
13	Muna Pradhan, Matikhalo:Opposed			
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> Already addressed in S.No.1, point No 2. **Temperature rising:** The maximum & minimum temperature at IREL,OSCOM site is recorded by HPU Lab of BARC which is attached herewith as **Annexure-F**. From the same data, it can be seen that the temperature range is 12-43ºC during the last ten year period i.e. during the year 2008 to 2017. Also, the normal temperature range in Chatrapur District is 20 - 41ºC (IMD data tables book). Therefore, the statement made is not correct.	As addressed in S.No.1, point No.2.	As addressed in S.No.1, point No.2.
16	Mr. Prashanta Kumar Kar, Vice Chairman - Chatrapur Block Request for postpone the	No point raised.	--	--

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
	Public Hearing to another date.			
17	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	IREL being a Government of India PSU, the recruitment will be made as per Government of India rules. MoPP Public Hearing was held in 2010 and as per the commitment given direct and indirect opportunities have been given through job work contracts and service contracts. Apart from that, local people are involved in plantation activity in mined out areas.	Indirect opportunities are provided through work contracts and service contracts for the local people.	**Time Frame & Budget:** Continues process
18	Mr. Ganesh Sahu Puruna Chatarpur: Opposed	No point raised.	--	--
19	Mr. Padma Charan Sahu Sarpanch - Kallipalli GP As people are suffering from Kidney Problem therefore this project is Opposed	This point has already been addressed in S.No.1, point No 5.	As addressed in S.No.1, point No 5.	As addressed in S.No.1, point No 5.
20	Mr. Santosh Kumar Sahoo, Chamakhandi:As they have lost their Land and Forest, Hence, he is opposing the Plant.	As per record, the claim made is not correct.	--	--
21	Mr J. Aginashu, Baginipeta: IREL is taking life of local people - Opposed	The compliant is not correct. IREL, OSCOM processes are well established and all the pollution levels are within the norms. All the safety measures stipulated by MoEF &CC, OSPCB, DGMS and AERB are strictly followed. All the Occupational Health and Safety issues as per OHSAS–14001 guidelines are strictly followed in IREL,OSCOM. The same will be fulfilled for TDP also.	All the stipulated safety and pollution norms are strictly followed and the same will be carried out for TDP.	**Time Frame & Budget:** Already implemented & continuous process.
22	Mr P. Lambodhara Reddy, Kallipalli: Opposed	No point raised.	--	--
23	Mr. Basanta Pradhan			

S. No	Issue	Proponent Response	Action Plan	Time Frame & Budget
	Chandarpadar : Opposed			
24	Mr. Gobind Chadra Sahu Uppalapati: Opposed			
25	Mr. R. Dandapani Reddy Tikiria, Berhampur: Opposed			
26	Mr. B. Simadri, Tikiria Berhampur: Opposed			

Point 5: Site Specific Risk Assessment studies & Disaster Management Plan

Reply: Risk assessment as per MSDS has been provided by the proponent

Point 6: 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 7: 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

Observations of the committee:

24.0 The committee deliberated on the reply submitted by the project proponent on the observations of the committee made in the earlier meeting of EAC. After detailed deliberations the committee was not satisfied with the reply made to Point No.1, Point No.4 and CER. The committee advised the PP to submit the quantity of the dozing material for neutralization of the generated acids; revised time bound action plan along with budget provision for the issues raised during the public hearing and revised CER provision.

25.0 The Project proponent submitted the details of quantity of the dozing material required for neutralization of the generated acids alongwith revised CER provision. The details are as follows:

1. 300 Kg/day of Lime (as CaO) will be required for neutralisation of the acids, generated in the proposed TDP process.

2. The total volume of treated effluent generatedi.e.37.045m^3/daywill be passed through Bentonite bed to separate the entrapped primary amine contents. The used Bentonite will

be sent to Treatment, Storage Disposal Facility(TSDF), authorised by State Pollution Control Board, Odisha till appropriate technology for biological treatment of primary amine is available. Meanwhile the PP will also take necessary action to contact NEERI, Nagpur & IICT, Hyderabadforexploring the possibility todevelop process for biological treatment of primary amines and will also explore the suitability of the Ion-Exchange adsorption process for separation of primary amine from the treated effluent.

3. The physical activitiesbased on public hearing and financial program of CER for this proposed TDP project is as given below:

S. No	Proposed CER Activity	Financial Allocation, Rs Lakhs		Total Amount Rs Lakhs
		1st Year	2nd Year	
1	Education	8.00	8.00	16.00
2	Environmental Monitoring	6.00	6.00	12.00
3	Plantation & Road Maintenance	6.00	6.00	12.00
4	Health	7.00	7.00	14.00
Total		**27.00**	**27.00**	**54.00**

Recommendations of the committee:

26.0 After detailed deliberations, the committee recommended for issue of environmental clearance for the proposed Technological demonstration plant with following specific and general conditions as per the EIA Notification, 2006.

A. Specific Conditions:

i. The project proponent shall conduct study on Bio-Degradation of hazardous primary amines and volatile solvents used for solvent extraction through a reputed scientific organization within one year and recommendations of the study shall be implemented. Meanwhile, the project proponent shall dispose the solids in the TSDF as per the CPCB guidelines.

B. General Conditions:

I. Statutory compliance:

i. The recommendations of the approved Turtle Conservation Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report.

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

iii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

iv. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emissions with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connect the systems to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

iii. The project proponent shall install Continuous Ambient Air Quality monitoring systems for monitoring of common/criteria 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.

iv. The project proponent shall submit monthly summary report of continuous stack emission and ambient air quality monitoring alongwith results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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

vi. The project proponent shall use leak proof trucks/dumpers for carrying ore and other raw materials and cover them with tarpaulin.

vii. Wind breaking fence and chemical spraying shall be provided on the raw material stock piles.

viii. The PP shall Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 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. (case to case basis small plants: Manual; Large plants: Continuous)

ii. The project proponent shall monitor regularly the ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

iv. The project proponent shall provide the slime disposal facility with impervious lining and collection wells for collection of seepage. The water collected from the slime pond shall be treated and recycled.

v. Adhere to 'Zero Liquid Discharge'

vi. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

viii. The project proponent shall practice rainwater harvesting to maximum possible extent.

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

IV. Noise monitoring and prevention

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as part of six-monthly compliance report.

ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

V. Energy Conservation measures

i. Provide solar power generation on roof tops of buildings, for lighting of all common areas, street lights, parking around project area and maintain the same regularly.

ii. Provide LED lights in the offices and residential areas.

VI. Waste management

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

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

VII. Green Belt and EMP

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

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

VIII. Public hearing and Human health issues

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

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

iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to bedismantled/removed after completion of the project.

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

IX. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

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

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

iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out

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

X. Miscellaneous

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

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

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

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

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

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the State Pollution Control Board as prescribed under the Environment

(Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office of this Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

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

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

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

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

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

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

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

xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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

1.2 **Modernization-cum-expansion of Bhilai Steel Plant (Crude Steel capacity from 4 MTPA to 7.0 MTPA; Captive Power Plant - 76 MW; TRT -14 MW & CDCP – 4 MW; Total Power Generation: 94 MW) at Bhilai, Chhattisgarh by M/s Steel**

Authority of India Limited [Online proposal No. IA/CG/IND/67974/2017; MoEFCC File No. J-11011/28/2007- IA-II(I)] – Environmental Clearance.

1.0 The proponent has made online application vide proposal no. IA/CG/IND/67974/2017dated 10thAugust 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The proposal for revised configuration of 7.0 MTPA Modernization-Cum-Expansion of Bhilai Steel Plant along with Captive power plant of M/s Steel Authority of India Limited (SAIL) located in Bhilai,Tehsil Durg, District Durg, State Chhattisgarh was initially received in the Ministry on 06th September, 2017 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 24thmeeting held during 13th – 15th November, 2017 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 29th November, 2017 vide Letter No.F. No. J-11011/28/2007-IA-II(I).

3.0 The project of M/s. SAIL-BSPlocated in Bhilai, Durg Tehsil, Durg District, Chhattisgarh State is for revised configuration of 7.0 MTPA Modernization-Cum-Expansion of Bhilai Steel Plant for production of 7.0 Million TonnesPer Annum(million TPA) of Crude Steel Production. The existing project was accorded environmental clearance videlr.no.J-11011/28/2007-IAII(I) dated 31.03.2008.The Status of compliance of earlier EC was obtained from Regional Office, Nagpur vide Lr. Nos. 5-249/2009(Env)3463 dated 2nd April, 2018 and 5-249/2009(Env)4372 dated 26th September, 2018. Presently, there are no non-compliances reported by Regional Officer. The table showing present configuration (7.0 MTPA project configuration as per EC 2008 with amendments), proposed configuration and final project configuration after grant of EC is as below:

S N.	**7.0 MTPA Plant Configuration (EC 31.03.2008 & amendments**	**Present Proposal under Revised Configuration for grant of EC**	**7.0 MTPA Plant Configuration After Grant of EC**		**Remarks**
			1st Three years	**After Three Years FINAL CONFIGURATION**	
1	**Sinter Plant Complex**				
	Sinter Plant-1 (4 x 50 m^2) **Phased out**	**No Change**	**-**	**-**	**No Change**
	Sinter Plant-2 (3x75 m^2+1x 80 m^2)	**No Change**	Sinter Plant-2 (3x75 m^2+1x80 m^2)	Sinter Plant-2 (3x75 m^2+1x 80 m^2)	**No Change**

S N.	7.0 MTPA Plant Configuration (EC 31.03.2008 & amendments	Present Proposal under Revised Configuration for grant of EC	7.0 MTPA Plant Configuration After Grant of EC		Remarks
			1st Three years	After Three Years **FINAL CONFIGURATION**	
	Sinter Plant-3 : Machine 1 (1x 320 m2)	**No Change**	Sinter Plant-3 : Machine 1 (1x 320 m^2)	Sinter Plant-3 : Machine 1 (1x 320 m^2)	**No Change**
	Sinter Plant-3 : Machine 2 (1x 360 m2) (Mc. 2 : Production : 3.168 MTPA)	Sinter Plant-3, Machine 2 (1x 360 m2) : Increase in Sinter Production from 3.168 MTPA to 3.705 MTPA (+ 0.537 MTPA)	Sinter Plant-3, Machine 2 (1x 360 m2) : Production Capacity : 3.705 MTPA	Sinter Plant-3, Machine 2 (1x 360 m2) : Production Capacity : 3.705 MTPA	**Change**
	Total Sinter Production = 9.235 MTPA	**Total Sinter Production = 9.772 MTPA**	**Total Sinter Production = 9.772 MTPA**	**Total Sinter Production = 9.772 MTPA**	**Change**
2	**Coke Oven Complex**				
	Composition : 8 Nos. - 65 Oven 4.3 m tall battery i.e. Battery No. 1, 2, 3, 4, 5, 6, 7 & 8 and 3 Nos. - 67 Ovens, 7 m tall batteries, i.e. Coven Battery No. 9, 10 & 11.	**Composition** : **No Change**	**Composition** : 8 Nos. - 65 Oven 4.3 m tall battery and 3 Nos. - 67 Oven 7 m tall battery	**Composition** : 8 Nos. - 65 Oven 4.3 m tall battery and 3 Nos. - 67 Oven 7 m tall battery	**Composition** : **No Change**
	Operation Regime: • 8 Battery Operation. • At any time 3 Coke Oven batteries will be shut-down for cold repair and rebuilding cycle.	**Operation Regime** : • 9 Battery Operation. • At any time 2 batteries will be shut-down for cold repair and rebuilding	**Operation Regime :** • 9 Battery Operation. • At any time 2 batteries will be shut-down for cold repair and rebuilding cycle.	**Operation Regime :** • 9 Battery Operation. • At any time 2 batteries will be shut-down for cold repair and rebuilding cycle.	**Change**

S N.	7.0 MTPA Plant Configuration (EC 31.03.2008 & amendments	Present Proposal under Revised Configuration for grant of EC	7.0 MTPA Plant Configuration After Grant of EC		Remarks
			1st Three years	After Three Years **FINAL CONFIGURATION**	
		cycle. • Running one extra battery, keeping coke production same.			
	Total Gross Coke Production = 3.94 MTPA	**No Change**	**Total Gross Coke Production = 3.94 MTPA**	**Total Gross Coke Production = 3.94 MTPA**	**No Change**
3	**Blast Furnace Complex**				
	BF 1 with CDI (1033 m^3) - to be gradually progressively phased out	BF 1 with CDI (1033 m^3) **in operation for three years for undertaking sequential capital repair of BF 4, 5 & 6 along with stabilisation of BF 8.**	BF 1 with CDI (1033 m^3) **in operation for three years**	Phased Out	**Will be in operation for 3 years and then phased out.**
	BF 2 with TIS (1033 m^3) - Phased Out	**No Change**	-	-	**No Change**
	BF 3 with TIS (1033 m^3) - Phased Out	**No Change**	-	-	**No Change**
	BF 4, 1719 m^3	BF 4, 1719 m^3 **Capital Repair**	BF 4, 1719 m^3	BF 4, 1719 m^3	**No Change**
	BF 5, 1719 m^3	BF 5, 1719 m^3	BF 5, 1719 m^3	BF 5, 1719 m^3	**No**

S N.	7.0 MTPA Plant Configuration (EC 31.03.2008 & amendments	Present Proposal under Revised Configuration for grant of EC	7.0 MTPA Plant Configuration After Grant of EC		Remarks
			1st Three years	After Three Years **FINAL CONFIGURATION**	
		Capital Repair			**Change**
	BF 6, 1719 m^3	BF 6, 1719 m^3 **Capital Repair**	BF 6, 1719 m^3	BF 6, 1719 m^3	**No Change**
	BF 7, 2363 m^3	**No Change**	BF 7, 2363 m^3	BF 7, 2363 m^3	**No Change**
	BF 8, 4060 m^3 with TRT	**No Change**	BF 8, 4060 m^3 with TRT	BF 8, 4060 m^3 with TRT	**No Change**
	Total Hot Metal = 7.5 MTPA	**No Change**	**Total Hot Metal = 7.5 MTPA**	**Total Hot Metal = 7.5 MTPA**	**No Change**
4	**Steel Making & Casting Units**				
	SMS I	**SMS I**	**SMS I**	**SMS I**	**SMS I**
	4x 500t Twin Hearth Furnace - to be gradually progressively phased out	4x 500t Twin Hearth Furnace **in operation for three years till stabilization of SMS III & BF 8).**	4x 500t Twin Hearth Furnace **in operation for three years**	Phased Out	**Will be in operation for 3 years and then phased out.**
	SMS II	**SMS II**	**SMS II**	**SMS II**	**SMS II**
	3x120t BOF	**No Change**	3x120t BOF	3x120t BOF	**No Change**
	2X120t LF	**No Change**	2X120t LF	2X120t LF	**No Change**
	3x120t RH	**No Change**	3x120t RH	3x120t RH	**No Change**
	1x120t VD	**No Change**	1x120t VD	1x120t VD	**No Change**
	Hot metal Desulphirisation	**No Change**	Hot metal Desulphirisation	Hot metal Desulphirisation	**No Change**
	3x1 strand Slab Casters (MC#1, 2, 3)	**No Change**	3x1 strand Slab Casters (MC#1, 2, 3)	3x1 strand Slab Casters (MC#1, 2, 3	**No Change**
	Combi-Caster: Bloom (3 strand) cum Slab (1	**No Change**	Combi-Caster: Bloom (3 strand)	Combi-Caster: Bloom (3 strand)	**No Change**

S N.	7.0 MTPA Plant Configuration (EC 31.03.2008 & amendments	Present Proposal under Revised Configuration for grant of EC	7.0 MTPA Plant Configuration After Grant of EC		Remarks
			1st Three years	After Three Years **FINAL CONFIGURATION**	
	strand) Caster (mc#4)		cum Slab (1 strand) Caster (mc#4)	cum Slab (1 strand) Caster (mc#4)	
	1x4 strand Bloom Caster (MC#5)	**No Change**	1x4 strand Bloom Caster (MC#5)	1x4 strand Bloom Caster (MC#5)	**No Change**
	1x1 slab caster (mc#6)	**No Change**	1x1 slab caster (mc#6)	1x1 slab caster (mc#6)	**No Change**
	SMS III	**SMS III**	**SMS III**	**SMS III**	**SMS III**
	3x160 t BOF	**No Change**	3x160 t BOF	3x160 t BOF	**No Change**
	3x160 t LFs	**No Change**	3x160 t LFs	3x160 t LFs	**No Change**
	1x 160 t RH-OB	**No Change**	1x 160 t RH-OB	1x 160 t RH-OB	**No Change**
	1 x vacuum tank degassing unit (Space provision)	**No Change**	1x vacuum tank degassing unit (Space provision)	1x vacuum tank degassing unit (Space provision)	**No Change**
	Hot metal Desulphirisation	**No Change**	Hot metal De-sulphirisation	Hot metal De-sulphirisation	**No Change**
	-	New 3x160t Argon Rinsing Unit (ARU) envisaged	New 3x160t Argon Rinsing Unit (ARU)	New 3x160t Argon Rinsing Unit (ARU)	**Change**
	2x6 strand Billet Casters	**No Change**	2x6 strand Billet Casters	2x6 strand Billet Casters	**No Change**
	1x6 strand Bloom cum Billet Casters	**No Change**	1x6 strand Bloom cum Billet Casters	1x6 strand Bloom cum Billet Casters	**No Change**
	1x3 strand Beam Blank Caster	Modification of 1x3 strand Beam Blank Caster into 1x3 strand Bloom-cum-Beam blank Caster of same capacity	1x3 strand Bloom-cum-Beam blank Caster	1x3 strand Bloom-cum-Beam blank Caster	**Change**
	Total Crude Steel Production : 7.0 MTPA	**No Change**	**Total Crude Steel Production : 7.0 MTPA**	**Total Crude Steel Production : 7.0 MTPA**	**No Change**

S N.	7.0 MTPA Plant Configuration (EC 31.03.2008 & amendments	Present Proposal under Revised Configuration for grant of EC	7.0 MTPA Plant Configuration After Grant of EC		Remarks
			1st Three years	After Three Years FINAL CONFIGURATION	
6	**Rolling Mills**				
	Blooming and Billet Mill (2.149 MTPA) - to be gradually progressively phased out.	Blooming and Billet Mill (2.149 MTPA) **in operation for three years till stabilization of SMS III & BF 8.**	Blooming and Billet Mill (2.149 MTPA) **in operation for three years**	-	**Will be in operation for 3 years and then phased out.**
	Universal Beam Mill (1.0 MTPA): Not coming	**No Change**	-	-	**No Change**
	2.2 MTPA Rail & Structural Complex with Universal Rail Mill (URM)	**No Change**	2.2 MTPA Rail & Structural with Universal Rail Mill (URM)	2.2 MTPA Rail & Structural with Universal Rail Mill (URM)	**No Change**
	Plate Mill (1.65 MTPA)	New Quenching & Tampering facility in Plate Mill	Plate Mill : 1.65 MTPA with Quenching & Tampering facility	Plate Mill : 1.65 MTPA with Quenching & Tampering facility	**Change**
	Bar & Rod Mill (0.90 MTPA)	**No Change**	Bar & Rod Mill 0.90 MTPA	Bar & Rod Mill 0.90 MTPA	**No Change**
	Merchant Mill (0.85 MTPA)	**No Change**	Merchant Mill (0.85 MTPA)	Merchant Mill (0.85 MTPA)	**No Change**
	Wire Rod Mill (0.7 MTPA)	**No Change**	Wire Rod Mill (0.7 MTPA)	Wire Rod Mill (0.7 MTPA)	**No Change**
	Total Finished Steel = 6.30 MTPA	**No Change**	**Total Finished Steel = 6.30 MTPA**	**Total Finished Steel = 6.30 MTPA**	**No Change**
7.	**Power Blowing Station & Turbo-generators**				
	6 x 150 tph boiler	**No Change**	6 x 150 tph boiler	6 x 150 tph boiler	**No Change**
	1 x 150 tph boiler	**No Change**	1 x 150 tph boiler	1 x 150 tph boiler	**No Change**

S N.	7.0 MTPA Plant Configuration (EC 31.03.2008 & amendments	Present Proposal under Revised Configuration for grant of EC	7.0 MTPA Plant Configuration After Grant of EC		Remarks
			1st Three years	After Three Years **FINAL CONFIGURATION**	
	3 x 12 MW	**No Change**	3 x 12 MW	3 x 12 MW	**No Change**
	1 x 15 MW	**No Change**	1 x 15 MW	1 x 15 MW	**No Change**
	2 x 150 tph BF gas fired boiler	**No Change**	2 x 150 tph BF gas fired boiler	2 x 150 tph BF gas fired boiler	**No Change**
	1 x 25 MW	**No Change**	1 x 25 MW	1 x 25 MW	**No Change**
	1390 tph steam, Power Generation 76 MW	**No Change**	**1350 tph steam, Power Generation 76 MW**	**1350 tph steam, Power Generation 76 MW**	**No Change**
	TRT Power Generation 14 MW	**No Change**	TRT Power Generation 14 MW	TRT Power Generation 14 MW	**No Change**
	CDCP Power Generation 4 MW	**No Change**	CDCP Power Generation 4 MW	CDCP Power Generation 4 MW	**No Change**
8.	**Refractory Material Plant (RMP) : Lime &Dolo plant**				
	RMP I to be gradually/ progressively phased out.	**RMP I in operation along with SMS-1 for three years till stabilization of SMS III & BF 8**	**RMP I in operation for three years**	-	**Will be in operation for 3 years and then phased out.**
	RMP - II • 2x330 tpd + 1 x 144 tpd Lime kiln	**No Change**	**RMP-II** • 2x330 tpd + 1 x 144 tpd Lime kiln	**RMP-II** • 2x330 tpd + 1 x 144 tpd Lime kiln	**No Change**
	RMP III 5x450 tpd lime and dolo kiln for SMS-III	**No Change**	**RMP III** 5x450 tpd lime and dolo kiln for SMS-III	**RMP III** 5x450 tpd lime and dolo kiln for SMS-III	**No Change**
	Refractory Material = 1.58 MTPA	**No Change**	**Refractory Material = 1.58 MTPA**	**Refractory Material = 1.58 MTPA**	**No Change**
9.	**Oxygen Plant :**	**No Change**	**Oxygen Plant :**	**Oxygen Plant :**	**No**

S N.	7.0 MTPA Plant Configuration (EC 31.03.2008 & amendments	Present Proposal under Revised Configuration for grant of EC	7.0 MTPA Plant Configuration After Grant of EC		Remarks
			1st Three years	After Three Years **FINAL CONFIGURATION**	
	• 3 x 550 tpd and • 1 x 700 tpd		• 3 x 550 tpd and • 1 x 700 tpd	• 3 x 550 tpd and • 1 x 700 tpd	**Change**
10.	Other Auxiliary facilities (Matching facilities for achieving production)	**No Change**	Other Auxiliary facilities (Matching facilities for achieving production)	Other Auxiliary facilities (Matching facilities for achieving production)	**No Change**

The summary of the proposed capacity / modernizations / modifications for different units/products of revised configuration of 7.0 MTPA Modernization-Cum-Expansion of Bhilai Steel Plant under present proposal for environmental clearance is as below:

S N	Name of unit	New units / Modernisation / Modificiation requested
	SMS-III	Addition of new 3x160 t Argon Rinsing Unit (ARU)
		Modification of 1x3 strand Beam Blank caster in to 1x3 Strand Bloom-cum-Bean Blank caster of same capacity
	Plate Mill	Addition of new Quenching and tempering facility
	Coke Oven Complex	Bringing in of one more Coke Oven Battery in operation to achieve the desired coke production (3.94 MTPA) for 7.0 MTPA Crude Steel production.
	Sinter Plant-III (Machine-2)	Increase of total sinter production from sinter plant complex (from 9.235 MTPA to 9.772 MTPA) by operational optimization.
	Blast Furnace-1 (BF-1)	In operation during the sequential capital repair of BF-4, BF-5 & BF-6 & BF8 Stabilisation / coming in to full production. Expected time required is 3 years.
	Steel Melting Shop-I (SMS-I)	In operation till SMS-III Stabilisation / coming in to full production & BF8 Stabilisation / coming in to full production. Expected time required 3 years.
	Refractory Material Plant-I (RMP-I)	
	Blooming & Billet Mill (BBM)	

4.0 The proposed project under revised configuration of BSP 7.0 MTPA modernization-cum-expansion is proposed within the already acquired existing premises of BSP and no additional land will be required. The project area of SAIL-BSP is 3284.75 ha. SAIL-BSP is

having total 6286.75 ha (15534 acre) of land under its possession. No forest land involved. The entire land has been acquired for the project earlier during the setting up of Bhilai Steel Plant which had initial capacity of 1.0 MTPA Crude Steel production. No River passes through the project area (p./c). However, it has been reported that two artificial water reservoirs, namely Maroda –I and Maroda-II, for industrial water cooling and storage of raw water exist within the project boundary 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 $21^0$11'to $21^0$13'N Latitude and $81^0$22' to $81^0$24'ELongitude in Survey of India topo sheet No. F44P08, at an average elevation of 290 m AMSL. No ground water is being used either for the existing project or being envisaged for the proposed project. Additionally, SAIL-BSP has constructed rain water harvesting systems in several units within plant premises and identified buildings of Bhilai Township, wherein the rain water system has been established to recharge ground water through recharges pits.

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 list of flora and fauna reporting no schedule-I fauna in the study area is shown in Table 3.2.6e of EIA.

7.0 The proposed project is envisaged for techno-economic advantage during project operation. While there will be no change in Hot Metal, Crude Steel and Finished Steel production and Power Generation, which will remain same as per the EC accorded in 2008, i.e 7.5 MTPA Hot Metal, 7.0 MTPA Crude Steel and 6.3 MTPA Finished Steel.

8.0 The targeted production capacity of the Bhilai Steel Plant is 7.0 Million TPA Crude Steel (same as per the EC accorded in 2008). The ore for the plant would be procured from captive mines of SAIL. The ore transportation is done through rail and road.

9.0 No additional water requirement is envisaged for the proposed project under the present proposal of revised configuration of 7.0 MTPA Modernization-cum-Expansion from that as required for the 7.0 MTPA modernization-cum-expansion (EC 2008). The existing total water requirement at 7.0 MTPA Modernization-cum-expansion of BSP is 15981 m3/hr(5.0 TMC ft/y). Presently the Water Resources Department (WRD), Chhattisgarh has accorded supply of 4.0 TMCft/y water through Tandula canal vide agreement dated 19th April, 2006 and BSP has requested WRD for supply of additional 1.0 TMCft/y water vide Lr. No. GM/WMD/2018/233 dated 8th March, 2018 to meet the water demand at 7.0 MTPA capacity.

10.0 The power requirement of the 7.0 MTPA project is estimated as 468MW. The agreement with Chhattisgarh State Power Distribution Company and NTPC-SAIL Power Company Private Limited (NSPCL) is enclosed as Annexure 2.3, Volume II of EIA/EMP Report. Only critical power and total process steam will be generated through the captive power plant. The balance power requirement will be met from outside sources.

11.0 Baseline Environmental Studies were conducted during Post Monsoon 2017season i.e. from 1st October, 2017to 31st December, 2017. Ambient air quality monitoring has been carried

out at 8 locations during October to December, 2017and the data submitted indicated: PM_{10} (39to 83µg/m^3), $PM_{2.5}$ (18to 43µg/m^3), SO_2 (4.8to 23.1µg/m^3) and NOx(14.5 to 31.9µg/m^3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 2.75µg/m^3 with respect to the PM10, 2.0µg/m^3 with respect to the SO2 and 2.0 µg/$m^3$with respect to the NOx and this increase will be only for the initial three years.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.25to 7.82, Total Hardness: 156 to 292mg/l, Chlorides: 15.43 to 63.64 mg/l, Fluoride:0.22to 0.48 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 9 locations. pH: 7.55 to 8.12; DO: 5.3 to 6.4 mg/l and BOD: 1 to 4mg/l.

13.0 Noise levels are in the range of 36.2 to 72.4 dB(A) for daytime and 34.2 to 55.7 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. Since it has been envisaged that no families are to be rehabilitated, hence providing compensation and preference in the employment does not arise/not applicable.

15.0 It has been reported that in the proposed project additional about 283618T/yr of air cooled processed slag from BF#1 will be generated, out of which about 30% will be used in road making/construction material/ sale to slag wool manufacturers and remaining will be stocked in the earmarked slag yard during the operation of BF#1. The earmarked slag yard has sufficient space to stock the remaining air cooled processed slag generated during the operation of BF#1. Project proponent has also reported that efforts are being made for further enhancing the air cooled processed slag. Green belt developed within and around the BSP project area is 1711.33 ha with about 4,192,144 trees planted up to 2016-17. In 2017-18, 35190 trees were planted covering about 14 hectares. Green belt developed around the project site will 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 Chhattisgarh Environment Conservation Board (CECB) obtained vide Lr.No 4690/TS/CECB/2018 dated 31.08.2018 (for 7.0 MTPA MODEX units and existing 4.0 MTPA units) and consent is valid up 29.08.2019. Proponent has also reported that the above consent thus covers all operating units of Bhilai Steel Plant.

17.0 The Public hearing of the project was held on 8th June, 2018 at Nehru Sanskritik Bhavan, Sector -1, Bhilai Nagar, Tehsil-Durg-Bhilai, Dist-Durg (C.G.) under the chairmanship of Shri Sanjay Agarwal, Additional District Magistrate, for revised configuration of 7.0 Million TPA Modernization-Cum-Expansion of Bhilai Steel Plant along with captive power plant of M/s Steel Authority of India Limited (SAIL) located in Bhilai, Tehsil Durg, District Durg, State Chhattisgarh.

S. N	Name / Address of Stakeholders	Issues raised by Stakeholders / Public Members / Representatives	SAIL-BSP Response / Action Plan
1	Shri. KhemlalSahu Sarpanch	1 Raised the requirements of : 2 Solar operated water tank at three places.	1 New Bore well fitted with Solar operated pump with storage tank at three places

S. N	Name / Address of Stakeholders	Issues raised by Stakeholders / Public Members / Representatives	SAIL-BSP Response / Action Plan
	Gram Panchayat -Selud	3 Construction of SulabhShauchalya at bazar chowk. 4 Construction of well equipped shed at weekly Hatt Bazar location. 5 Sports equipments for boys and girls of the village. 6 Well equipped Community hall for 1000 person. 7 Pitching, boundary wall, cementing around the Talab and beautification of Main pond (KhadhanTalab, Bajrang chowk).	shall be provided 1 Four Seater SulabhShauchalya at Bazar Chowk shall be constructed. 2 Other issues raised may be considered in the forthcoming years under CSR activities.
2	Shri Dinesh Kumar Thakur Sarpanch, Gram Panchayat –Khapri (Kuatelabhata)	Raised the requirements of : 1 Boundary wall of Panchayat Bhavan with tree plantation all around the periphery. 2 New Bore wells at 2 locations fitted with Solar operated Pumps. 3 Construction of Two extra rooms in Govt. Primary School. 4 Construction of dustbin at 8 places for collection of waste from houses. 5 Beautification and tree plantation around ShitalaTalab. 6 Entrance Gate at approach road from Chikli to Khapri (K). 7 Tree plantation at all govt grass land with fence- Khasra No-235,243 and 239 8 Waiting hall, boundary wall and tree plantation at cremation ground.	1 Boundary wall of Panchayat Bhavan with tree plantation all around the periphery shall be constructed. 2 New Bore wells at 2 locations fitted with Solar operated Pumps shall be provided. 3 Two extra rooms in Govt. Primary School shall be constructed. 4 Other issues raised may be considered in the forthcoming years under CSR activities.
3	ShriYashwant Kumar Thakur Sarpanch Gram Panchayat-Dhumardhi	Raised the requirements / issue of : 1 Cementing of roads from main road to cremation ground-700 meters 2 Extension of pipeline for drinking water by 1000 m 3 Bus stand falls under revenue records 41 as Khasra no 101 which is claimed by Nagar Panchayat Utai and is to be acquired by BSP. - To solve this issue.	1 Service road from main road to cremation ground approx..700 meters shall be cemented 2 Pipeline for drinking water pipeline shall be extended further by 1000 m approx. 3 Point No.3 not related to BSP

S. N	Name / Address of Stakeholders	Issues raised by Stakeholders / Public Members / Representatives	SAIL-BSP Response / Action Plan
4	Shri Sarpanch, Gram Panchayat - Pauwara	Raised the requirements of : 1 Pad Machine to women group. 2 Extension of pipeline for drinking water . 3 Tree plantation at New Talab and arrangement of security. 4 Construction of Mangal Bhavan. 5 Cleaning of wells and provision of water in Tank from well. 6 Provision of cars at Shitala Chowk and other Chowks 7 Provision of Syntax at Health Center. 8 Beautification of Shitala Talab. 9 Tree plantation at unused land.	1 Sanitary Pad Machine to women group shall be provided 2 Pipeline for drinking water pipeline shall be extended further by 1000 m approx. 3 Other issues raised may be considered in the forthcoming years under CSR activities.
5	Shri Ajay kant Bhatt Director, Muskan NGO Sector – 2, Bhilai	Raised the requirements of : 1 Construction of Garage for School Bus. 2 Arranging of Visit to BSP for meritorious students of Durg District. 3 Rain water harvesting in BSP building. 4 Garden in Muskan School.	1 Garage for School Bus at Muskan School shall be constructed. 2 Arranging of visit to BSP for meritorious students of Durg District shall be provided. Presently every year about 50-60 meritorious students are being taken for plant visit and given brief details about the working of the plant. In addition, more than 400 engineering students undergo vocational training at BSP plant area. 3 Other issues raised may be considered in the forthcoming years under CSR activities.
6	Smt Tarani Verma Sarpanch Gram Panchayat-Pathora	Raised the requirements of : 1 Construction of toilet for boys Govt Middle School 2 Construction of boundary wall at High school of length 165 meter. 3 Beautification of Baray in Talab and Construction of garden and	1 Four Seater Sulabh Shauchalya at Govt. Middle school for boys shall be constructed. 2 Boundary wall at high school of length 165 meter shall be constructed.

S. N	Name / Address of Stakeholders	Issues raised by Stakeholders / Public Members / Representatives	SAIL-BSP Response / Action Plan
		round footpath at Middle School Maidan. 4 Construction of Mangal Bhavan. 5 Leveling and boundary wall of Gouthan. 6 Provision of Jhulaghar at Middle and Primary School 7 Construction of shed at Muktidham for sitting. 8 Dirty water purification and water harvesting. 9 Provision of solar high-mast at 3 places. 10 Construction of Water Tank at Bhatapara.	3 Other issues raised may be considered in the forthcoming years under CSR activities.
7	Smt. Kumari Kodappa Sarpanch Gram Panchayat - Dhuarabhatta	Raised the requirements / issue of : 1. Construction of women bathroom, Public toilet for both men & women and pond beautification at Khadan Talab. 2. Additional rooms at High school. 3. Construction of boundary wall - 380 meters and tree plantation at high school. 4. Construction of separate toilets for boys and girls at high school. 5. Construction of women bathroom, Public toilet for both men & women and pond beautification at Bhatapara Talab. 6. Construction of women bathroom, Public toilet for both men & women and pond beautification at Ghatta Talab. 7. Construction of women bathroom at Bhatapara Talab. 8. Gym at high school. 9. Construction of waiting hall at cremation ground and tree	1. Four seater Sulabh Shauchalya at Khadan Talab for both men and women shall be constructed. 2. Additional 2 class rooms at High school premise shall be constructed. 3. Boundary wall of approx.- 380 meters shall be constructed at high school premise. 4. Point-13 not related to BSP 5. Other issues raised may be considered in the forthcoming years under CSR activities.

S. N	Name / Address of Stakeholders	Issues raised by Stakeholders / Public Members / Representatives	SAIL-BSP Response / Action Plan
		plantation. 10. Cleaning of three govt wells of the village and then covering these wells by grill. 11. Beautification and tree plantation of Bagbudha Devsthan. 12. Construction of community Hall at Bhatapara. 13. Stop dam at Jheriya Nallah and tree plantation.	
8	Ku.Deep mala Kosare Sarpanch Gram Panchayat - Mahakakala - Mudpaar	Raised the requirements of : 1. Pipeline extension by 1000 meters in ward no 01,06,04 2. C.C. road construction - ward no 05 - 250 meters 3. C.C. road construction - ward no 04 - 250 meters 4. Repair and construction of Public toilet 5. Tree plantation at Pahandor Jalashaya Marg - 1500nos. 6. Pond beautification BhatkaTalab 7. Construction of community Hall 8. Pucca Nallah at ward no 01,02 and 04 9. Cremation ground beautification	1. Pipeline for drinking water pipeline shall be extended further by 1000 m approx. meters in ward no 01,06,04 2. C.C. road shall be constructed at ward no 05 for approx.. 250 meters. 3. C.C. road shall be constructed at ward no 04 for approx. 250 meters. 4. Four seater SulabhhShauchalya for boys and girls shall be constructed. 5. Other issues raised to be considered in the forthcoming years under CSR activities.
9.	Arvind Kumar Pandey 35B/C/MS Mob. No. 9407981335	Raised the requirements of : Formation of Nagar Paryavaran Vibhag (Env dept-township) in Bhilai Township area for environment conservation and other issues.	Public Health Engineering and Horticulture section exists at Township to cater to environmental activities.
10	Smt Neelam Chandrakar Sarpanch Gram Panchayat-Aundhi	Raised the requirements of : 1. Repair and maintenance of Pipeline(1 KM) under NalJal Yogna 2. Ward-14 to ward-20 : Construction of C.C road 3. Tree plantation periphery of	1. Pipeline for drinking water pipeline shall be extended further by 1000 m approx. 2. C.C. road shall be constructed from Ward No 14 to Ward No 20

S. N	Name / Address of Stakeholders	Issues raised by Stakeholders / Public Members / Representatives	SAIL-BSP Response / Action Plan
		school ground 4. fencing of cremation ground and tree plantation 5. Beautification and tree plantation of Bade Talab 6. Levelling of Gouthan and tree plantation	3. Other issues raised may be considered in the forthcoming years under CSR activities.
11	C.V. BhagawantRao MIG-II -39 Hudco	Raised the issue of : Audit of green belt of BSP by CECB to ascertain the total trees planted in green belt.	The number of trees reported to be planted over the years is actual with 80% survivability & if CECB decides, the same may be audited.
12	Shri. Gajendra Madharia Sarpanch Gram Panchayat-Pahandor	Raised the requirements of : 1. Drilling of 6 inch bore well near Mohare Dabri and install 5 HP motor pump. 2. Extension of pipeline and water tank 3. Leveling of Gouthaan and Tree Plantation 4. Solar pump and light 5. Road side tree plantation at Mohare Dabri and from Dabri to Bendri Nallah. 6. Beautification and dredging of MohareDabri	1. New Bore wells at required location fitted with Solar operated Pumps shall be provided. 2. Pipeline for drinking water pipeline shall be extended further by 1000 m approx. 3. Other issues raised may be considered in the forthcoming years under CSR activities.
13	Shri.Pandey Pariyavaran Mitra Mandal, Bhilai	Raised the requirements of : 1. e-rickshaw 2. Power driven portable drilling machine. 3. Tractor with tanker 4. Power driven water pump. 5. Power driven grass cutter 6. Solar Pump and Drip irrigation system for three acres 7. Trees of different variety of height 10 feet or more - 200 nos. 8. Sprayers	1. E-rickshaw shall be provided to facilitate the plantation activities 2. Power driven portable drilling machine to facilitate the plantation activities 3. Other issues raised may be considered in the forthcoming years under CSR activities
14	SmtSangeeta Nirmalkar Sarpanch Gram	Raised the requirements of : 1. Water Tank and Pipeline NalJal Yogna 2. Public Toilet and Bath room	1. New Bore wells at required location fitted with Solar operated Pumps shall be provided

S. N	Name / Address of Stakeholders	Issues raised by Stakeholders / Public Members / Representatives	SAIL-BSP Response / Action Plan
	Panchayat-Mahakakurd	3. Community Health Center 4. Community Hall 5. Tree Plantation at College Ground 6. Boundary wall of school	2. Four seater Sulabhh Shauchalya for men and women shall be constructed
		7. Boundary wall of Panchayat Bhavan 8. Talab Ghat construction	3. Other issues raised may be considered in the forthcoming years under CSR activities.

18.0 The issues raised during public hearing and actions/schemes proposed by project proponent with action plan is as follows:

Scheme Envisaged on Public Demand	**Scheme Cost (Rs. Lakhs)**	**Completion Year**
Schemes / Activities for Infrastructure Creation for Drinking Water Supply		
Extension of drinking water pipeline by 1000 m approx. in Gram Panchayat- Dhumardhi.	7	2020-2021
Extension of drinking water pipeline by 1000 m approx. in Gram Panchayat - Pauwara.	7	2020-2021
Extension of drinking water pipeline by 1000 m approx. in Gram Panchayat - Mahakakala – Mudpaar.	7	2020-2021
Extension of drinking water pipeline by 1000 m approx. in Gram Panchayat – Aundhi.	7	2021-2022
Extension of drinking water pipeline by 1000 m approx. in Gram Panchayat – Pahandor.	7	2020-2021
New Bore well fitted with Solar operated pump with storage tank at three locations in Gram Panchayat - Pauwara.	15	2021-2022
New Bore wells at 2 locations fitted with Solar operated Pumps in Gram Panchayat –Khapri (Kuatelabhata).	10	2021-2022
New Bore wells at required location fitted with Solar operated Pumps in Gram Panchayat- Pahandor.	5	2021-2022
New Bore wells at required location fitted with Solar operated Pumps in Gram Panchayat- Mahakakurd.	5	2021-2022
Total	**70**	
Schemes / Activities for Sanitation Facilities		
Sanitary Pad Machine to women group in Gram Panchayat - Pauwara	3	2020-2021
Construction of four SeaterSulabhShauchalya at Bazar Chowk in Gram Panchayat -Selud.	6	2020-2021
Construction of four SeaterSulabhShauchalya at Govt. Middle school	3	2020-2021

Scheme Envisaged on Public Demand	**Scheme Cost (Rs. Lakhs)**	**Completion Year**
for boys in Gram Panchayat- Pathora.		
Construction of four SeaterSulabhShauchalya for boys and girls in Mahakakala - Mudpaar.	12	2020-2021
Construction of four SeaterSulabhShauchalya at KhadanTalab for both men and women in Gram Panchayat - Dhuarabhatta.	12	2021-2022
Construction of four SeaterSulabhShauchalya for men and women shall be constructed in Gram Panchayat- Mahakakurd.	12	2021-2022
Total	**48**	
Schemes / Activities for Education Infrastructure		
Arranging of Visit to BSP for meritorious students of Durg District.	0	2019-2020
Construction of two extra rooms in Govt. Primary School in Gram Panchayat –Khapri (Kuatelabhata).	10	2020-2021
Construction of additional 2 class rooms at High school premise in Gram Panchayat - Dhuarabhatta	10	2021-2022
Construction of Garage for School Bus at Muskan School, Sector – 2, Bhilai.	1	2020-2021
Construction of Boundary wall at high school of length 165 meter in Gram Panchayat- Pathora.	15	2021-2022
Construction of Boundary wall of approx. ~ 380 meters at high school premises in Gram Panchayat - Dhuarabhatta.	20	2021-2022
Total	**56**	
Schemes / Activities Road, Infrastructure & Plantation		
Construction of C.C. road at wards no 05 of approx. 250 meters in Gram Panchayat - Mahakakala - Mudpaar.	4	2021-2022
Construction of C.C. road at ward no 04 of approx. 250 meters in Gram Panchayat - Mahakakala - Mudpaar.	4	2021-2022
Construction of C.C. road from Ward No. 14 to Ward No. 20 in Gram Panchayat- Aundhi.	20	2021-2022
Construction of Service road from main road to cremation ground approx..700 meters in Gram Panchayat- Dhumardhi.	10	2021-2022
Construction of Boundary wall of Panchayat Bhavan with tree plantation all around the periphery in Gram Panchayat –Khapri (Kuatelabhata).	10	2021-2022
Providing E-rickshaw for facilitating plantation activities in Pariyavaran Mitra Mandal, Bhilai	3	2020-2021
Providing Power driven portable drilling machine to facilitate the plantation activities in Pariyavaran Mitra Mandal, Bhilai.	1	2020-2021
Total	**52**	
Grand Total of different Schemes under CER Project (in lakhs)	**226**	

19.0 An amount of 226Lakhs (0.83% of project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues

20.0 The capital cost of the project is Rs 273Crores and the capital cost for environmental protection measures has already been considered under already implemented Modernization-cum-Expansion 7.0 MTPA project. The detailed CSR plan has been provided in the EIA in its page No. 285 to 294.

21.0 It was informed that, Green belt developed within and around the BSP project area is 1711.33 ha with about 4,192,144 trees planted up to 2016-17.Greenbelt along plant boundary (in available space) has already been developed, which will be further re-strengthened. Local and native species will be planted with a density of 2500 trees per hectare. In the next five years for further strengthening the green cover / plantation in BSP project area and in surrounding about 107500 saplings will be planted and nurtured in an area of about 45.25 ha.

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

23.0 EIA Consultant: Mecon Limited, Ranchi

Observations of the Committee: -

24.0 After detailed deliberations, the committee observed that the Hazard Identification and Risk Assessment was generic in nature and not specific to the project; The action plan and budget provision for the issues raised during the public consultation was not specific; the activities envisaged and fund provision for CER should be based on the public hearing issues and the fund provision shall be made as per the guidelines issued by the ministry vide OM dated 1st May, 2018; The system of reporting of non-compliance/infrigments to the Board of Directors is not as per the ToRs prescribed; the action plan for disposal of solid waste is not proper; no concrete plan furnished for disposal of hazardous waste; action plan for performance monitoring of pollution control equipment was not furnished.

Recommendations of the Committee: -

25.0 Therefore, the committee advised the PP to submit the following information for further consideration of the proposal:

1. Revised Hazard Identification and Risk Assessment report along with the action plan specific to the project addressing all possible hazards / risks.

2. Revised time bound action plan including budgetary provisions for the issues raised during the public consultation.

3. Revised CER as per the guidelines issued by the ministry vide OM dated 1st May, 2018.

4. Standard Operating Procedures (SOP) for reporting of non-compliance/infrigments to the Board of Directors at periodical interval inter alia including in case of occurance of emergency / accident.

5. Action plan for 100% utilization / disposal of solid waste.
6. Concrete action plan for disposal of hazardous waste.
7. Action plan for performance monitoring of pollution control equipment.
8. Deatails of land utilization for plant, green belt and colony shall be provided.
9. Consolidated water balance of the plant for existing and expanded capacity shall be provided.

1.3 Proposed modification project of the existing 0.4 MTPA Integrated Steel Plant to 0.3 MTPA Integrated Steel Plant by changing 1x35 T FAR to 1x350 TPD DRI Kiln and 2x20 T Induction Furnace by M/s Gagan Ferro Tech Limited located at Jamuria Industrial Estate PO Ikra, DisttPashimBardhaman, West Bengal[Proposal No. IA/WB/IND/22096/2010; F.No. J-11011/232/2010-IA-II(I)] – Environmental Clearance.

1.0 The proponent has made online application vide proposal no. **IA/WB/IND/22096/2010**dated 13th September 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The Expansion Project of M/s Gagan Ferrotech Ltd located in Village-Ikra, Tehsil-Kanksa, District-Bardhaman (West), State-West Bengal was initially received in the Ministry on 31.03.2017 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 18th meeting held on 03.05 2017 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 23.05.2017 vide Lr. No. J-11011/232/2010-IA-II(I).

3.0 The project of M/s Gagan Ferrotech Ltdlocated in Jamuria Industrial Estate Village-Ikra , Tehsil- Kanksa, District- Bardhaman (West) , State- West Bengal is for modification of existing unit for reduction of steel production capacity from 0.4million tonnes per annum (million TPA) to 0.3 million tonnes per annum (million TPA).The existing project was accorded environmental clearance vide lr.no J-11011/232/2010-IA II (I) dated 11.03.2015.The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneshwar vide Lr. No.102-/362/EPE/2877, dated16.08.2018. There is no non-compliances reported by Regional officer. The proposed capacity for different products for new site area as below:

Name of unit	No. of unit	Capacity of each unit	Production Capacity in TPA
DRI Kiln	4	100 TPD	2,40,000 Sponge Iron

Name of unit	No. of unit	Capacity of each unit	Production Capacity in TPA
	1	350 TPD	
IF with LF	5	20 T,10H	3,20,000 Hot metal
Submerged Arc Furnace	2	9 MVA	38,200 Fe-Mn & Si-Mn)
CCM	2	3 Strand	3,20,000 Billet
Rolling Mill	1	1000 TPD	3,00,000TMT rods & coils
CPP(FBC)	1	8 MW	8 MW
AOD	1	30 T	Alloy Steel
CPP (WHRB)	1	16 MW	16 MW

4.0 The total land required for the project is 18.85 ha, industrial land. No forestland involved. The entire land has been acquired for the project. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is flat and reported to lies between to 23^0 41' 24.03'' N to 23^0 41' 47.87'' N Latitude and 87^0 06' 57.29'' E to 87^0 07' 04.59'' E Longitude in Survey of India topo sheet No. F45 D2 at an elevation of 105m AMSL. The ground water table reported to ranges between 1.8m – 2.3m below the land surface during the post-monsoon season and 2.23m - 4.23 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 3000 ham. Further, the stage of groundwater development is reported to be16% and 41% 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 corridors for Schedule-I fauna. The authenticated list of flora and fauna provided through the Base Line. Reporting presence of no schedule-I fauna in the study area given in Page Number 131,132,133 in the EIA/EMP report

7.0 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process. The final product is TMT rods using DRI-IF-CCM-RM route utilizing I/O lumps, Coal, Dolomite etc.

8.0 The targeted production capacity of the project is 0.3 million TPA TMT rods &coils.. The Iron ore for the plant would be procured from Barbil Odisha and coal to be imported from South Africa (agreement between Adani Global PTE limited and Gagan Ferrotech Ltd 21.12.17. Agreement Ref- AGPTE/GFL/2017-18/17). The ore transportation will be done through Rail & Road.

9.0 The fresh water requirement of the project is estimated at 3,725 m^3 /day, the required water will be drawn from Jamuria Municipal Corporation. The permission for drawl of 4000 m3/day water has been obtained from Jamuria Municipal Corporation vide Lr. No. 441/JM date

20.03.2012 and Lr.No. GFL/JM-AMC/2017-18/04/006 Dated 31.07.17 respectively application has been made for total requirement.

10.0 The power requirement of the project is estimated as 48 MW, out of which 24 MW will be obtained from cpp and balance from DVC, agreement has been made for drawl of 25 MVA.

11.0 Baseline Environmental Studies were conducted during Winter season i.e. from 01.11.2017 to31.01.2018, Ambient air quality monitoring has been carried out at 8 locations during 01.11.2017*to*31.01.2018, and the data submitted indicated: PM_{10} (75.2.0/m^3 to 103.0 µg/m^3), $PM_{2.5}$ (42.0 to 55.1µg/m^3), SO_2 (13.8 to 24.6µg/m^3) and NOx (22.8µg/m^3 to 33.6 µg/m^3). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 0.012 µg/m^3 with respect to the PM_{10}, 24.51 µg/m^3 with respect to the SO2 and 0. µg/m^3 with respect to the NOx.

12.0 Ground water quality has been monitored in 8.locations in the study area and analysed. pH:7.6 to 7.21, Total Hardness180 to 144 mg/l, Chlorides: 30 to 16 mg/l, Fluoride:0.05 to 0.01 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 7.5 to 6.9; DO: 7.4 to 6.8 mg/l and BOD: 4.8 to 2.4.mg/l& no C m^3 /day OD.

13.0 Noise levels are in the range of 53 to 48 dB(A) for day time and 44.1 to 40.2 dB(A) for night time.

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

15.0 It has been reported that a total of 2,71,400TPA of solid waste will be generated due to the project, out of which 1,16,000 TPA will be used in Power Plant & Co-processing and 60,900TPA to be supplied to fly ash brick plants, 53,800 TPA to be used as road construction material and balance 40,700 TPA will be dumped in Open Cast Pit of ECL mines for which permission has been taken. It has been envisaged that an area of 6.22ha 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 West Bengal. State Pollution Control Board obtained vide Lr. No CO81333 dated29.06.2015 and consent is valid up to 30.06.2023

17.0 The Public hearing of the project was held on 06.06.2018 at Nazrul Satabarsiki Hall (Jamuria Municipality Hall) under the chairmanship of Kaushik Mukherjee, Dy Magistrate & Dy Collector (designation) for production of 0.3.million TPA TMT rod & coils under the modification. The issues raised during public hearing are Plantation drive, Pollution abatement measures, Employment opportunities to locals and Implementation of CSR. An amount of 100Lakhs (1% of Project cost) has been earmarked for CER based on public hearing issues and socio economic study report.

Issues raised by	Commitment of PP	Action Plan
Concern on Pollution	APCD has been installed. Online	APCD and CEMS will be installed before plant commissioning.Rs.400 lakhs has been earmarked

	monitoring installed.	in EMP
Job to unemployed	PP agreed	As 250 people will be required for the proposed modification &Local employable youths will be preferred
Afforestation	5715 trees planted inside and outside the plant premises.	Greenbelt area is 6.22 ha, where 10000 trees could be planted. GFL is continuing the tree plantation drive.
Provision for drinking water facility, health camps	CSR activities being done by GFL.	Frequency of health camps will be increased. Action will be taken to revive the sinking bore wells

18.0 The activities and fund provision for CER is as follows:

Sl. No	**Assignments**	**Implementation**	**1st Year Budget in Lakhs**	**2nd Year Budget in Lakhs**
1	Avenue Plantation	10,000 saplings to be planted and maintained	7	3
2	Drinking Water	20 no's of sinking bore wells to be restored & 10 no new bore wells to be erected.	25	15
3	Women Empowerment	Engaging under privilege women in self help group	5	5
4	Refresher course to the unemployed	A short term training course to the local unemployed	3	2
5	LED	Existing halogen Electric bulbs to be replaced with LED bulbs.	4	1
6	Strengthening of approaching road	About 2 km approaching road to the plant site	20	10
Year wise expenses			**64**	**36**
TOTAL			**100**	

19.0 The capital cost of the project is Rs100 Crores and the capital cost for environmental protection measures is proposed as Rs 400.Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs40.2Lakhs.The detailed CER plan has been provided in the EMP in section 6.6.The employment generation from the proposed expansion project is 250.

Category	**Capital Cost (INR lakh)**	**Recurring Cost (INR Lakh)**
Air pollution Equipment	175	17.5
Water Pollution Control Machinery & Construction	50	5
Rainwater Harvesting	44	4.4

Occupational Health	9	1
Green Belt Development	42	4.2
Environmental Monitoring	10	1
Solid Waste management	28	2.8
Safety & Disaster Management	42	4.2
EMS & Capacity Development	01	0.1
Total	**400**	**40.2**

20.0 Greenbelt will be developed in 6.22 Ha which is about 33% of the total acquired area. A 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 trees per hectare. Total no. of 9366 saplings will be planted and nurtured in 6.22 hectares of land. 7666 nos. have already been planted and 1700 nos. will be planted in next two 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: Global Envirotech, Bhubaneshwar.

Observations of the Committee: -

22.0 The committee observed that the public hearing was chaired by Shri Kaushik Mukherjee, Dy Magistrate & Dy Collector, who is below the rank of ADM. The committee noted that the Addl Chief Secretary, West Bengal has requested the ministry to consider the public hearing chaired by the Dy. Collector as the district was formed newly and there exists shortage of ADM level officers. The competent authority in the Ministry has approved for consideration of the pubic consultation convened under chairmanship of Dy. Collector also.

Recommendations of the Committee: -

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

A. Speicific conditions:

i. The green blet shall be developed in an area of 37% of the total project area with broad leaved native tree species.
ii. The project propnet shall plan for re-charging of rain water equalent to the amount of the water abstracted from ground.
iii. The PP shall explore the possibility of installing WHRB for the DRI klin.
iv. The project proponent shall under take community sanitation programme in association with the local bodies as per the issues raised during the public hearing and the works shall be completed within 3 years.

B. General Conditions:

I. Statutory compliance:

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

ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water from the competent authority concerned in case of drawl of surface water required for the project.

iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emissions 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 connectthe system to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

iii. The project proponent shall install carryout 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.

iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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

vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better functioning of baghouses.

vii. Provide pollution control system in the sponge iron plant as per the CREP Guidelines of CPCB.

viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

ix. 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.

x. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation;

xi. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

III. Water quality monitoring and preservation

i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (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. (case to case basis small plants: Manual; Large plants: Continuous)

ii. The project proponent shall monitor regularly the ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

iv. Adhere to 'Zero Liquid Discharge'.

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

vii. The project proponent shall practice rainwater harvesting to maximum possible extent.

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

IV. Noise monitoring and prevention

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report

ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

V. Energy Conservation measures

i. The project proponent shall provide waste heat recovery system on the DRI Kilns.

ii. The dolochar generated shall be used for power generation.

iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.

iv. Provide LED lights in their offices and residential areas.

VI. Waste management

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

ii. 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.

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

iv. 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*)

VII. Green Belt

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

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

VIII. Public hearing and Human health issues

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

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

iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

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

IX. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

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

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

i. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and should not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

iv. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

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

X. Miscellaneous

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

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

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

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

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

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

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

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

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

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

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

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

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

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

xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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

1.4 Proposed Cement Plant Expansion with a Capacity of 1.5 to 2.2 MTPA of Clinker and 2.25 to 3.55 MTPA of Cement by M/s. KJS Cement Private Limited at Village Amilia-Lakhwar, Tehsil Maihar, District Satna, Madhya Pradesh–[Proposal No. IA/MP/IND/58186/2008; F.No. J-11011/607/2008-IA.II(I)] – Environmental Clearance.

1.0 The proponent has made online application vide proposal no. IA/MP/IND/58186/2008dated 28th September 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The cement plant expansion project proposal of M/s KJS Cement (I) Limited (KJS) located in Village Amilia-Lakhwar, Tehsil Maihar, District Satna, Madhya Pradesh State was initially received in the Ministry on 09 Aug 2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 10th meeting held on 29th to 31st August, 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on

17th March 2017 vide Lr. No. J-11011/607/2008-IA.II(I). Request for Change in Company Name from M/s KJS Cement Private Limited to M/s KJS Cement (I) Limited has been submitted by KJS on 29.08.2018 in the online portal.

3.0 The project of M/s KJS Cement (I) Limited (KJS) located in Amilia-Lakhwar Village, Maihar Tehsil, Satna District, Madhya Pradesh State is for enhancement of production of clinker and cement from 1.5 to 2.2 million tonnes per annum (MTPA) and 2.25 to 3.55 MTPA respectively. EC was obtained for 1.5 MTPA clinker, 2.25 MTPA cement, 20 MW CPP vide F.No. J-11011/607/2008-IA.II(I) dated 26 Nov, 2009. Further, EC amendment was obtained for change in CPP capacity from 20 to 27 MW vide Letter dated 30 March, 2011. The existing cement plant and CPP commenced its operation in July, 2012. The Status of compliance of earlier EC was obtained from Regional Office, Bhopal vide Lr. No.5-323/2009(ENV)/117, dated 11/05/2018. There is no non-compliance reported by Regional officer. Out of 42 total conditions, it has been reported that 38 conditions are fully complied, 1 condition is complied subject to acceptance by MoEF&CC, New Delhi, 1 is compliance in progress, 1 is deemed complied, 1 is agreed to comply. The point-wise compliance status of these four non complied conditions is provided as under:

EC Condition	**Status Remarks by RO, MoEF&CC**	**Present Compliance Status**
Specific Condition iii: Possibilities shall be explored for the proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB) and feasibility report shall be prepared and submitted to the ministry and it's Regional Officer at Bhopal within 03 month from the date of issue of the letter	Complied subject to acceptance by MoEF&CC, New Delhi	KJS Cement limited has Pyro processing circuit of six stage. Maximum Heat of Gases generated from kiln is utilized here. Temperature of gases after bag house remains around 100^0 C. Heat of these gases is also utilized in raw mill operation. Feasibility study report of WHRB done by third party has been submitted to Regional office, MoEFCC, Bhopal vide letter no. KJS/EMD/494 dated 17/02/2018 for perusal. As per the report, WHRB is not feasible at present operating parameters.
Specific Condition xv: Recommendation and permission of the State Forest Department regarding impact of proposed plant on surrounding reserve forests viz. Ghuleti Reserve forest (6 km W), Kaimur R.F. (6 km S) shall be obtained and implemented. Further, Conservation Plan for the conservation of wild fauna in consultation with the State Forest Department shall be prepared and implemented.	Compliance in Progress	The approved Wildlife Conservation Plan of wild fauna has been prepared in consultation with the State Forest Department. M/s KJS proposes to invest Rs 214.4 Lakhs over a span of 10 years. Copy of the conservation plan report along with approval letter and approved budget have been submitted for MoEF&CC's perusal.

EC Condition	Status Remarks by RO, MoEF&CC	Present Compliance Status
Specific Condition xvii: The company shall provide housing for construction labour within the side with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Deemed Complied	Housing for construction labour was provided during construction period. Presently there is a full fledge colony with all facilities, i.e. drinking water, Club, playground, Temple and Dispensary. The housing during project stage was in form of temporary structures which had been already removed after the completion of the project. In view of the information furnished by the PP and as the compliance dates back to construction period, the stipulated condition is considered deemed complied.
General Condition vii: In case of change in the scope of the project, the company shall obtain fresh environmental clearance.	Agreed to Comply	Agreed to obtain fresh environment clearance in case of change in the scope of the project.

4.0 The proposed plant expansion, inter alia, involves process optimization and debottlenecking of existing cement plant; installation of a new Cement grinding mill of capacity 170 TPH; laying of new railway siding to cater inward and outward logistic needs. The proposed capacity for different products is provided as below:

S. No	Product/ Activity	Unit	Existing Capacity	Additional Proposed Capacity	Total Capacity post Expansion	Remarks
1	Clinker Production	MTPA	1.5	0.7	2.2	Proposed debottlenecking process optimization
2	Cement (OPC/PPC) Production	MTPA	2.25	1.3	3.55	New Cement grinding mill of capacity 170 TPH
3	Captive Power Plant	MW	27	-	27	No change
4	New Railway siding	-	-	Proposed from Katni-Satna main line of West Central Railway (WCR) Zone running at a distance of 3 km, NW to plant site		for raw materials handling and cement transportation

5.0 Proposed Optimization of Existing Plant Units-Running Hours Norms are as follows:

Equipment	Existing			Proposed		
	Running Hours/Day	**Running Days/Week**	**Safety Factor**	**Running Hours/Day**	**Running Days/Week**	**Safety Factor**
Limestone crusher	10 (Shift Operation)	6	1. 25	16 (Shift Operation)	6	1. 25
Raw Mill	20	7	1.10	23	7	1.10
Coal Mill	18	7	1.10	22	7	1.10
Kiln	24	7	1.00	24	7	1.00
Cement Mill-1	20	7	1.10	22	7	1.10
Packing Plant	15	7	1. 25	16	7	1.25
Cement Mill-2 (proposed)	-	-	-	20	7	1.10

6.0 No additional land is required for the proposed expansion project and the expansion units will be installed within the existing plant premises. Presently, 91 ha of land area is already under possession of M/s KJS Cement Ltd. It has been reported that proposed plant expansion does not involve any diversion in the existing natural drainage pattern or felling of trees in the existing plant complex.

7.0 The topography of the area is flat and reported to lie between 24°14'50.96" N & 24° 15'27.70" N latitudes and 80°47'28.99" E & 80°48'09.66"E longitudes in Survey of India topo-sheet No. 63 D/ 15 and 63 D/ 16, at an elevation of 335m AMSL. The ground water levels have been reported to range between 16.7 to 20.1 m bgl during pre-monsoon season and 12.4 m to 17.8 m during post monsoon season. Further, the stage of groundwater development is reported to be 79 % in the district and thereby designated as semi-critical area.

8.0 The Bandhavgarh National Park is located at a distance of 47 km from the site. No National park/ wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported in the study area. It has been reported that no Schedule-I species were reported during the survey period in the study area. However, on the basis of direct and indirect evidences, buffer zone of the project area appears to support two Schedule-I species i.e. Peacock and Monitor Lizard as per Indian Wildlife Protection Act, 1972; and two species of threatened birds i.e. White-necked Stork and White Scavenger Vulture / Egyptian Vulture listed as a Vulnerable and Endangered respectively in IUCN red list. As per the approved Wildlife Conservation Plan, KJS proposes to invest Rs 214.4 Lakhs over a span of 10 years. (PCCF approval letter and executive summary of which is enclosed as Annexure-XI of EIA).

9.0 The existing cement plant has adopted Dry Process Technology for Cement manufacturing with Pre Heating and Pre-Calciner Technology. At the existing plant, at the rate of 300 working days, the total annual output of clinker is about 1.50 MTPA. The plant produces Ordinary Portland Cement (OPC) and Pozzolana Portland Cement (PPC) of 2.25 MTPA.

10.0 The targeted production capacity of the proposed plant expansion is 2.2 million TPA of clinker and 3.55 million TPA of cement. The raw materials transportation will be done through road/rail. The details of raw material requirement and transportation mode are given below:

S. No	Raw Material	Existing (MTPA)	Additional Proposed (MTPA)	Total Proposed (MTPA)	Source	Distance from Plant Site (km)	Mode of Transport
1	Limestone	2.4	0.8	3.2	captive mines	< 25 km	road
2	Iron ore/ Bauxite	0.06	0.02	0.08	private mines in Sihora, Jabalpur/ Katni, Shahdol area	< 200 km	road
3	Coal (for cement plant and CPP)	0.5	0.1	0.6	South Eastern Coalfields & nearby petroleum refineries	<200 km	Rail/Road
4	Gypsum	0.1	0.1	0.2	Mineral Gypsum from Iran (received at Paradeep/ Ganagavaram/ Dahej ports), mines in Nagpur/Bikaner districts (third part outsourcing)	<1000 km	road
5	Fly ash	0.3	0.9	1.2	Nearby thermal power plants - Mahan Power Plant, Barigaon Sidhi, Moser Baer Anuppur, MPEB Chachai, MPEB Pali, Japee Nigari, OPM Amlai, M.P, CG, Maharastra, U.P.	<150 km	Bulkers

11.0 The major raw material for manufacture of cement is Limestone. The limestone requirement of the plant is estimated to be about 3.2 MTPA with daily requirement of 11,700 t. Details of the same alongwith EC status are provided as below:

S. No	Mines Name	Area (ha)	Capacity (MTPA)	Location	Distance from Plant Site (km)	EC Status	Mode of transport
1	Amilia limestone	217	1.250	Amilia village, Maihar tehsil,	adjacent	EC obtained vide letter No	road

S. No	Mines Name	Area (ha)	Capacity (MTPA)	Location	Distance from Plant Site (km)	EC Status	Mode of transport
	mines			Satna district, Madhya Pradesh		J011015/175/2010-IA.II(M) dated 22 July, 2015	
2	Bhatia limestone mines	45.888	0.500	Bhatia village, Maihar tehsil, Satna district, Madhya Pradesh	15	EC obtained vide letter No 5617/SEIAA/15 dated 16.09.2015	road
3	Bhatia limestone mines	10.431	0.100	Bhatia village, Maihar tehsil, Satna district, Madhya Pradesh	15	EC obtained vide letter no 1258/SEIAA/12 dated 8.10.2012	road
4	Bathia limestone mines	9.008	0.040	Bhatia village, Maihar tehsil, Satna district, Madhya Pradesh	15	EC obtained vide letter no 372/EPCO-SEIAA/09 dated 16.12.2019	road
5	Barahia limestone mines	7.102	0.030	Barahia village, Maihar tehsil, Satna district, Madhya Pradesh	13	EC obtained vide letter No 5616/SEIAA/15 dated 16.09.2015	road
6	Deori limestone mines	23.123	0.050	Deori village, Maihar tehsil, Satna district, Madhya Pradesh	20	EC obtained vide letter No 1518/SEIAA/16 dated 19.05.2016	road
7	Piprahat limestone mines	7.316	0.465	Piprahat village, Maihar tehsil, Satna district, Madhya Pradesh	25	EC obtained vide letter No 591/SEIAA/17 dated 31.05.2017	road
8	Girgita limestone mines	258.998	1.75	Girgita village, Maihar tehsil, Satna district, Madhya Pradesh	in vicinity	EC in progress	road
	Total	**579.37**	**4.185**		-	-	

12.0 The existing water requirement for cement plant and CPP is 2400 m^3/day, out of which 100 m^3/day of drinking water requirement is being sourced from the bore wells and 1560 m^3/day of water is being recycled. The remaining plant water requirement of 740 m^3/day is met from rainwater harvested in the captive mine pits with a capacity of around 17 lacs cum located adjacent to the plant area. The additional water requirement of the expansion project is estimated as 500 m^3/day, which will also be met from adjacent mine pit. The permission for drawl of groundwater / surface water is obtained from CGW Authority vide Lr. No. 21-4(85)/NCR/CGWA/2010-2416 dated 21/10/2010. The cement plant is operating on 'Zero liquid discharge (ZLD) condition' as no effluent is being discharged outside the plant premises. Entire quantity of treated effluent is being utilized within the premises for plantation, horticulture, dust suppression, etc.

13.0 The total power requirement of the plant is estimated at 39 MW, which will be sourced from the existing 27 MW capacity CPP, operating at the existing plant complex and MPSEB grid, for which MoU is in place. (Lr No 053-01/01/02/HT-ST-58/8802 dated 30-11-2016).

14.0 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 9 locations during October, 2016 to December 2016 and the data submitted indicated: PM_{10} (50.1 µg/m^3 to 65.4 µg/m^3), $PM_{2.5}$ (14.1 µg/m^3 to 57.0 µg/m^3), SO_2 (12.3 µg/m^3 to 17.2 µg/m^3) and NOx (13.4 µg/m^3 to 18.6 µg/m^3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.3 µg/m^3 with respect to the PM_{10}, 1.1 µg/m^3 with respect to the SO_2 6.9 µg/m^3 with respect to the NO_x.

15.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.63 to 8.24, Total Hardness: 75 to 1395 mg/l, Chlorides: 15 to 216 mg/l, Fluoride: 0.2 to 1.6 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 7 locations. pH: 7.96 to 8.39; DO: 4.1 to 6.2 mg/l and BOD: 2 to 6 mg/l. COD from 4.0 to 28.0 mg/l.

16.0 Noise levels are in the range of 39.9 to 62.1 dB(A) for daytime and 47.7 to 68.8 dB(A) for night time.

17.0 It has been reported that there are 514 employees at present. About 30 additional workers will be required for the proposed expansion project. The existing plant township has 192 no of quarters, in which, 165 families are presently residing with a total existing population of about 600 people in the plant township. As the plant is existing and it is an expansion project without any additional area requirement, no Rehabilitation & Resettlement (R&R) issues are involved.

18.0 It has been reported that no solid waste is generated in cement manufacturing process. Dust collected from air pollution control equipment will be recycled in process. Hazardous waste like used batteries and used oil will be disposed to authorised recyclers. Only additional municipal solid waste generation to the tune of 15 kg/day (30 x 0.5 kg/day) will be generated by the additional manpower for the proposed expansion project, which will be managed as per existing practice. It has been envisaged that additional area of 1 ha will be developed as green belt along with strengthening of existing greenbelt of 30 ha to attenuate the noise levels and trap the dust generated due to the project development activities.

19.0 It has been reported that the latest Consent to Operate from the Madhya Pradesh State Pollution Control Board obtained vide Lr. No AW-48302 dated 08/05/2018 and consent is valid up to 30/04/2019.

20.0 The Public hearing of the project was held on 25/07/2018 near to the Plant site in Amilia village under the chairmanship of Upper Collector, Satna for cement plant expansion from 1.5 to 2.2 MTPA of Clinker and 2.25 to 3.55 MTPA of Cement. The issues raised during public hearing are employment, compensatory employment to land losers, construction/maintenance of approach road, plantation activities, social initiatives including educational facilities. The point-wise statement of issues raised by the public and response of the project proponent with action plan is as follows:

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
A	**During the Public Hearing Proceeding**				
1	*Mr. Ramchandra Singh Patle, village Girgita, Tehsil Maihar District Satna:* *He had a point of view of the development of the region through the proposed project and expressed his agreement.* He mentioned that that NH-7, which leads to village Amilia troubles during the rainy days and it should be built by the company	KJS has already requested Municipal Corporation to construct the approach road, which will cost around Rs 3 Crores. Road development will be taken up by Municipal Authorities. M/s KJS submits Rs 50 Lakhs per annum to Municipal Authorities for road usage. However, maintenance of approach roads will be undertaken by M/s KJS.	Maintenance of approach roads Avenue plantation along the roads Construction of bus shelter along approach road	Rs 50 Lakhs Rs 20 Lakhs Rs 10 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 2 years

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
	He suggested to provide training the unemployed educated youth of the nearby villages so that they can be trained and nourished.	Employment to all in the plant cannot be assured due to limited vacancies in the plant. However, there is a provision of one year apprentice programme for training of the educated youth; KJS is also working towards professional training of women for increasing their self-employability; KJS will support further programmes for professional training of educated unemployed youth.	Aiding to Self Help Groups (SHGs) in the region for professional training of youth and employment	Rs 20 Lakhs	Proposed for 1st 5 years
2	*Mr Jai Govind Vishwakarma, Village Girgita, Tehsil Maihar Satna* He mentioned that the *kuchha* approach roads are in bad condition and locals face problem due to the same and that the road should be	Road development will be taken up by Municipal Authorities. However, maintenance of approach roads will be undertaken by M/s KJS.	Maintenance of approach roads and avenue plantation along the roads Avenue plantation along the roads Construction of bus shelter along approach road	Rs 50 Lakhs Rs 20 Lakhs Rs 10 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed in 1st 2 years

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
	built.				
	The blasting in the mines in vicinity leads to cracks in the houses in vicinity. The strength of blasting should be reduced so that it doesn't cause damage to the houses.	*VP, Mines* explained that the blasting during the limestone mining process involves usage of latest NONEL technology; the drilling machine, and delay detonator technique is used as per the rules of IBM Acts and regulations, 1964. Blasting till date have been recorded at 2 to 3 mm/s, whereas the permissible limit is 10 mm/sec. He assured that it will be ensured that no damage occurs due to blasting activities in the KJS mines.	Issue will be taken by the Mines Management to take necessary precautions.	-	-
	He mentioned that he is an employee of this industry, Rs. 200 wages are given instead of 8 hours work.	Wages to Employees will be in line with Company's Act	-	-	-

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
3	*Mr. Nagendra Singh Patle, Village Harnampur, Tehsil Maihar District Satna* *While giving his consent for the proposed expansion project, he* said that pollution is increasing in more quantity today, Environmental Management proposals should be made for its prevention	The existing and proposed EMP measures were explained and assured that it will be ensured that it will be ensured to prevent pollution in future. EMP measures and budget allocation is made to mitigate the environmental impacts.	EMP budget of Rs 600 Lakhs of capital budget and Rs 70 Lakhs of recurring budget for 1st five years has been allocated for the expansion project. EMP measures to reduce air pollution. Solar lights/fencing of the Plant/Colony has been proposed Vermi-Composting Unit for conversion of biodegradable waste within plant and colony premises to Compost, which can be used for horticulture purpose	Rs 600 Lakhs of capital budget Rs 70 Lakhs of recurring budget Rs 20 Lakhs Rs 20 Lakhs	Along with implementation Proposed for 1st 5 years Proposed for 1st 4 years Proposed for 1st 5 years
	There is a lot of dust on the approach roads and it should be controlled.	Road development will be taken up by Municipal Authorities. However, maintenance of approach roads will be undertaken by M/s KJS.	Water sprinkling on approach roads by tankers Maintenance of approach roads Avenue plantation along the roads Construction of bus shelter along approach road	Rs 10 Lakhs Rs 50 Lakhs Rs 20 Lakhs Rs 10 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years Proposed in 1st 2 years
	Social work should be done in the village through the management	Social work in the region is taken up through CSR wing of KJS were briefed	Construction of Community toilet To create awareness on hygiene & healthy life	Rs 5 Lakhs Rs 5 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
		and assured to continue the social activities in the region.	Supply / installation of Water softners in the villages in vicinity to plant Distribution of fertilisers/organic manure to farmers Watershed development works by construction of channels, rainwater harvesting structures and bunds will be sponsored by m/s KJS Apart from the above CER proposal, CSR budget is proposed for social initiatives in the region.	Rs 20 Lakhs Rs 5 Lakhs Rs 15 Lakhs	Proposed in 1st 5 years Proposed in 1st 5 years Proposed in 1st 5 years
	Good schools should be opened so that the children of nearby villages can get good education	Financial support to existing Govt. schools will be made.	Financial aid to Govt Schools in vicinity Visit of students to Cement Plant for educational visit Campaign on donation of books to identified Govt School to promote reading in schools and aid teachers in their teaching process	Rs 20 Lakhs - Rs 5 Lakhs	Proposed in 1st 5 years Proposed in 1st 5 years Proposed in 1st 5 years

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
4	*Mr. Ramayan Singh Patle, Village Lakhwar, Tehsil Maihar District Satna* *While mentioning that he has given his 5 acres of land for the existing plant,* he complained that the plant management is not approachable.		Grievance cell will be made functional to register any concerns from locals. The Grievances will be registered and discussed during Management Review Meetings and addressed on priority.	-	Immediate
	Blasting of the mines caused cracks in the houses, which should be rectified.	*VP, Mines* explained that the blasting during the limestone mining process involves usage of latest NONEL technology; the drilling machine, and delay detonator technique is used as per the rules of IBM Acts and regulations, 1964. Blasting till date have been recorded at 2 to 3 mm/s, whereas the permissible limit is 10 mm/sec. He assured that it will be ensured that no damage	Issue will be taken by the Mines Management to take necessary precautions.	-	-

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
		occurs due to blasting activities in the KJS mines.			
5	*Mr. Dilip Singh Tiwari, Maihar, Tehsil Maihar District Satna* *While mentioning that he is a plant employee*, he said that the plantation and development activities by the management which has also been seen gradually, so they should be given the Environmental Clearance	Initiatives for greenbelt development have been taken up on priority. Greenbelt development and further densification of existing greenbelt area in scientific manner has been proposed	Development of nursery for plantation within plant complex Road Avenue plantation Each one Plant one Campaign will held annually by all Plant Employees every year Apart from the above mentioned CER initiatives, EMP budget has been allocated for greenbelt development	Rs 10 Lakhs Rs 20 Lakhs Rs 5 Lakhs Rs 40 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years
6	*Mr. Nagendra Singh, Village Beldra, Tehsil Maihar District Satna* *While mentioning that he is a plant employee and that he has given his land to the existing plant,* he mentioned that the problems of farmers should be solved.	Support to agricultural population of the region will be extended on priority and various initiatives will be taken.	Distribution of fertilisers/organic manure to farmers Watershed development works by construction of channels, rainwater harvesting structures and bunds will be sponsored by KJS Vermi-Composting Unit for conversion of biodegradable waste within plant and colony	Rs 5 Lakhs Rs 15 Lakhs Rs 20 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
			premises to Compost, which can be used for horticulture purpose		
	The approach roads should be constructed as the dust on *kuchha* roads causes air pollution	M/s KJS has already requested Municipal Corporation to construct the approach road, which will cost around Rs 3 Crores. Road development will be taken up by Municipal Authorities. M/s KJS submits Rs 50 Lakhs per annum to Municipal Authorities for road usage. However, maintenance of approach roads will be undertaken by M/s KJS.	Water sprinkling on approach roads by tankers Maintenance of approach roads Avenue plantation along the roads Construction of bus shelter along approach road	Rs 10 Lakhs Rs 50 Lakhs Rs 20 Lakhs Rs 10 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years Proposed in 1st 2 years
7	*Mr. Bhupendra Pandey, Union President, K.J.S Cement Tehsil Maihar, District Satna* While recommending the proposed plant expansion project, he said that with the approval of the plant, the people	It was mentioned that 90% of the existing employees in the plant are from Satna district and only about 10% of the technical experts employed are from other regions. It was	About 100 labourers during construction and 30 employees during operation phase of the proposed plant expansion will be employed. Priority in secondary job allocation for the proposed plant expansion with be given to the Land Loosers/Ex-		

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
	of the village will get employment and they will be fed and development will be ensured.	ensured to give preference to locals/land losers based on eligibility for employment in future also.	employees/locals Aiding to SHGs in the region for professional training of youth and employment	Rs 20 Lakhs	Proposed for 1st 5 years
8	*Mr. Bhaiyalaal Patle, Village Beldra, Tehsil Maihar District Satna* While mentioning that he has given his land to the existing plant, he stated his poor condition and requested support.	It was mentioned to give preference to locals/land losers based on eligibility for employment in future also.	Aiding to SHGs in the region for professional training of youth and employment	Rs 20 Lakhs	Proposed for 1st 5 years
9	*Mr. Virendra Singh Patle, Village Lakhwar, Tehsil Maihar District Satna* While mentioning that he has given his land to the existing plant, he said by the company promised that 7 members would get job in the plant, but only one member got the job rest of the 6 members have got no job till date.	Employment has been given on the basis of agreement and eligibility, if there is any error it will be sorted out.	Priority will be given for secondary employment, who are not eligible for primary employment. SHGs in the region will be aided for employment generation for the locals.	- Rs 20 Lakhs	- Proposed for 1st 5 years
	The plant Management is not approachable to discuss on our problems	-	Grievance cell will be made functional to register any concerns from locals. The	-	Immediate

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
			Grievances will be registered and discussed during Management Review Meetings and addressed on priority.		
	The houses of the village have been effected from the blasting of the mines. Factory management should compensate and make new houses.	The blasting during the limestone mining process involves usage of latest NONEL technology; the drilling machine, and delay detonator technique is used as per the rules of IBM Acts and regulations, 1964. It will be ensured that no damage occurs due to blasting activities in the KJS mines.	Issue will be taken by the Mines Management to take necessary precautions.	-	
B	**Written Applications**				
1	*Shri Ramayan Singh, Gram-Lakhawar, Tehsil Maihar, Distt-Satna:* He said that employment should be given as per land agreement.	About 514 persons are presently employed at the existing plant KJS provides employment to the local populace and also further labour of unskilled and semi-skilled	A total of about 100 persons would be given indirect employment during construction and installation of proposed expansion project. About 30 number of persons will be employed during operation phase of the proposed expansion	-	-

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
		categories will be taken from the nearby villages and towns. Employment will be given on the basis of agreement and eligibility	project.		
2	*Shri Sant Kumar Mallah Gram Lakhawar, Tah.Maihar, Distt-Satna:* He said that employment is not being given according to agreement.	Employment is being given on the basis of agreement and eligibility. If there is any error. It will be rectified.	Priority will be given for secondary employment, who are not eligible for primary employment. SHG will be aided for employment generation for the locals.	- Rs 20 Lakhs	- Proposed for 1st 5 years
3	*Shri Manshukh Lal Patel Gram-Lakhawar, Tah.-Maihar, Distt Satna M.P.:* He said that he is a civil contactor and has given his land to company. He appealed for contact job and work of tractor to be given again.	According to the need, work will be given. Priority will be given for secondary employment, who are not eligible for primary employment. SHG will be aided for employment generation for the locals.	List of Sub-Contractors will include Land Losers and priority of work allocation will be given to the land losers for all CSR and CER related works.	-	-
4	*Shri Ramniwas Kushawaha Gram Kharamseda, Tall. Amarpatan, Distt-Satna:*	Action will be taken according to Factories Act.	Job and compensation for the applicant is under consideration.	Rs 0.05 Lakhs	1 year

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
	Applicant has requested to provide job again as previously due to accident his leg was fracture. He has also demanded Rs. 50,000 cash.				
5	*Shri Anoop Singh GramBeldra, Tah.-Maihar, Distt-Satna M.P.:* Company is taking land of farmers and company is not giving employment to them. Exploitation is being done.	Employment has been given on the basis of agreement and eligibility, if there is any error it will be sorted out.	Priority will be given for secondary employment, who are not eligible for primary employment. SHGs will be aided for employment generation for the locals.	- Rs 20 Lakhs	- Proposed for 1st 5 years
6	*Shri Ramji Shukla GramNaktara, Tah.-Maihar, Distt-Satna M.P.:* Applicant has given his consent for capacity enhancement	Thanked him for the support	-	-	-
7	*Shri Rajendra Kumar Viswakarma Gram Pahadi, Tah.-Maihar, Distt-Satna MP.:* He mentioned that more plantations should be done so that clean and pollution free Air can be maintained, Applicant has given his consent for capacity enhancement.	Presently One lakh plant has been planted in cement plant and colony. In future more plantations will be done	Development of nursery for plantation within plant complex Road Avenue plantation Each one Plant one Campaign will held annually by all Plant Employees every year Apart from the above mentioned CER initiatives,	Rs 10 Lakhs Rs 20 Lakhs Rs 5 Lakhs Rs 40 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
			EMP budget has been allocated for greenbelt development		

21.0 An amount of Rs 240 Lakhs (0.75 % of Project cost) has been earmarked for Enterprise Social Commitment (ESC) based on public hearing issues. Details of ESC proposed are as follows:

S. No	Proposed Enterprise Social Commitment Activities	Financial Allocation (Lakhs)					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	Employment through Self Help Groups (SHG)/ Professional Training to create employment-linked skill training	4	4	4	4	4	20
2	Nursery development within plant complex	2	2	2	2	2	10
	Avenue plantation along approach roads to the Plant	4	4	4	4	4	20
	Awareness Creation - Each one Plant one Campaign will be held annually by all Plant Employees every year	1	1	1	1	1	5
	Solid waste management : Vermi-Composting Unit within plant/colony complex for conversion of biodegradable waste within plant and colony premises to Compost, which can be used for horticulture purpose	4	4	4	4	4	20
3	Distribution of fertilisers/organic manure to farmers	1	1	1	1	1	5
	Watershed development works by construction of channels, rainwater harvesting structures and bunds will be sponsored by KJS	3	3	3	3	3	15
4	Sanitation : Construction of Community toilet along Plant approach road	1	1	1	1	1	5
	Awareness: To create awareness on hygiene & healthy life	1	1	1	1	1	5

S. No	Proposed Enterprise Social Commitment Activities	Financial Allocation (Lakhs)					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
	Drinking Water Supply: Supply / installation of Water softners in the villages in vicinity to plant	4	4	4	4	4	20
5	Road maintenance and avenue plantation - Strengthen basic infrastructure facilities and provide clean environment	10	10	10	10	10	50
	Construction of bus shelter along approach road	5	5	-	-	-	10
6	Financial aid to Govt Schools in vicinity	4	4	4	4	4	20
	Support to school library - Campaign on donation of books to identified Govt School to promote reading in schools and aid teachers in their teaching process	1	1	1	1	1	5
	Air pollution mitigation -Sprinkling on approach roads by tankers	2	2	2	2	2	10
	Solar lights/fencing of the Plant/Colony has been proposed	5	5	5	5	-	20
	Total	**52**	**52**	**47**	**47**	**46**	**240**

22.0 The capital cost of the project is Rs 320 Crores and the capital cost for environmental protection measures is proposed as Rs 600 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 100 during construction phase and 30 during operation phase. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S. No.	Particulars	Capital Cost (RsLakhs)	Recurring Cost (RsLakhs)
1	Air Pollution & Noise Control	400	50
2	Water Pollution Control	25	5
3	Environment Monitoring and Management	100	13
4	Occupational Health	30	0.8
5	Greenbelt Development within the Plant complex	38	0.50
6	Plantation outside plant boundary	2	0.50
7	Awareness programme-animal conservation*	5	0.20
	Total	**600**	**70**
*Proposed for 1st 5 years			

23.0 Greenbelt will be developed in 31 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. For greenbelt of 1 ha within the plant complex, around 1000 sapling will be planted within project site within two years.

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

25.0 EIA Consultant: Bhagavathi Anna Labs, Hyderabad.

Observations of the Committee: -

25.0 The committee observed that the request for Change in Company Name from M/s KJS Cement Private Limited to M/s KJS Cement (I) Limited has been submitted. The committee opined that the change of name of the project may be incorporated while issuing the environmental clearance.

26.0 Further, the committee observed that the EIA consultant is under suspension for 6 month from 15th June 2018. The representative of the consultant explaind that the QCI has allowed them to complete the ongoing projects and letter in this regard has been submitted.

27.0 After detailed deliberations the committee sought revised action plan for issues raised during the public hearing; revised CER budget allocation; additional measures for control of fugitive emmisions. Accordingly, the project proponent has submitted the revised details, which are as follows:

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
A	**During the Public Hearing Proceeding**				

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
1	Mr. Ramchandra Singh Patle, village Girgita, Tehsil Maihar District Satna: He had a point of view of the development of the region through the proposed project and expressed his agreement. He mentioned that that NH-7, which leads to village Amilia troubles during the rainy days and it should be built by the company	a) M/s KJS submits Rs 50 Lakhs per annum as tax for road usage. Construction of roads is not is purview of M/s KJS, KJS has already requested Maihar Municipal Corporation to construct the approach roads, which will cost around Rs 3 Crores. Road development However, maintenance of approach roads will be undertaken by M/s KJS.	Maintenance of approach roads Avenue plantation along the roads Construction of bus shelter along approach road	Rs 50 Lakhs Rs 20 Lakhs Rs 10 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 2 years
	He suggested to provide training the unemployed educated youth of the nearby villages so that they can be trained and nourished.	b) Employment to all in the plant cannot be assured due to limited vacancies in the plant. There is a provision of one year apprentice programme for training of the educated youth; KJS is also working towards professional training of women for increasing their self-employability; KJS will support further programmes for professional training of educated unemployed youth.	Conducting/ sponsoring of Professional Training of youth through Skill India Programmes by a Govt of India	Rs 35 Lakhs	Proposed for 1st 5 years

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
2	Mr Jai Govind Vishwakarma, Village Girgita, Tehsil Maihar Satna He mentioned that the kuchha approach roads are in bad condition and locals face problem due to the same and that the road should be built.	a) Road development will be taken up by Municipal Authorities. However, maintenance of approach roads will be undertaken by M/s KJS.	Maintenance of approach roads and avenue plantation along the roads Avenue plantation along the roads Construction of bus shelter along approach road	Provided in S.No 1	Provided in S.No 1
	The blasting in the mines in vicinity leads to cracks in the houses in vicinity. The strength of blasting should be reduced so that it doesn't cause damage to the houses.	VP, Mines explained that the blasting during the limestone mining process involves usage of latest NONEL technology; the drilling machine, and delay detonator technique is used as per the rules of IBM Acts and regulations, 1964. Blasting till date have been recorded at 2 to 3 mm/s, whereas the permissible limit is 10 mm/sec. He assured that it will be ensured that no damage occurs due to blasting activities in the KJS mines.	Issue will be taken by the Mines Management to take necessary precautions.	-	-
	He mentioned that he is an employee of this industry, Rs. 200 wages are given instead of 8 hours work.	Wages to Employees will be in line with Company's Act	-	-	-

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
3	Mr. Nagendra Singh Patle, Village Harnampur, Tehsil Maihar District Satna While giving his consent for the proposed expansion project, he said that pollution is increasing in more quantity today, Environmental Management proposals should be made for its prevention	The existing and proposed EMP measures were explained and assured that it will be ensured that it will be ensured to prevent pollution in future. EMP measures and budget allocation is made to mitigate the environmental impacts.	EMP budget of Rs 600 Lakhs of capital budget and Rs 70 Lakhs of recurring budget for 1st five years has been allocated for the expansion project. EMP measures to reduce air pollution. Solar lights/fencing of the Plant/Colony has been proposed Vermi-Composting Unit for conversion of biodegradable waste within plant and colony premises to Compost, which can be used for horticulture purpose	Rs 600 Lakhs of capital budget Rs 70 Lakhs of recurring budget under EMP budget Rs 20 Lakhs Rs 20 Lakhs	Along with implementation Proposed for 1st 5 years Proposed for 1st 4 years Proposed for 1st 5 years
	There is a lot of dust on the approach roads and it should be controlled.	Road development will be taken up by Municipal Authorities. However, maintenance of approach roads will be undertaken by M/s KJS.	Water sprinkling on approach roads by tankers Maintenance of approach roads Avenue plantation along the roads Construction of bus shelter along approach road	Provided in S.No 1	Provided in S.No 1
	Social work should be done in the village through the management	Social work in the region is taken up through CSR wing of KJS were briefed and assured to continue the social activities in the region.	Construction of Community toilet To create awareness on hygiene & healthy life Supply / installation of Water softners in the villages in vicinity to plant Distribution of fertilisers/organic manure to farmers Watershed development works by construction of channels, rainwater harvesting structures and bunds will be sponsored by m/s KJS Apart from the above CER proposal, CSR	Rs 5 Lakhs Rs 5 Lakhs Rs 20 Lakhs Rs 5 Lakhs Rs 15 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed in 1st 5 years Proposed in 1st 5 years Proposed in 1st 5 years

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
			budget is proposed for social initiatives in the region.		
	Good schools should be opened so that the children of nearby villages can get good education	Financial support to existing Govt. schools will be made.	Financial aid to Govt Schools in vicinity Visit of students to Cement Plant for educational visit Campaign on donation of books to identified Govt School to promote reading in schools and aid teachers in their teaching process	Rs 20 Lakhs - Rs 5 Lakhs	Proposed in 1st 5 years Proposed in 1st 5 years Proposed in 1st 5 years
4	Mr. Ramayan Singh Patle, Village Lakhwar, Tehsil Maihar District Satna While mentioning that he has given his 5 acres of land for the existing plant, he complained that the plant management is not approachable.		Grievance cell will be made functional to register any concerns from locals. The Grievances will be registered and discussed during Management Review Meetings and addressed on priority.	-	Immediate
	Blasting of the mines caused cracks in the houses, which should be rectified.	VP, Mines explained that the blasting during the limestone mining process involves usage of latest NONEL technology; the drilling machine, and delay detonator technique is used as per the rules of IBM Acts and regulations, 1964. Blasting till date have been recorded at 2 to 3 mm/s, whereas the permissible limit is 10 mm/sec. He assured that it will be ensured that no damage occurs due to blasting activities in the KJS mines.	Issue will be taken by the Mines Management to take necessary precautions.	-	-

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
5	Mr. Dilip Singh Tiwari, Maihar, Tehsil Maihar District Satna While mentioning that he is a plant employee, he said that the plantation and development activities by the management which has also been seen gradually, so they should be given the Environmental Clearance	Initiatives for greenbelt development have been taken up on priority. Greenbelt development and further densification of existing greenbelt area in scientific manner has been proposed	Development of nursery for plantation within plant complex Road Avenue plantation Each one Plant one Campaign will held annually by all Plant Employees every year Apart from the above mentioned CER initiatives, EMP budget has been allocated for greenbelt development	Rs 10 Lakhs Rs 20 Lakhs Rs 5 Lakhs Rs 40 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years
6	Mr. Nagendra Singh, Village Beldra, Tehsil Maihar District Satna While mentioning that he is a plant employee and that he has given his land to the existing plant, he mentioned that the problems of farmers should be solved.	Support to agricultural population of the region will be extended on priority and various initiatives will be taken.	Distribution of fertilisers/organic manure to farmers Watershed development works by construction of channels, rainwater harvesting structures and bunds will be sponsored by KJS Vermi-Composting Unit for conversion of biodegradable waste within plant and colony premises to Compost, which can be used for horticulture purpose	Rs 5 Lakhs Rs 15 Lakhs Rs 20 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years
	The approach roads should be constructed as the dust on kuchha roads causes air pollution	M/s KJS has already requested Municipal Corporation to construct the approach road, which will cost around Rs 3 Crores. Road development will be taken up by Municipal Authorities. M/s KJS submits Rs 50 Lakhs per annum to Municipal Authorities for road usage. However, maintenance of approach	Water sprinkling on approach roads by tankers Maintenance of approach roads Avenue plantation along the roads Construction of bus shelter along approach road	Rs 10 Lakhs Rs 50 Lakhs Rs 20 Lakhs Rs 10 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years Proposed in 1st 2 years

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
		roads will be undertaken by M/s KJS.			
7	Mr. Bhupendra Pandey, Union President, K.J.S Cement Tehsil Maihar, District Satna While recommending the proposed plant expansion project, he said that with the approval of the plant, the people of the village will get employment and they will be fed and development will be ensured.	It was mentioned that 90% of the existing employees in the plant are from Satna district and only about 10% of the technical experts employed are from other regions. It was ensured to give preference to locals/land losers based on eligibility for employment in future also.	About 100 labourers during construction and 30 employees during operation phase of the proposed plant expansion will be employed. Priority in secondary job allocation for the proposed plant expansion with be given to the Land Loosers/Ex-employees/locals Conducting/ sponsoring of Professional Training of youth through Skill India Programmes by a Govt of India	Covered in S.No 1	Covered in S.No 1
8	Mr. Bhaiyalaal Patle, Village Beldra, Tehsil Maihar District Satna While mentioning that he has given his land to the existing plant, he stated his poor condition and requested support.	It was mentioned to give preference to locals/land losers based on eligibility for employment in future also.	Conducting/ sponsoring of Professional Training of youth through Skill India Programmes by a Govt of India	Covered in S.No1	Covered in S.No1
9	Mr. Virendra Singh Patle, Village Lakhwar, Tehsil Maihar District Satna While mentioning that he has given his land to the existing plant, he said by the company promised that 7 members would get job in the plant, but only one member got the job rest of the 6 members have got no job till date.	Employment has been given on the basis of agreement and eligibility, if there is any error it will be sorted out.	Priority will be given for secondary employment, who are not eligible for primary employment. Conducting/ sponsoring of Professional Training of youth through Skill India Programmes by a Govt of India	- Covered in S.No1	- Covered in S.No1

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
	The plant Management is not approachable to discuss on our problems	-	Grievance cell will be made functional to register any concerns from locals. The Grievances will be registered and discussed during Management Review Meetings and addressed on priority.	-	Immediate
	The houses of the village have been effected from the blasting of the mines. Factory management should compensate and make new houses.	The blasting during the limestone mining process involves usage of latest NONEL technology; the drilling machine, and delay detonator technique is used as per the rules of IBM Acts and regulations, 1964. It will be ensured that no damage occurs due to blasting activities in the KJS mines.	Issue will be taken by the Mines Management to take necessary precautions.	-	
B	**Written Applications**				
1	Shri Ramayan Singh, Gram-Lakhawar, Tehsil Maihar, Distt-Satna: He said that employment should be given as per land agreement.	About 514 persons are presently employed at the existing plant KJS provides employment to the local populace and also further labour of unskilled and semi-skilled categories will be taken from the nearby villages and towns. Employment will be given on the basis of agreement and eligibility	A total of about 100 persons would be given indirect employment during construction and installation of proposed expansion project. About 30 number of persons will be employed during operation phase of the proposed expansion project.	-	-
2	Shri Sant Kumar Mallah Gram Lakhawar, Tah.Maihar, Distt-Satna: He said that employment is not being given according to agreement.	Employment is being given on the basis of agreement and eligibility. If there is any error. It will be rectified.	Priority will be given for secondary employment, who are not eligible for primary employment. Conducting/ sponsoring of Professional Training of youth through Skill India Programmes by a Govt of India	- Covered in S.No1	- Covered in S.No1
3	Shri Manshukh Lal Patel Gram-Lakhawar, Tah.-Maihar, Distt Satna M.P.:	According to the need, work will be given. Priority will be given for secondary employment, who are not eligible for primary employment.	List of Sub-Contractors will include Land Losers and priority of work allocation will be given to the land losers for all CSR and CER	-	-

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
	He said that he is a civil contactor and has given his land to company. He appealed for contact job and work of tractor to be given again.	SHG will be aided for employment generation for the locals.	related works.		
4	Shri Ramniwas Kushawaha Gram Kharamseda, Tall. Amarpatan, Distt-Satna: Applicant has requested to provide job again as previously due to accident his leg was fracture. He has also demanded Rs. 50,000 cash.	Action will be taken according to Factories Act.	Job and compensation for the applicant is under consideration.	Rs 0.05 Lakhs	1 year
5	Shri Anoop Singh GramBeldra, Tah.-Maihar, Distt-Satna M.P.: Company is taking land of farmers and company is not giving employment to them. Exploitation is being done.	Employment has been given on the basis of agreement and eligibility, if there is any error it will be sorted out.	Priority will be given for secondary employment, who are not eligible for primary employment. Conducting/ sponsoring of Professional Training of youth through Skill India Programmes by a Govt of India	- Covered in S.No1	- Covered in S.No1
6	Shri Ramji Shukla GramNaktara, Tah.-Maihar, Distt-Satna M.P.: Applicant has given his consent for capacity enhancement	Thanked him for the support	-	-	-
7	Shri Rajendra Kumar Viswakarma Gram Pahadi, Tah.-Maihar, Distt-Satna MP.: He mentioned that more plantations should be done so that clean and pollution free Air can be maintained, Applicant has given	Presently One lakh plant has been planted in cement plant and colony. In future more plantations will be done	Development of nursery for plantation within plant complex Road Avenue plantation Each one Plant one Campaign will held annually by all Plant Employees every year Apart from the above	Rs 10 Lakhs Rs 20 Lakhs Rs 5 Lakhs	Proposed for 1st 5 years Proposed for 1st 5 years Proposed for 1st 5 years

S. No	Issue	Proponent Response	Action Plan	Financial Allocation	Timeline
	his consent for capacity enhancement.		mentioned CER initiatives, EMP budget has been allocated for greenbelt development	Rs 40 Lakhs	Proposed for 1st 5 years

II Revised CER:

A Corporate Environmental Responsibility (CER) Budget of Rs 265 Lakhs has been allocated for the environmental and social development/mitigation w.r.t. the proposed Expansion project in line with the MoEF&CC OM dated 1 May, 2018, with an investment Rs 240 Lakhs (an investment of 1% Project Cost of Rs 100 Crores + 0.75% of Project cost of Rs 220 Crores for Project Cost > Rs 100 Crores to </= Rs 500 Crores)

Corporate Environmental Responsibility (CER) Action Plan

S. No	Thematic Areas	Program Name/ Objective	Proposed Action Plan	Focus Group	Financial Allocation (Lakhs)
1	**Employment through Self Help Groups/Professional Training**	Skills training for employability	Conducting/ sponsoring of Professional Training of youth through Skill India Programmes by a Govt of India	Village youth	35
2	**Plantation**	Nursery development	Development of nursery for plantation within plan complex and avenue plantation along the roads	Community	10
		Avenue Plantation	Avenue plantation along approach roads to the Plant	Community	20
		Awareness	Each one Plant one Campaign will held annually by all Plant Employees every year	Community	5
		Greenbelt Development	Greenbelt development and further densification of existing greenbelt	Community	EMP budget of 40 Lakhs allocated

S. No	Thematic Areas	Program Name/	Proposed Action Plan	Focus Group	Financial Allocation
			area in scientific manner has been proposed		
		Solid waste management	Vermi-Composting Unit within plant/colony complex for conversion of biodegradable waste within plant and colony premises to Compost, which can be used for horticulture purpose	Community	20
3	**Agriculture**	Soil Fertility	Distribution of fertilisers/organic manure to farmers	Farmers	5
		Watershed Development	Watershed development works by construction of channels, rainwater harvesting structures and bunds will be sponsored by M/s KJS	Farmers	15
4	**Social Initiative**	Sanitation	Construction of Community toilet along Plant approach road	Community	5
			To create awareness on hygiene & healthy life	Community	5
		Drinking Water	Supply / installation of Water softners in the villages in vicinity to plant	Community	20
5	**Road Development**	Road maintenance and avenue plantation	Strengthen basic infrastructure facilities and provide clean environment	Community	50
		Bus Shelter	Construction of bus shelter along approach road	Community	10

S. No	Thematic Areas	Program Name/	Proposed Action Plan	Focus Group	Financial Allocation
6	**Education**	Support to Existing Govt Schools in Region	Financial aid to Govt Schools in vicinity	Students and teachers	20
			Visit of students to Cement Plant for educational visit	Students and teachers	-
		Support to school library	Campaign on donation of books to identified Govt School to promote reading in schools and aid teachers in their teaching process	Students and teachers	5
7	**Sub-contracting of works**	Approved Sub-Contractors	List of Sub-Contractors will include Land Losers and priority of work allocation will be given to the land losers for all CSR and CER related works	Land Losers	-
8	**Compensation against loss of land**	Tertiary Jobs	Priority in secondary job allocation for the proposed plant expansion with be given to the Land Losers/Ex--employees	Land Losers/Ex-employees	-
9	**Grievance Mechanism**	Grievance Cell	Grievance cell will be made functional to register any concerns from locals. The Grievances will be registered and discussed during Management Review Meetings and addressed on priority.	Community	-
10	**EMP Measures (air pollution, blasting at mines)**	Air pollution mitigation	Sprinkling on approach roads by tankers	Environment, Community	10
		Clean Energy	Solar lights/fencing of the Plant/Colony has been proposed	Environment, Community	20
	Total				**265**

III. Additional Measures for Fugitive Emissions

i. Green belt area will be increased as per CPCB guidelines and old green belt area will be further densified.

ii. Plantation at both side of approach road (0.6 km from NH-7 to Cement plant) will be done and it will be made of concrete.

iii. Dust suppression water tankers will be equipped with booster pumps.

iv. Crusher hopper will be equipped with fogging dust suppression system

v. Crusher ramp road will be metalled

vi. All the trucks transporting raw materials will be covered.

vii. One more mechanical sweeping machine will be deployed.

viii. By making railway yard, more emphasis will be given by transportation through rail to reduce the pressure on road transport.

ix. Wharfs will be made with wind barriers for rail loading and unloading.

Recommendations of the Committee: -

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

A. Specific Conditions:

i) The project proponent shall carry out greenbelt in an area of 37% of the total project area with native, broad leaved tree species.

ii) The project proponent shall take appropriate additional control measures for containing the fungitive emissions.

iii) The PP shall provide wind breakers at proposed warf loading.

iv) The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report.

B. General Conditions:

I. **Statutory compliance**:

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

ii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R. No. 612 (E) dated 25th S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

iii. The project proponent shall install Continuous Ambient Air Quality monitoring systems for monitoring of common/criterion parameters relevant to the main pollutants released (e.g. 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.

iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring alongwith results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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

vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better operation of baghouse.

vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.

viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

ix. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.

x. Provide wind shelter fence and chemical spraying on the raw material stock piles; and

xi. Provide Low NO_X burners as primary measures and SCR /NSCR technologies as secondary measure to control NO_X emissions.

xii. Have separate truck parking area and monitor vehicular emissions at regular interval.

xiii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport

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

III. Water quality monitoring and preservation

i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. (case to case basis small plants: Manual; Large plants: Continuous)

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers / sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

iv. Adhere to 'Zero Liquid Discharge'.

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off

vii. The project proponent shall practice rainwater harvesting to maximum possible extent.

viii. Water meters shall be provided at the inlet to all unit processes in the cement plant.

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

IV. Noise monitoring and prevention

iii. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

iv. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

V. Energy Conservation measures

i. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.

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

iii. Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards.

VI. Waste management

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

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

VII. Greenbelt:

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

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

VIII. Public hearing and Human health issues

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

ii. The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP,

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

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

IX. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

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

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

iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out

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

X. Miscellaneous

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

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

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

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

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

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

vii. The project proponent shall inform the Regional Office of this Ministry as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

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

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

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

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

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

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

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

xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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

1.5 Expansion of Steel Plant – New Iron Ore Beneficiation & Pellet Plant (Pellets - 6,00,000 TPA), New Gasifier for Pellet Plant 14250 Nm^3 /Hr, Induction Furnace (MS Ingots / Billets/Blooms from 86,400 TPA to 2,48,400 TPA), New Electric Arc Furnace with AOD / VOD Caster (MS & SS Ingots / Billets / Blooms – 1,20,000 TPA), Rolling Mill (Rolled Products / Structural Steels / TMT bars – from 1,45,250 TPA to 3,45,250 TPA), New Gasifier for Rolling Mill – 15,500 Nm^3 /Hr, New Ferro Alloys Unit (FeSi – 12,600 TPA / SiMn – 28,400 TPA / FeMn – 37,000 TPA) by M/s. API Ispat & Powertech Pvt. Limited at Siltara Village, near Phase – II, Siltara Industrial Growth Centre, Tehsil and District Raipur, Chhattisgarh –[Proposal No. IA/CG/IND/79244/2014; F.No. IA- J-11011/377/2014-IA.II(I)] – Environmental Clearance.

1.0 The proponent has made online application vide proposal no. **IA/CG/IND/79244/2014**dated 28th September 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The proposed expansion of Integrated Steel Plant of M/s. API Ispat & Powertech Private Limitedlocated at Siltara Village, Near Phase-II, Siltara Industrial Growth Centre, Raipur Tehsil & District, Chhattisgarh was initially received in the Ministry on 27th November 2014 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised in 29th EAC (Industry) meeting held on 11th – 12th December, 2014 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 vide Lr. No.J-11011/377/2014-IA II (I) dt. 12th June 2015 and subsequently TOR validity has been extended vide letter dated 21st June 2018 and is valid up to 10th June 2019.

3.0 The project of M/s. API Ispat & Powertech Private Limitedlocated at Siltara Village, Near Phase-II, Siltara Industrial Growth Centre, Raipur Tehsil & District, Chhattisgarh, has received the CTE prior to EIA Notification, 2006 for the existing Sponge Iron Plant (1,05,000 TPA) along with Power Plant (WHRB - 18 MW & AFBC - 7 MW), Induction Furnace (86,400 TPA) & subsequently Environmental Clearance accorded by SEIAA, C.G. for establishment of Rolling Mill (1,45,250 TPA) in the same premises vide Letter no 418 / SEIAA-CG / EC / Rolling Mill / RYP / 90 / 08 dated 10th December 2009. Consent to Operate for 2,10,000 TPA Sponge Iron, 18 MW WHRB Power Plant, 7 MW FBC Power Plant, 86,400 TPA of M.S Ingots/Billets, 1,45,250 TPA Rolling Mill & 1,45,250 TPA of Wire drawing mill has been issued by CECB and is valid till 31-08-2020.

4.0 Now as a part of proposed expansion, it has been proposed to establish New Iron Ore Beneficiation & Pellet Plant (Pellets - 6,00,000 TPA), New Gasifier for Pellet Plant 14250 Nm^3/Hr, Expansion of steel melting through Induction Furnace (MS Ingots / Billets/Blooms from 86,400 TPA to 2,48,400 TPA), New Electric Arc Furnace with AOD / VOD Caster (MS & SS Ingots / Billets / Blooms – 1,20,000 TPA), Expansion of Rolling Mill (Rolled Products / Structural Steels / TMT bars – from 1,45,250 TPA to 3,45,250 TPA), New Gasifier for Rolling Mill – 15,500 Nm^3/Hr, New Ferro Alloys Unit (FeSi – 12,600 TPA / SiMn – 28,400 TPA / FeMn – 37,000 TPA).

5.0 The existing project has been accorded Environmental Clearance vide order No. 418/SEIAA-CG/EC/Rolling Mill/RYP/90/08 dt.10.12.2009. The Status of compliance of earlier EC has been obtained from the Regional Office, MoEF&CC, Nagpur vide F.No. 18-D-5/2010-(SEAC)/3980, dated 31st July 2018.Fewpartial compliances were reported in the Certified Compliance Report in the same. Action taken report on partial compliances has been submitted to MoEF&CC, Nagpur for Recertification, accordingly Recertification has been issued vide F.No. 18-D-5/2010-(SEAC)/4356, dated 25th September 2018. Ministry has issued an EDS vide dated 25th September, 2018 asking proponent to submit action taken report on partial compliances of EC conditions. Proponent has submitted reply to EDS vide dated 26th September, 2018. It was observed from the latest Certified report that all conditions stipulated in the Earlier E.C. are Complied. The following are the existing EC permitted units & Proposed units:

S. No.	**Unit (Product)**	**Existing Plant (In Operation)**	**Proposed Expansion**	**After Proposed Expansion**
1.	Iron Ore Beneficiation and Pelletization Plant (Pellet)	---	2 x 1000 TPD (6,00,000 TPA)	2 x 1000 TPD (6,00,000 TPA)
2.	Gasifier for Pellet Plant	---	14,250 Nm^3 /Hr	14,250 Nm^3 /Hr
3.	DRI Kilns (Sponge Iron)	2 x 350 TPD (2,10,000 TPA)	---	2 x 350 TPD (2,10,000 TPA)
4.	Steel Melting Shop			
	a) Induction Furnace with CCM (MS Ingots/ billets/ blooms)	2 x 12 T (86,400 TPA)	3 x 15 T (1,62,000 TPA)	2 x 12 T & 3 x 15 T (2,48,400 TPA)
	b) Electric Arc Furnace with AOD/ VOD &	---	2 x 20 T (1,20,000 TPA)	2 x 20 T (1,20,000 TPA)

	Caster (MS and SS Ingots/ billets/ blooms)			
5.	Rolling Mill (Rolled Products / Structural Steels / TMT bars / Wire Drawing mill)	1,45,250 TPA	2,00,000 TPA	3,45,250 TPA
6.	Gasifier for Rolling Mill	---	15,500 Nm^3/Hr	15,500 Nm^3/Hr
7.	Ferro alloys	---	2 x 9 MVA	2 x 9 MVA
	i. Ferro – Silicon	---	12,600 TPA	12,600 TPA
	Or		or	Or
	ii. Silico–Manganese	---	28,400 TPA	28,400 TPA
	Or		or	Or
	iii. Ferro–Manganese	---	37,000 TPA	37,000 TPA
8.	Power Plant (WHRB based)	18 MW	---	18 MW
9.	Power Plant (FBC based)	7 MW	---	7 MW

6.0 Existing plant is located in 96.57 acres (39.1 Ha.) of land and proposed expansion will be carried out in the existing plant premises only. The land is in possession of management. Existing land is private land and diverted for industrial purpose. 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.

7.0 The topography of the area is flat with undulations and reported that the site lies between 21°22'58.13"N to 21°22'21.22"N Latitude and 81°38'36.24"E to 81°38'38.92"E longitude in Survey of India Topo sheet no. 64 G/11 at an elevation of 270 AMSL. The ground water table reported to ranges between 0.56 to 7.86 m bgl below the land surface during the post-monsoon season and 2.75 to 15 m bgl below the land surface during the pre-monsoon season.

8.0 There are no notified Reserve Forest / National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ Elephant Corridors / 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 furnished in Chapter # 3 of EIA report.

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

S. No.	RAW MATERIAL	QUANTITY (TPA)	SOURCES	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
1. For Iron Ore beneficiation plant (Iron ore concentrate)					
a)	Iron ore fines	9,00,000	Orissa	~500 Kms.	By Rail & Road through covered trucks
2. For Pellet Plant (Pellets)					
a)	Iron ore Concentrate	6,30,000	Own Generation	----	Covered Conveyor

S. No.	RAW MATERIAL		QUANTITY (TPA)	SOURCES	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
b)	Bentonite		9,000	Gujarat	~1400 Kms.	By Rail & Road through covered trucks
c)	Limestone		9,000	Chhattisgarh / Madhya Pradesh	100 – 500 Kms.	By Rail & Road through covered trucks
d)	Coke breeze		21,450	Chhattisgarh / Andhra Pradesh	100 – 200 Kms.	By Rail & Road through covered trucks
e)	Coal (Gasifier)	Indian	39,000	SECL	~200 Kms.	By Rail & Road (Covered trucks)
		Imported	24,000	Indonesia / South Africa / Australia	590 Kms. (from Vizag Port)	By Sea, Rail & Road (Covered trucks)
	Furnace Oil		10500 KL/annum	Raipur	~50 Kms.	By road (through Tankers)
3. For Induction Furnace (MS Billets)						
a)	Sponge Iron		1,32,000	In house generation	---	By Road through covered trucks
b)	Scrap		42970	Raipur	~50 Kms.	By Rail & Road through covered trucks
c)	Ferro Alloys		12,350	In house generation	---	----
4. For Electric Arc Furnace with AOD/ VOD & Caster unit						
a)	Sponge Iron		1,08,000	In house generation & External purchase	--- ~50 Kms.	By Road through covered trucks
b)	Scrap		24,000	Raipur	~50 Kms.	By Rail & Road through covered trucks
c)	Ferro Alloys		6,000	In house generation	---	----
5. For Rolling Mill (TMT bars & Structural Steel)						
	Billets / Ingots		2,16,600	In house generation	---	----
	Coal for Gasifier	Indian	41,500	SECL	~200 Kms.	By Rail & Road (Covered trucks)
		Imported	25,400	Indonesia / South Africa	590 Kms. (from Vizag	By Sea, Rail & Road (Covered trucks)

S. No.	RAW MATERIAL	QUANTITY (TPA)	SOURCES	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
			/ Australia	Port)	
	Furnace Oil	11450 KL/annum	Raipur	~50 Kms.	By road (through Tankers)
6.	For Ferro Alloys				
6. (i)	For Ferro Silicon				
a)	Quartz	16890	Chhattisgarh / Andhra Pradesh	100 – 700 Kms.	By Rail & Road through covered trucks
b)	LAM coke	5600	Imported from Australia, China	590 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)
c)	MS Scrap	350	Raipur	~50 Kms.	By Road through covered trucks
d)	Electrode paste	840	Andhra Pradesh (Vizag)	~550 Kms.	By Rail & Road through covered trucks
6. (ii)	For Silico Manganese				
a)	Manganese Ore	31780	MOIL / OMC	~300 Kms.	By Rail & Road through covered trucks
b)	Mn. Slag	18000	In house generation	---	----
c)	Quartz	7800	Chhattisgarh / Andhra Pradesh	100 – 700 Kms.	By Rail & Road through covered trucks
d)	LAM coke	3160	Imported from Australia, China	590 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)
6. (iii)	For Ferro Manganese				
a)	Manganese Ore	53400	MOIL / OMC	~300 Kms.	By Rail & Road through covered trucks
b)	LAM coke	30780	Imported from Australia, China	590 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)
c)	MS Scrap	2060	Raipur	~50 Kms.	By Road through covered trucks

S. No.	RAW MATERIAL	QUANTITY (TPA)	SOURCES	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
d)	Electrode Paste	6160	Andhra Pradesh (Vizag)	~550 Kms.	By Road through covered trucks

10.0 The targeted production capacity of the plant after expansion project is Rolled Products / Structural Steels / TMT bars / Wire Drawing mill - 0.345 million TPA. Iron ore, Iron ore fines will be supplied by M/s. Kamaljeet Singh Ahluwalia & M/s. Kaypee Enterprises. Imported Coal for would be supplied by M/s. S R M Commercial Pvt. Ltd.Iron Ore, Iron Ore fines transportation in railway rakes up to Mandhar Railway Station by Rail & then by road through covered trucks. Imported Coal transportation will be done through Ship to Vizag Port and from there to Mandhar Railway Station by Rail. The coal unloaded at Mandhar Railway Station will be transported to the Plant by road through covered trucks, which is at 12.0 Kms. from the plant.

11.0 Water requirement for the expansion project will be 1525 KLD. Total water requirement for the entire project will be 2880 KLD, which will be supplied by Chhattisgarh Ispat Bhumi Limited. Letter has been issued by C.G. Ispat Bhumi Ltd. confirming supply of 1525 KLD for proposed expansion.

12.0 Total power required for the existing units & for the proposed expansion units will be 99.75 MW which will be partly met from the existing captive power plants of 25 MW & Balance 75 MW will be sourced from the State Grid.

13.0 Baseline Environmental Studies were conducted during winter season i.e. from 1st December 2016 to 28th February 2017. Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated: $PM_{2.5}$ (39.5 to 52.9 mg/m^3), PM_{10} (70.5 to 91.3 µg/m^3), SO_2 (8.0 to 29.5 µg/m^3), NOx (7.4 to 39.7 µg/m^3) & CO (675 to 1225 µg/m^3). The results of the modeling study indicated that the maximum increase of GLC due to the proposed units & Vehicular emissions will be 4.9 µg/m^3 with respect to the PM_{10}, 6.4 µg/m^3 with respect to the SO_2, 18.6 µg/m^3 with respect to the NOx & 3.7 µg/m^3 with respect to the CO.

14.0 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: 178 to 249 mg/l, Chlorides: 101 to 294 mg/l, Fluoride: 0.39 to 0.61 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 3 locations in the study area and analysed and the data submitted indicated pH: 7.3 to 7.8, DO: 4.3 to 4.8 mg/l, BOD: 2.3 to 2.8 mg/l & COD 7.0 to 13.0 mg/l.

15.0 Noise levels are in the range of 45.40 dB(A) to 67.65 dB(A) during the study period.

16.0 It has been reported that there is no R & R involved, as it is an expansion project.

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

S.No.	**Waste / By product**	**Quantity (TPD)**	**Method of disposal**

S.No.	Waste / By product	Quantity (TPD)	Method of disposal
1.	Tailings	900	Will be given to M/s. Earthen Ceramics Pvt. Ltd. (Manufacturer of Porcelain Insulators)
2.	Ash / Dust generated from Pellet plant	54	Will be given to M/s. Ambuja Cement (Rawan), M/s. Om Bricks (Fly ash Brick manufacturer) & M/s. Rigid Fly Ash Blocks (Fly ash Brick manufacturer).
3.	Slag from SMS	94	Slag will be crushed and after recovery of iron, after that it will be given to Contractor (M/s. Shreeji Infrastructure India Pvt. Ltd.) for Road Construction.
4.	Mill Scales from Rolling Mill	34	Will be reused in existing & proposed SMS
5.	Slag from Ferro Silicon Manufacturing Process	5	Will be given to cast iron foundries.
6.	Slag from Silico Manganese Manufacturing Process	75	Will be given to Contractor for Road Construction.
7.	Slag from Ferro Manganese Manufacturing Process	70	Will be used in manufacture of Silico manganese as it contains high MnO_2.
8.	Ash generated from Gasifier (Pellet plant)	20	Will be given to M/s. Ambuja Cement (Rawan), M/s. Om Bricks (Fly ash Brick manufacturer) & M/s. Rigid Fly Ash Blocks (Fly ash Brick manufacturer).
9.	Ash generated from Gasifier (Rolling Mill)	21	Will be given to M/s. Ambuja Cement (Rawan), M/s. Om Bricks (Fly ash Brick manufacturer) & M/s. Rigid Fly Ash Blocks (Fly ash Brick manufacturer).
10.	Tar generation from Gasifiers	8	Will be given to coal tar recyclers / agencies engaged in construction activities.

18.0 It has been reported that an area of 13.0 Ha has already been developed with greenbelt out of total plant area 39.1 Ha. (96.57 Acres) in the existing plant premises to attenuate the noise levels and trap the dust generated due to the project development activities.

19.0 It has been reported that the Consent To Operate from Chhattisgarh Environment Conservation Board has been obtained vide No. 4146/TS/CECB/2017 Naya Raipur Dt. 30/10/2017 and consent is valid upto 31-08-2020.

20.0 The Public hearing for the proposed Expansion project was held on 10th April 2018, Gram Panchayat Building, Village Siltara, District Raipur, Chhattisgarh under the chairmanship of Additional District Magistrate for proposed expansion. The issues raised during public hearing are local employment, Pollution control in the area, Socio economic related, development of Greenbelt in Siltara, Rainwater harvesting in village, etc.

The following are the issues raised during PH & commitment of the Project Proponent.

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
1.	• Industry management shall provide employment to educated unemployed	• In the existing plant, out of total 350 numbers of employees, 245 numbers (70%) of employees are from the nearby villages. It is here by confirmed that priority in employment will be given to the local youth based on their qualification & experience and the requirement for a particular vacancy.	Continuous Process	---
2.	CSR activities in the village	• Socio economic activities will be carried out under CER and budget for same has been allocated under CER as per MOEF&CC norms which will be carried out in consultation with the village panchayat.	1 to 7 years	Rs. 2.1 Crores
3.	• Demanded that all industrialists shall personally come to meet the villagers, so that they can be appraised of the problems faced by the villagers.	• Socio economic activities will be carried out under CER and budget for same has been allocated under CER as per MOEF&CC norms which will be carried out in consultation with the village panchayat.	1 to 7 years	Rs. 2.1 Crores
4.	• There are several sponge iron industries in the area. Pollution can be controlled in sponge iron industries if industries operate the pollution control systems properly. Requested that all industries shall control pollution.	• In the existing plant air emission control systems such as ESP, Bagfilters, dust suppression system, covered conveyers, pucca internal roads, Dust extraction system with bag filters have been installed and operated to comply with the CECB norms. CECB has issued CTO for the existing plant which is valid till 31st August 2020. CECB accords CTO after all necessary emission control systems have been installed and operated. • ESPs are operated continuously in the plant and the CEMS data	Before commencement of operation of expansion	Rs 18 Crores

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
		connected to CPCB server is well within the norms. Similarly, in the expansion also requisite emission control systems will be installed and operated to comply with the norms. • Net resultant GLCs are within the National Ambient Air Quality standards after the expansion also. • No effluent is being discharged outside and ZLD is being followed in the existing plant. Similar practice will be followed after expansion also. • Ash is stored in silo and no open storage of ash. Ash disposal in the expansion project also will be in accordance with the MOEF&CC Notification and its subsequent amendments. • Development of greenbelt in 1/3rd of the area helps in mitigating the emissions further. With all these measures there will not be any significant adverse impact on environment due to the proposed expansion project		
5.	• Plantation in siltara industrial area needs improvement and industries should contribute towards the same.	• In the existing plant out of total 39.1 Ha., 13 Ha. of area has been developed with greenbelt. • Total 38,808 numbers of plants have been planted, out which 33,108 have survived. Additional 5000 nos. will be planted as part of the expansion project.	1st year of operation	Rs 15 lakhs
6.	• Drinking water problem in the area.	• Water required for the existing plant and for the expansion is supplied by CSIDC. Copy of		

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
		the CSIDC confirmation on supplying the requisite quantity for expansion is enclosed in the Final EIA report • Rainwater harvesting measures are taken up in the existing plant and similar practices will be continued after the expansion.	1st year of operation	Rs 10 Lakhs
7.	• Rainwater harvesting measures	• Rainwater harvesting measures such as deepening of existing ponds will be taken up in the village under CER and budget is also allocated for the same.	1st, 2nd& 3rd years	Rs 56 Lakhs
8.	• Employment to local people shall be provided	• It is confirmed that top priority will be given to the local youth in providing employment and will be based on their qualification & experience and the requirement for a particular vacancy.	Continuous	---
9.	• The road made by PWD from Bazar Chowk in Siltara to Bilaspur Road is hardly two to two and half years old. Godavari power promised to lay the road but till now it is not laid.	• Company is using only the permitted capacity trucks for transport of raw materials and products. Company is willing to contribute expenditure jointly with other industries in the area in consultation with the State Government to lay the new road. Provision will be made in the CER budget. However, the company will definitely contribute towards the maintenance of the road outside the plant premises.	---	---
10.	• More Plantation shall be taken up in Siltara area.	• In the existing plant out of total 96.57 acres (39.1 Ha.), 32.0 acres (13 Ha.) of area has been developed with greenbelt. • Total 38,808 numbers of plants have been planted, out which 33,108 have survived. • Tree plantation will be taken up	1st year of operation	Rs 15 lakhs

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
		in Silatara area to increase the green cover of the area. 5,000 plants will be planted in siltara rea during the next monsoon. The same is considered under CER and budget also has been earmarked for the same.	1st year of operation	Rs 25 lakhs
11.	• CSR amount shall be spent for development of village, such as construction of Wharf in village pond, plantation, concreting of village road. All the work of village development can't be done by the government alone and industries in the area shall also contribute to the village development.	• Socio economic activities will be carried out under CER and budget for same has been allocated under CER as per MOEF&CC norms which will be carried out in consultation with the village Panchayat. These activities include development of plantation in Siltara area, pucca village road, strengthening of existing ponds, etc.	1 to 7 years	Rs. 2.1 Crores
12.	• Committee for environmental approval has been dissolved due to completion of the term, so is this public hearing proper?	• TOR has been granted, by MOEF&CC, Govt. of India, New Delhi and not from the SEIAA, Chhattisgarh. Moreover at the time of conducting of public hearing the Expert Appraisal Committee need not necessarily be functional. • CECB has conducted the Public hearing as per the procedure prescribed by MOEF&CC	---	---
13.	• The company where it is expanding, that place was previously for Green Land.	• Existing plant is located in the 97.57 acres (39.1 Ha.) of land and proposed expansion will be carried out in the vacant land in existing plant and no plant cutting is envisaged. Greenbelt	1st year	Rs 10 Lakhs

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
		will be developed 1/3 rd of total area after expansion.		
14.	• Company has not done any work under CSR for the last 4 years neither given any details.	• During the financial year of 2015-16, 2016-17 and 2017-18, an amount of Rs.7.71 Lakhs, Rs. 5.34 and Rs.24 Lakhs respectively has been spent on the socio economic developmental activities in the villages. The same can be confirmed from the certified compliance report issued by the Regional Office, MoEF&CC, Nagpur.	---	---
15.	• When this company had changed its ownership in the past, 60 numbers of employees did not get any new jobs nor got last salary.	• Salaries to all employees at the time of acquisition by the new management has all been done by the earlier management. • Priority will be given to local people in employment.	---	---
16.	• There is no provision like PF nor the company follow any rules of government.	• PF and all other statutory rules have been followed	---	---
17.	• Where will the water come from for the capacity expansion, this is not clear. Water level of Siltara, Sankra and Sondra is already at low level.	• Water for the expansion will be supplied by CSIDC. A copy of the confirmation letter given by CSIDC is enclosed in the Final EIA Report. • To augment the water table Rainwater harvesting has been implemented in the existing plant and further RWH measures will be implemented in the plant as part of expansion. • Company also proposes to deepen the existing ponds in the village to augment the ground water table. • Recharge pits also will be	1st year of operation 1st, 2nd& 3rd years	Rs 10 Lakhs Rs 56 Lakhs

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
		constructed to further augment water table. • All these measures will help in improvement of ground water table		
18.	• It is not clear that the new unit will run by coal or anything else, so how will the environment be compensated.	• No sponge iron manufacturing and power generation is envisaged in the proposed expansion project. No coal usage is envisaged in the expansion. •	---	---
19.	• The siltara also comes in the urban residential area in the new master plan. Then how can it be allowed there.	• The present proposal is expansion and which will be taken up in the existing plant premises only which is situated in industrial area.	---	---
20.	• There are several plants in Siltara area, except for one or two industries the wages given by other companies are very low. Wages paid are Rs 200-250 in Siltara area as against the minimum wage fixed by the govt at Rs 350. Necessary action can be done to meet this.	• Wages in our company have been paid in accordance with the govt norms.	---	---
21.	• Local employment	• It is here by confirmed that priority in employment will be given to the locals based on their qualification & experience and the requirement for a particular vacancy.	---	---

21.0 An amount of Rs.2.1 Crores (as per Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018) has been earmarked for Corporate Environment

Responsibility (CER) 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	3rd	4th	5th	6th	7th	
A	**Based on need based & Social assessment study**								
1	Community & Infrastructure Development Programmes (Development of village road, renovation of school buildings, providing Street Lights & its maintenance in panchayat area, maintenance of Temples in nearby Villages, sanitation facilities, drainage facilities in nearby villages & schools.	8	8	8	4	4	4	4	40
2	Skill & Entrepreneur Development (Skills updation on welder / Fitter / wiremen etc.)	7	7	7	7	7	6	6	47
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	2	2	2	2	1	1	12
4	Medical & health related activities (Ambulance facilities to villagers)	2	2	2	2	1	1	1	11
5	Other requirements as per needs of the nearby Village Panchayat (such as supply of Fertilizers to augment N,P,K)	2	2	2	1	1	1	1	10
	SUB TOTAL (A)	**21**	**21**	**21**	**16**	**15**	**13**	**13**	120
B	**Based on Public Consultation**								
1	Additional Rain water harvesting measures in nearby villages	3	3	2	2	2	2	2	16
2	Plantation in the Siltara area	10	10	5	0	0	0	0	25
3	Deepening of Ponds in the	20	10	10	0	0	0	0	40

	nearby villages								
4	Supply of drinking water in the villages	2	2	1	1	1	1	1	9
	SUB TOTAL (B)	**35**	**25**	**18**	**3**	**3**	**3**	**3**	90
	TOTAL (A+B)	**56**	**46**	**39**	**19**	**18**	**16**	**16**	210

22.0 The capital cost of the project is Rs.240 Crores and the capital cost for environmental protection measures is proposed as Rs. 18 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 2.6 Crores/annum. The employment generation is 350 people during operation of the proposed expansion and 500 people during construction of the proposed units.

23.0 The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S.No	Particulars	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Crores)
1.	**Air Emission Management**		
	Electro Static Precipitators (ESP)	5.0	1.00
	Fume Extraction system with bag filters	2.5	
	Stacks	2.5	
	Water Sprinklers	0.2	
2.	**Wastewater Management**		
	for ETP	0.5	0.30
	for Garland drains	0.1	
3.	**Solid waste Management**		
	Slag Handling & Disposal	0.3	0.70
	Hazardous waste storage & disposal	0.2	
	Municipal solid waste storage & disposal	0.1	
4.	Greenbelt development, Land scaping, Noise Management, RWH etc.	0.8	0.30
5.	Fire Safety Systems	2.0	0.05
6.	**Environmental Monitoring**		
	AAQMS	1.3	0.10
	CEMS	1.3	
7.	**Occupational Health & Safety**		
	Primary Health Centre (PHC)	0.8	0.15
	Personal Protective Equipment's (PPEs)	0.2	
	Ambulance	0.2	
TOTAL		**18.0**	**2.60**

24.0 Greenbelt has already been developed in 13.00 Ha. (32.0 Acres) in the existing plant premises, which is about 33% of the total acquired area. Greenbelt width varying from 15 to 100 m is being developed all around the plant.33,108 no. of plants have already been developed in

the existing plant premises. PA's proposed to plant about another 5,000 no. of saplings as part of expansion project.

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

26.0 EIA Conultant: Pioneer Enviro Laboratories & Consultants Pvt. Ltd., Hyderabad

Observations of the Committee: -

27.0 The committee observed that the background consentration of the particulate matter is almost reaching the permissible standard; the issues raised during the public hearing was not addressed properly; the CER provision was not made as per the guideines issued by the ministry vide OM dated 1st May 2018; the committee opined that the unit configuaration of the EAF may be revised by proposing one 40T EAC in place of 2X20T EAF for reduction of pollutions, explore the possibility of providing one gassifier in place of two gassifier proposed for pellet plant and rolling mill or shall explore the possibility of liquid firing and fume extraction system;

Recommendations of the Committee: -

28.0 The committee advised to submit following information for further consideration of the proposal:

1. Revised time bound action plan along with budget provision on the issues raised by the public during the public consultation;
2. Revised CER based on the issues raised during the public consultation;
3. Additional dust control measures for containing the air pollution to bring down the particulate matter consentration well below the prescribed standards;
4. Revided configuration of the EAF
5. Explore the possibility of providing one gassifier in place of two gassifier proposed for pellet plant and rolling mill or shall explore the possibility of liquid firing
6. Fume extraction system with forth hole
7. Provision of filer press shall be made

1.6 Proposed expansion & modernization of the existing Unit to produce Mild Steel Billets/Ingots and MS Bars/Sections (Capacity – 2,00,000 MTPA each) through augmentation in the existing Induction Furnaces capacity by M/s Kashi Vishwanath Steels Private Limited at Narain Nagar Industrial Estate, Bazpur Road, Kashipur, District Udham Singh Nagar, Uttarakhand – [Proposal No. IA/UK/IND/75122/2018; F.No.] – Terms of Reference.

1.0 The proponent has made online application vide proposal no. **IA/UK/IND/75122/2018** dated24th October, 2018along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under category 'B' of the Schedule of EIA Notification, 2006. The project is located within 5 Km from the interstate boundary with the Uttar Pradesh, therefore, the proposal is appraised at the Central Level.

Details submitted by the Project Proponent

2.0 M/s Kashi Vishwanath Steels Private Limited (KVS) proposes for expansion & modernization of existing manufacturing unit to produce MS Billets/Ingots and MS Bars/Sections (Capacity – 2, 00,000 MTPA each) through augmentation in the existing Induction Furnaces capacity & Utilities.It is proposed to expand /modify the plant for melting the mixture of Sponge Iron, Scrap and Ferro Alloysthrough Induction Furnace after reducing micro elements such as Sulphur and Phosphorous by aconvertor then solidify the molten metal in Continuous Casting Machines and then direct feeding inRolling machinery to produce Bars/Sections with the help of conveyer system based on HOT CHARGING technology.

3.0 The Company adopted the technology whereby steel billets produced from induction furnace are directly rolled in the rolling mill, thereby bypassing altogether the requirement of any fuel. This led to cleaner environment as there is no fuel consumption and therefore no emission and at the same time, this enabled the company to cut cost of manufacturing to remain a cost effective option for its consumers. Apart from reducing fuel consumption, refining of micro elements eventually increase the yield and quality of the finished products.Company is proposed to install APCS dust processing Unit (Capacity - 4.0 mt/day) also to extract Metals.500 kg Furnace (01No.) shall be installed for metal recovery from the APCS dust.

4.0 M/s KVS has taken CTE & CTO at all stages of expansion from respective Pollution Control Boards prior to application of the Environment Impact Assessment (EIA) Notification Number S.O.1533 dated 14th September, 2006. The last CTE expansion was obtained on dated 26.04.2006 for the total capacity of 245 MTPD and thereafter no increase in Production capacity was made, therefore environment clearance was not required as no expansion, modernization &change in product mix took place. Consent to Operate was accorded by Uttarakhand Environment Protection & Pollution Control Board (UEPPCB) vide Letter No. UEPPCB/HO/Con-K-8/2017/1169, which is valid up to 31.03.2018 and Company has applied for CTO Renewal for the Period up to 31.03.2019.

5.0 The existing unit is located at Narain Nagar Industrial Estate, notified by Uttarakhand Government, situated at Khasra No. 64, 65, 66 min, 22, 25/1& 25/3, Bazpur Road, Kashipur, District Udham Singh Nagar,Uttarakhand.

6.0 The land area already acquired for the existing plant is 14.78 Acres (59817.0 Sqm). Vacant land (3705.4 Sqm) shall be used for proposed expansion activities. No forestland involved. The entire land has been acquired for the project. Out of which 19740.00 Sq m (i.e.33.0 % of total area) shall be developed as greenbelt and other forms ofgreenery by planting the native species. Approx. 20% of the area is alreadydeveloped as Green Belt and being

maintained. Additionally 13% of the area is also proposed to develop Green Beltwithin premises. In addition to that we wish to inform that company has maintained a Garden of various Plant species on 05 Acres (20234.28 Sqm) of Land just 9.0 m away towards entrance of project boundary.

7.0 Jim Corbett National Parkis located at a distance of 24.05 km N from the project site. 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.

8.0 Total project cost is approx. 12.0 Crore rupees. Proposed employment generation fromproposed project will be 100 direct and 50 indirect employments.

9.0 The targeted production capacity of the MS Billets/Ingots and MS Bars/Sections is Capacity – 2,00,000 MTPA each. Primary raw materials are Sponge Iron, Iron Scrap and Natural Gas. Sponge Iron is available from district Koenjhar of Orissa state and Company is proposed to replace the fuel viz.Coal with Natural Gas as fuel under the cleaner technology for existing Re heating furnace. Company has made an agreement with Indian Oil – Adani Gas Pvt. Ltd. for made the connection & continuous supply of Gas for reheating Furnace as & when required. The Raw materials transportation is being done through Road/Rail. The proposed capacity for different products for existing site area as below: -

Products (Mild Steel)	**Capacity (MTPA)**		
	Existing	**Proposed**	**Total**
Mild Steel Billets/Ingots	57,600	1,42,400	2,00,000
Mild Steel Bars/Sections	88,200	1,11,800	2,00,000

Detail of the Existing and Proposed Capacities						
Plant Facilities	**Existing**		**Proposed**		**Total (after proposedexpansion)**	
	Unit	**Capacity (MTPA)**	**Unit&IF Capacity**	**Capacity**	**Unit**	**Capacity (MTPA)**
Induction Furnace	5 Tons (02 Nos.) and 4 Tons (02 Nos.)	57,600	**Proposed: 6 Tons (03 Nos. – modify/replacement of existing IFs) and 10 Tons (03 Nos. - 01 No. replacementwith existing 4 Ton furnace& 02 Nos. new)**	**1,42,400**	6 Tons (03 Nos.) and 10 Tons (03 Nos.)	**2,00,000**
Continuous Casting M/c (CCM)	2 Strand, 4/7 m radius	57,600	**Modernization**	**1,42,400**	2 Strand, 4/7 m radius	

Detail of the Existing and Proposed Capacities						
Plant Facilities	**Existing**		**Proposed**		**Total (after proposedexpansion)**	
	Unit	**Capacity (MTPA)**	**Unit&IF Capacity**	**Capacity**	**Unit**	**Capacity (MTPA)**
Rolling Mill	02	88200	**Modernization**	**1,11,800**	--	**2,00,000**

10.0 After proposed expansion, the Unit at full capacity will demand 26.5 MW of power, which shall be supplied through Grid (UPCL). Existing power demand is 16.5 MW. Company has alsoproposed to install Green insulated DG Set of 685 KVA (125, 160 & 400 KVA). Existing DG Set is 63 KVA capacity, which shall be replaced by proposed DG Set.

11.0 Proposed raw material for Melting Division are Sponge Iron, Iron Scrap/Pig Iron and Ferro-alloys and fuel requirement for project areNatural Gas, LPG and HSD (for DG set). Fuel consumption will be mainlyNatural Gas: 12000 SCM/day, LPG: 3.33 KG/ day and HSD: 112 LIT/ hr.Annual requirement of Raw Material with source of supply is given below:

For making of MS Billets/Ingots (Melting Division)

S. No.	Raw Materials	Ratio	Quantity (Tons/annum)			Source of Supply
			Existing	Additional	Total	
1.	Sponge Iron	77.0	47935.64	118507.56	166443.20	Koenjhar, Orissa
2.	Iron Scrap/ Pig Iron	22.50	14007.17	34628.83	48636.00	Delhi & UP
4.	Ferro-Alloys	0.50	311.27	769.53	1080.80	Raipur & UP
Total		100	62254.08	153905.92	216160.0	

For making of MS Bars/Section (Rolling Division)

S. No.	Raw Materials	Quantity (Tons/annum)			Source of Supply
		Existing	Additional	Total	
1.	MS Billets/Ingots	89543.0	113502.54	203045.68	Open Market/Captive

12.0 Initially total water demand is 506.0 KLD and recycle/reuse water is 305.0 KLD. Fresh Water required for Production of Mild Steel Billets/Ingots and Bars/Sections will be 201.0 KLD after proposed expansion and No waste water generation from industrial process except Cooling Tower& Softener Plant Bleed (5.0 KLD) which shall be reused in the green belt development & Dust Suppression respectively after sedimentation followed by neutralization.

13.0 Domestic waste water (18.0 KLD) will be treated through proposed STP (Capacity - 25.0 KLD)& reuse in green belt for irrigation purpose. Zero discharge will be achieved.

14.0 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: -

15.0 The committee observed that the proposal was deliberated in the earlier meeting of EAC and recommended the proposal for returning in present form due to congestion.

Recommendations of the Committee: -

16.0 After detailed deliberations the committee advised to submit the revised layout showing the details of internal roads suitable for movement of fire tender and ambulances in case of emergency, storage yard, parking, etc. The configuration Induction Furnaces may be explored to plan for bigger size of IF i.e. 4X10 T in place of 3X6 T+ 3X10 T Induction Furnaces. Therefore, the proposal is deferred for additional information.

1.7 Proposed Installation of the Ferro Alloy Plant through setting up of 4 nos. 16.5 MVA Submerged Arc Furnaces Along with Sinter & Briquette Plant by M/s. Maithan Alloys Limited at Bankura District, West Bengal [Proposal No. IA/WB/IND/80421/2018; F.No.] – Terms of Reference.

1.0 The proponent has made online application vide proposal no. IA/WB/IND/80421/2018dated27thSeptember, 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & nonferrous) under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

Details submitted by the project proponent

2.0 M/s. Maithan Alloys Ltd. proposes to install a new unit for production of ferro alloys. It is proposed to set up the plant for production of ferro alloys by installation of 4 nos. 16.5 MVA Submerged Arc Furnaces along with Sinter & Briquette Plant at Village: Hat-Asuria and Basudebpur (North), Mouza: Basudebpur (North) and Hat-Asuria, P.O. Hat-Asuria, P.S. Barjora, District Bankura in West Bengal.

3.0 This is a new Project. Therefore, the Consent to Operate (CTO) will be accorded from State Pollution Control after getting EC from MoEF&CC.

4.0 The proposed unit will be located at L.R. Plot No. at Mouza: Basudevpur (North) – 856, 960-964, 972, 974-999, 1001-1026, 1028-1036, 1063-1066, 1076, 1077, 1080-1083, 1085-1105, 1107-1113, 1117, 1120, 1125, 1128, 1138-1141, 1025/1247, 1065/1174, 1106/1106, 986/1249, 986/1250, 986/1251, L.R. Plot No. at Mouza: Hat-Asuria – 365-379, 381, 382, 385, 1002-1026, 1028, 1035, 1011/2872, 1035/2874, 1806/2871, 372/2672, Village : Hat-Asuria and Basudebpur (North), Mouza: Basudebpur (North) and Hat-Asuria, P.O. Hat-Asuria, P.S. Barjora, District Bankura in West Bengal.

5.0 The land area required for the total plant is 16.19 Ha (40 acres). The land is industrial in nature. No forest land involved. The entire land has been acquired for the project. Of the total area 5.34 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. Rs. 271 Crore. Proposed employment generation from proposed project will be 570 in total. 134 direct employment and 436 indirect employment.

8.0 The targeted production capacity of the proposed Ferro alloy plant is 1,20,000 TPA Ferro Alloys (Ferro Chrome, Silico Manganese, Ferro Silicon & Ferro Manganese) along with Sinter Plant (70,000 TPA Manganese Ore) and Sinter Briquette Plant (3,00,000 TPA Chrome Ore Briquette).The Chrome ore will be procured from Jajpur district of Orissa & Manganese ore will be procured from Australia / Africa and Barbil, Nagpur or Bellary sector. The ore transportation will be done through Rail / Road. The proposed capacity for different products for new site area as below:

Name of Unit	No. of Unit	Capacity of each Unit	Production Capacity
Ferro Alloys Plant	4 Numbers Submerged Arc Furnace	16.5 MVA	1,20,000 TPA ferro alloys (Ferro Chrome, Silico Manganese, Ferro Silicon & Ferro Manganese)
Sinter Plant	2	100 TPD	70,000 TPA Manganese Ore Sinter
Briquette Plant	2	30 TPH	3,00,000 TPA Chrome Ore Briquette

9.0 The electricity load of 64 MVA which will be procured from DVC (Damodar Valley Corporation) power supply system.

10.0 Proposed raw materials requirement for project are as follows:

Sl. No.	Items	Raw Material Requirement
Ferro Chrome Production:		
1.	Chrome Ore	2600 kg/MT Fe-Cr
2.	Coke	400 kg/MT Fe-Cr
3.	Coal	180 kg/MT Fe-Cr
4.	Quartz	20 kg/MT Fe-Cr
5.	Dolomite	20 kg/MT Fe-Cr
6.	Lime	25 kg/MT Fe-Cr
7.	Molasses	60 kg/MT Fe-Cr
Silico Manganese Production:		
1.	Manganese Ore	1700 kg/MT Si-Mn
2.	FeMn Slag	700 kg/MT Si-Mn
3.	Coke	400 kg/MT Si-Mn
4.	Coal	400 kg/MT Si-Mn
5.	Quartz	200 kg/MT Si-Mn
Ferro Silicon Production:		
1.	Quartz	1700 kg/MT Fe-Si
2.	Mill Scale	430 kg/MT Fe-Si
3.	M.S. Scrap	20 kg/MT Fe-Si

4.	Charcoal	900 kg/MT Fe-Si
5.	LAM Coke	550 kg/MT Fe-Si
Ferro Manganese Production:		
1.	Manganese Ore	2400 kg/MT Fe-Mn
2.	Coke	400 kg/MT Fe-Mn
3.	Coal	400 kg/MT Fe-Mn
4.	Dolomite	30 kg/MT Fe-Mn

11.0 Water Consumption for the proposed project will be 650 kld (daily Industrial make-up water – 600 KLD, daily domestic water demand – 50 KLD). Domestic waste water will be treated in septic tank-soak pit system and industrial waste water generated will be treated in water treatment facility and reused completely.

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

13.0 The project proponent submitted the same proposal vide Proposal No. IA/WB/IND/80421/2018 dated 23rd June, 2018 and considered in the 33rd meeting of EAC held on 9thJuly, 2018. After detailed deliberations, the committee recommended for returning the proposal in the present form and requested to submit a revised proposal addressing the following five (5) issues.

The reply against the respective five points as raised by the committee is as follows:

Point 1: The CPCB has already brought out the "Zoning Atlas for Setting of Industries" for the District of Bankura in West Bengal where the project is proposed to be located. However, the project proponent could not provide the details of that zoning for ascertaining whether the proposed site is in the proper zone. The project proponent could not show the drainage pattern in that area and also could not specify sufficiently how the quality of water in these ponds would be maintained.

Reply: As per "Zoning Atlas for Setting of Industries" based on environmental considerations for Bankura District in West Bengal, published by CPCB in January, 2000, the Proposed Project site falls under "Medium Air &/or Low Water Polluting Industries". The relevant Map was uploaded in the MoEF&CC website as Annexure-I with covering letter.

Point 2: Being a green field project, there was no alternative site proposed so that alternative site analysis could be discussed.

Reply: M/s Maithan Alloys Limited has proposed to install 4x16.5 MVA Submerged Arc Furnaces along with Sinter & Briquette Plant at Village: Hat-Asuria and Basudebpur (North), Mouza: Basudebpur (North) and Hat-Asuria, P.O. Hat-Asuria, P.S. Barjora, District Bankura, West Bengal on about 16 hectares (40 acres) of land.

The following alternative locations/ sites were considered and analyzed to select the most suitable location for development of proposed project on the basis of raw material, power & water availability, area requirement and accessibility via road or port.

- Alternative Site-1: Near village Deuli, Mouza Bishnupur, District Bankura, West Bengal. (Geographical Co-ordinates: 23° 6'13.09"N & 87°19'24.18"E)

- Alternative Site-2: Village: Hat-Asuria and Basudebpur (North), Mouza: Basudebpur (North) and Hat-Asuria, P.O. Hat-Asuria, P.S. Barjora, District Bankura, West Bengal. (Geographical Co-ordinates: 23°24'11.27"N & 87°17'51.37"E)

- Alternative Site-3: Village Dharmma, District Burdhaman, West Bengal (Geographical Co-ordinates: 23°44'44.45"N & 86°54'12.94"E)

The facts presented in preceding paragraphs mandate that Site-2 at Barjora emerges as technically best suitable site for availability & proximity of water source, power source, accessibility to Road & Rail network, Flat terrain etc.. Details of Alternative sites & Maps was uploaded in the MoEF&CC website as Annexure-II with covering letter.

Point 3: There were three live village ponds in the vicinity of the proposed site and these ponds were being used by the local villagers.

Reply: The Elevation of all the adjoining Ponds is higher than the Elevation of the project site. Thus, there will be no flow of storm water from the project area to any of these adjoining ponds. The plant is designed as Zero Liquid Discharged project in terms of waste water generation during plant operation. However, a separate storm water drainage system will be developed in the project site. In case of heavy rain fall, a part of rain water shall be collected in the Rain Water Harvesting Tank in the project site and the remaining portion shall be discharged suitably ensuring no contamination of any surface water. Relevant Maps for Elevation of the site & surrounding was uploaded in the MoEF&CC website as Annexure-III with covering letter.

Point 4: The waste silt recovery was not envisaged in the proposal.

Reply: The silt is expected to get accumulated / collected in the rain water harvesting tank which is envisaged to be located in lowest elevation area of the plant and it shall be removed from there and diverted for suitable use.

Point 5: The details of land under the possession of the proponent were not provided.

Reply: The relevant land details was uploaded in the MoEF&CC website as Annexure-IV with covering letter.

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

Observations of the Committee: -

15.0 The committee observed that the proposed location is falling in the "Medium Air &/or Low Water Polluting Industries" as per "Zoning Atlas for Setting of Industries" for Bankura District in West Bengal, published by CPCB in January, 2000. The project proponent is informed that the plant will be designed for ZLD, therefore, no discharge will be made to the adjoining ponds and also agreed to develop not less than 15 m wide greenbelt against the ponds.

Recommendations of the Committee: -

16.0 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed **at Annexure I read with additional ToRs at Annexure-2:**

i. The layout shall be planned in such a way that not less than 15 m of green belt shall be planned against the ponds located adjacent to the proposed boundary.

ii. The layout of the plant shall be designed such way that no discharge/runoff from the plant premises shall enter into the adjacent ponds.

iii. The plant shall be designed for ZLD.

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

v. 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.

vi. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

1.8 DRI Kilns to Manufacture 3,63,000 TPA of Sponge Iron, installation of Induction Furnaces to manufacture 3,30,000 TPA of M.S. Ingots / Billets, installation of Rolling Mill to manufacture 3,30,000 TPA of TMT bars / Structural Steel / Rolled Products, installation of Submerged Arc Furnaces to manufacture Ferro alloys (Ferro – Silicon – 12,600 TPA or Silico–Manganese- 28,400 TPA or Ferro–Manganese – 37,000 TPA) & Power plant - 42 MW (WHRB – 30 MW & FBC – 12 MW) of M/s Avinash Energy Private Limited at Mohra&Hirmi Villages, SimgaTahsil, Baloda Bazar -Bhatapara District, Chhattisgarh[Proposal No. IA/CG/IND/80527/2018; F.No. IA-J-11011/307/2018-IA-II(I)] – Terms of Reference.

1.0 The proponent has made online application vide proposal no. IA/CG/IND/80527/2018dated 27thSeptember 2018along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & nonferrous) under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

Details submitted by the project proponent

2. M/s. Avinash Energy Private Limited proposed Steel Plant- installation of DRI Kilns for Manufacture of 3,63,000 TPA and installation of Induction Furnaces to manufacture of 3,30,000 TPA of M.S. Ingots / Billets, installation of Rolling Mill to manufacture of 3,30,000 TPA of TMT bars / Structural Steel / Rolled Products, installation of Submerged Arc Furnaces to manufacture Ferro alloys (Ferro – Silicon – 12,600 TPA or Silico–Manganese- 28,400 TPA or Ferro–Manganese – 37,000 TPA) & Power plant - 42 MW (WHRB – 30 MW & CFBC – 12 MW). It is proposed to manufacture the above products based on the following technology

- Producing Sponge Iron through DRI route.
- Producing MS Billets/MS Ingots through IF route & LRF
- Producing TMT Bars / Structural Steels / Rolled Products through Rolling mill.
- Producing Ferro Alloys through Submerged Arc Furnace route
- Power generation through Waste Heat Recovery & CFBC Boiler

3. The proposed project will be located at Khasra numbers 146, 147, 148, 149, 150, 168/1,2,3&4, 169, 170/1,2,3,4&5, 171, 172/1,2,3,4,5,6,7,8,9&10, 173, 174/1&2, 175, 176, 177/1 & 3, 178, 179/1&2, 180, 181/1,2 & 3, 182/1 & 6, 183, 184 of Mohra Village & 872/2, 856, 855/3 of Hirmi village, Simga Tahsil, BalodaBazar-Bhatapara District, Chhattisgarh.

4. The proposed project is a Greenfield project. CTE will be obtained after getting Environment Clearance from MoEF&CC. Consent to Operate will be obtained after getting CTE from CECB, Chhattisgarh

5. Total land envisaged is 67 Acres /27.129 Ha. and same is taken on lease for the proposed project. Of the total area, 22.1 acres / 8.94 Ha. (33%) land will be used for greenbelt developed. No Forest land involved.

6. One Protected Forest exists within 10 Km. radius of the project 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. The area also does not report to form corridor for Schedule – I fauna. Mahanadi canal (1.5 Kms.), Kumhari Tank (3.5 Kms.) and Banjari nala (3.2 Kms) are present within 10 Km. radius of the project site.

7. Total project cost for proposed project is approx. Rs. 400.0 Crores. Proposed employment generation from proposed project will be 500 nos. direct employment and 1000 nos. indirect employment.

8. The targeted production capacity of the total plant is 0.33 million TPA. The ore for the plant would be procured from NMDC, Bastar Chhattisgarh. The ore transportation will be done through by road (through covered trucks). Following is the proposed plant configuration and production capacity details:

S.No.	Name of the Unit & Product	PROJECT CONFIGURATION	PRODUCTION CAPACITY

1.	DRI plant (Sponge Iron)	4x100 TPD 2x350 TPD	3,63,000 TPA
2.	Induction Furnace (M.S. Billets / M.s. Ingots)	4x15 MT 2x20MT	3,30,000 TPA
3.	Rolling Mill (TMT Bars / Structural Steels / Rolled Products)	2x500 TPD	3,30,000 TPA
4.	Submerged Arc Furnaces (Ferro Alloys)	2x9 MVA	Ferro – Silicon – 12,600 TPA or Silico–Manganese- 28,400 TPA or Ferro–Manganese – 37,000 TPA
5.	Captive Power plant	4x2.5 MW 2x10 MW 1x12 MW	WHRB – 30 MW CFBC – 12 MW

9. The total power requirement for the proposed project will be 61.6 MW, this will be met mainly with captive power plant of 42 MW (i.e. 30 MW WHRB and 12 MW FBC based power plant), A load of ~19.6 MW is proposed to be procured from the state grid.

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

Raw Material		**Quantity (TPA)**	**Sources**	**Mode of Transport**
For DRI Kilns (Sponge Iron – 363000 TPA)				
Iron ore		5,80,800	NMDC and Other Supplies from Chhattisgarh and Odisha	By rail & road (through covered trucks)
Limestone		47,190	Supplies from Chhattisgarh	By road (through covered trucks)
Coal	Indian	4,71,900	SECL and Other Supplies from Chhattisgarh and Odisha	By rail & road (through covered trucks)
	(or)			
	Imported	3,02,016	South African and Australian	Through sea route, rail route & by road
For Induction Furnace (MS Billets / Ingots) – 330000 TPA				
Sponge Iron		3,56,400	In-house generation	By Conveyor
Scrap		46,200	Supplies from Chhattisgarh and Odisha	By road (through covered trucks)

Ferro Alloys		4,950	Supplies from Chhattisgarh	By road (through covered trucks)
For Rolling Mill (TMT bars & Structural Steel/Rolled products) – 330000 TPA				
M.S. Ingots / Steel billets		3,79,500	In-house generation & purchase	through conveyors & trucks
Furnace oil		10,890 (11,200 KL)	Supplies from Chhattisgarh	Tankers
Pulverized coal	Indian	66,000	SECL and Other Supplies from Chhattisgarh and Odisha	By road (through covered trucks)
	(or)			
	Imported	42,240	South African and Australian	Through sea route / rail route / by road
For FBC Boiler [Power Generation 12 MW]				
Dolochar		1,08,900	In-house generation	through covered conveyors
Coal	Indian (100 %)	71,280	SECL and Other Supplies from Chhattisgarh and Odisha	By rail & road (through covered trucks)
	(or)			
	Imported (100 %)	45,651	South African and Australian	Through sea route / rail route / by road

Raw Material	**Quantity (TPA)**	**Sources**	**Mode of Transport**
For Ferro Silicon unit (For 2 x 9 mVA)			
Quartz	24450	Chhattisgarh / Andhra Pradesh	By Rail & Road (covered trucks)
Mill scales	5000	In-house generation	Through conveyor
LAM Coke	3800	Raipur	By Road (covered trucks)
EC Paste	1000	Maharashtra / West Bengal	By Road (covered trucks)
Bag filter dust	750	In-house generation	Through conveyor
For Ferro Manganese unit (For 2 x 9 mVA)			
Manganese Ore	29750	MOIL / OMC	By Rail & Road (covered trucks)
Dolomite	5050	Chhattisgarh / Andhra Pradesh	By Road (covered trucks)
LAM Coke	5000	Raipur, Chhattisgarh	By Road (covered trucks)

EC Paste	230	Maharashtra / West Bengal	By Road (covered trucks)
Bag filter dust	500	In-house generation	Through conveyor
For Silico Manganese unit (For2 x 9 mVA)			
Manganese Ore	22175	MOIL / OMC	By Rail & Road (covered trucks)
LAM Coke	5300	Raipur	By Road (covered trucks)
Dolomite	5050	Chhattisgarh / Andhra Pradesh	By Road (covered trucks)
Quartz	5700	Chhattisgarh / Andhra Pradesh	By Road (covered trucks)
EC Paste	315	Maharashtra / West Bengal	By Road (covered trucks)
Ferro Manganese Slag	5000	In-house generation	Through conveyor
Bag Filter dust	440	In-house generation	Through conveyor

11. Water consumption for the proposed project will be 735 KLD. Water drawl permission will be obtained from Central Ground Water Authority. Air Cooled Condensers have been proposed in the Power plant to reduce the water consumption significantly.

12. There will not be any wastewater generation from the DRI, SMS, Rolling Mill & Ferro alloys process 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 holding tank. The treated effluent from holding tank will be utilized for dust suppression, ash conditioning and for greenbelt development. The sanitary wastewater will be treated in Septic tank followed by sub-surface dispersion trench. Zero Liquid effluent Discharge system will be maintained in the proposed project

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

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

Observations of the Committee: -

15.0 The committee observed that the instat proposal is green filed project and proposed to locate in the agricultural area surround by the agricultural lands and the land proposed is also on shortterm lease from the owners. The alternative sites shown were also not acceptable from the environmental aspects as there were close to the habitations and agrriculutral lands. The committee felt that the project proponent may explore the barren/waste lands available in the area in place of agricultural lands for setting up of proposed industry.

Recommendations of the Committee: -

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

1.9 Proposed Dhenkanal Steel Plant (2.85 MTPA Steel) of M/s Rungta Mines Ltd at villages Jharbandh, Galpada and Tarkabeda, District Dhenkanal, Odisha [Proposal No. IA/OR/IND/80884/2018; F.No. IA-J-11011/309/2018-IA-II(I)] – Terms of Reference.

1.0 The proponent has made online application vide proposal no. **IA/OR/IND/80884/2018** dated 30/09/2018along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & nonferrous) under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

Details submitted by the Project Proponent

2.0 M/s Rungta Mines Ltd. proposes to install a new manufacturing unit for 2.85 MTPA integrated Steel Plant based on DRI/IF/MBF/EAF technology.

3.0 The project was granted Environment Clearance vide Letter No. J-11011/241/2009-IA.II(I) dated 02.08.2010. The CTE has been obtained from OSPCB vide letter No. 917 dated 21.01.2012 for the proposed plant, but the company was not able to complete installation of Plant Facilities within validity period of Environment Clearance due to fluctuation in steel market.

4.0 The proposed unit will be located at villages Jharbandh, Galpada and Tarkabeda, District Dhenkanal, Odisha.

5.0 The land required for the proposed plant is 273.07 ha., out of which 218.82 ha. is private fallow land and 27.43 ha is Government waste land. 3.156 ha Forest land is present within project area. Stage II forest clearance has been obtained from MOEF&C vide letter no. 5-ORB207/2014-BHU dated 02.07.2015. The entire land has not been acquired for the project. Out of total area, 246.249 ha (218.815 ha private and 27.434 ha Government Land) has been acquired and balance of 26.82 ha is pending with Tehisldar, Hindol. Out of the total area 90.11 ha (33%) land will be used for green belt development and plantation.

6.0 The Chandka Dampur WLS is located at a distance of 26 km from the site. 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.

7.0 Total project cost is approx 7836.9 Crore rupees (Phase I-Rs 3888.63 Crores; Phase II-Rs. 3948.27 Crores). Proposed employment generation from proposed project will be 2600 (Phase I-1300; Phase II-1300) direct employment and 2000 indirect employment.

8.0 The targeted production capacity of the Integrated Steel Plant is 2.85 million TPA (Phase I-1.45 MTPA; Phase II-1.40 MTPA). The iron ore for the plant would be procured from company's own mine/OMC/other private mines and coking coal shall be sourced from South

Africa. The ore transportation will be done through Rail/Road. The proposed capacity for different products is given below:

Sl. No.		Phase-1					Phase-2					Total Capacity
	Plant Facilities	Production Unit Description			Annual Production/ Generation		Production Unit Description			Annual Production/ Generation		Total Annual Production/ Generation
		No of Units	Unit	Unit Capacity	Unit	Annual Capacity	No of Units	Unit	Unit Capacity	Unit	Annual Capacity	
C1	C2	C3	C4	C5	C6	C7	C13	C14	C15	C16	C17	C18=C7+C12+C17
1	Sponge Iron Plant					1.001					0.546	1.547
	DR Kilns	2	TPD	500	MTPA	0.455						0.455
		2	TPD	600	MTPA	0.546	2	TPD	600	MTPA	0.55	1.092
2	Pelletisation Plant	1	MTPA	1.2	MTPA	1.47	1	MTPA	1.2	MTPA	1.47	2.948
3	Beneficiation Plant (Based on input)	1	MTPA	2.69	MTPA	2.7	1	MTPA	2.69	MTPA	2.7	5.4
4	Coal Washery (Based on input ROM Coal)	1	TPH	400	MTPA	2.616	1	TPH	235	MTPA	1.524	4.141
5	Mini Blast Furnace	1	CUM	600	MTPA	0.567	1	CUM	1050	MTPA	0.992	1.559
6	Sinter Plant	1	SQM	64	MTPA	0.612	1	SQM	110	MTPA	1.051	1.663
7	Coke Oven Plant	6	TPA	70000	MTPA	0.420	10	TPA	70000	MTPA	0.70	1.12
8	Steel Melting Shop				MTPA	1.232				MTPA	1.232	2.464
8.1	Steel Melting Via IF-Route				MTPA	0.539						0.539
a	Induction Furnace	7	Ton	20	MTPA	0.539						0.539
b	Laddle Furnace	4	Ton	20								0
8.2	Steel Melting via				MTPA	0.693				MTPA	1.232	1.925

Sl. No.		Phase-1					Phase-2					Total Capacity
	Plant Facilities	Production Unit Description			Annual Production/ Generation		Production Unit Description			Annual Production/ Generation		Total Annual Production/ Generation
		No of Units	Unit	Unit Capacity	Unit	Annual Capacity	No of Units	Unit	Unit Capacity	Unit	Annual Capacity	
C1	C2	C3	C4	C5	C6	C7	C13	C14	C15	C16	C17	C18=C7+C12+C17
	EAF-VD-AOF Route											
a	Electric Arc Furnace	1	Ton	90	MTPA	0.693	1	Ton	160	MTPA	1.232	1.925
b	Laddle Furnace	1	Ton	90			1	Ton	160			0
8.3	Continuous Casting Machine				MTPA	1.207				MTPA	1.207	2.415
a	Billets/ Bloom Caster/Slab Caster	2	Strands	3	MTPA	1.207	1	Strands	3	MTPA	1.207	2.415
9	Finished Product Facilities				MTPA	1.450				MTPA	1.400	2.850
9.1	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ others)				MTPA	0.800					0.800	1.600
a	Rolling Mill-1	4	TPA	200000	MTPA	0.800	2	TPA	300,000.00	MTPA	0.600	1.400
b	Rolling Mill-2						1	TPA	200,000.00	MTPA	0.200	0.200
9.2	Strip Mill/Sheet/ Coil/ Wire & Bar Mill/Wire Rope	1	TPA	450000	MTPA	0.450	1	TPA	400,000.00	MTPA	0.400	0.8500
9.3	Ductile Pipe Plant	1	TPA	200000	MTPA	0.200	1	TPA	200,000.00	MTPA	0.200	0.400
10	Producer				Nm^3/Ann	2400000				Nm^3/Ann	2400000	480000000

Sl. No.		Phase-1					Phase-2					Total Capacity
	Plant Facilities	Production Unit Description			Annual Production/ Generation		Production Unit Description			Annual Production/ Generation		Total Annual Production/ Generation
		No of Units	Unit	Unit Capacity	Unit	Annual Capacity	No of Units	Unit	Unit Capacity	Unit	Annual Capacity	
C1	C2	C3	C4	C5	C6	C7	C13	C14	C15	C16	C17	C18=C7+C12+C17
	Gas Plant				um	00				um	00	
	Producer Gas Plant	10	Nm^3/Hr	3000	Nm3/Annum	240000000	10	Nm^3/Hr	3000	Nm3/Annum	240000000	480000000
11	Oxygen Plant				MTPA	0.0350				MTPA	0.0630	0.0980
	Oxygen Plant	1	TPD	100	Nm^3/Annum	24500000	1	TPD	180.00	Nm^3/Annum	44100000	68600000
12	Lime Plant				MTPA	0.105				MTPA	0.1995	0.3045
	Lime Plant	1	TPD	300	TPA	105000	1	TPD	570	TPA	199500	304500
13	Cement Plant				MTPA	0.884				MTPA	0.802	1.686
	Cement Plant alongwith Clinker Plant	1	TPD	2600	TPA	884000	1	TPD	2300	TPD	801596	1685596
14	Captive Power Plant				MW	217.00				MW	168.00	385.00
14.1	WHRB Based CPP				MW	67.00				MW	68.00	135.00
a	WHRB (500 TPD DR Kiln)	2	TPH	50	MW	20.00						20.00
b	WHRB (600 TPD DR Kiln)	2	TPH	60	MW	24.00	2	TPH	60	MW	24.00	48.00
c	WHRB (MBF)	1	TPH	50	MW	11.00	1	TPH	90	MW	20.00	31.00
d	WHRB (Coke Oven)	1	TPH	60	MW	12.00	1	TPH	100	MW	24.00	36.00
14.2	AFBC/CFBC based CPP				MW	150.00				MW	100.00	250.00

Sl. No.		Phase-1					Phase-2					Total Capacity
	Plant Facilities	Production Unit Description			Annual Production/ Generation		Production Unit Description			Annual Production/ Generation		Total Annual Production/ Generation
		No of Units	Unit	Unit Capacity	Unit	Annual Capacity	No of Units	Unit	Unit Capacity	Unit	Annual Capacity	
C1	C2	C3	C4	C5	C6	C7	C13	C14	C15	C16	C17	C18=C7+C12+C17
a	AFBC/CFBC	2	TPH	125	MW	50.00						50.00
b	AFBC/CFBC	2	TPH	250	MW	100.00	2	TPH	250	MW	100.00	200.00

9.0 The Electricity load of 385 MW (Phase I- 217 MW; Phase II- 168 MW) will be procured from Captive Power Plant of the company. Company has also proposed to install2x1500 KVA and 6x3500 KVA DG Set.

10.0 Proposed raw material and fuel requirement for project are Iron Ore (8.9 MTPA from own mines/OMC/other private mines), BF Grade Iron Ore (0.701 MTPA from own mines/OMC/other Private Mines), non-coking coal (6.39 MTPA domestic/Import) and Coking Coal (1.6 MTPA from South Africa)**.** The requirement would be fulfilled by company's own mines/OMC/Other private mines. Fuel consumption will be mainly Coking and non coking coal**.**

11.0 Water Consumption for the proposed project will be 2950 cum/hrand waste water generation will be 545.38 cum/hr. Domestic waste water will be treated Sewage treatment plantand industrial waste water generated will be treated in Effluent Treatment Plant and reused completely.

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

13.0 There is displacement of 54 families which have been rehabilitated & resettled as per R&R Policy, Government of Odisha. Compensation has already been paid through IDCO.

14.0 Name of the Consultant: M/s Min Mec Consultancy Pvt. Ltd., New Delhi with permission from High Court of Delhi vide in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016.

Observations of the Committee: -

15.0 The committee observed that the project proponent has obtained the environmental clearance in the August 2010 and got extended the validity upto 2020. However, it was informed that they may not be able to implement within the balance validity period and also would like to optimse the project configuartions. Therefore, the PP has made an application for seeking the ToRs, so as to obtain the fresh environmental clearance before the expiry of the earlier EC.

Recommendations of the Committee: -

16.0 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed **at Annexure I read with additional ToRs at Annexure-2:**

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

ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.

iii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

iv. The project propone shall clearly specify the implemented units and proposed units along with configuration and product.

1.10 Installation of 300 TPD Hard Wood Fibre line & 400 TPD Duplex Board machine, 16 MW co-generation power plant and 700 TDS/day conventional chemical recovery plant along with 12 MW power generation in Existing 140 TPD Writing & Printing Paper of M/s NAINI PAPERS LIMITEDlocated at 7thK.M. Stone, Moradabad Road, Kashipur, Tehsil Jaspur, District Udham Singh Nagar, Uttarakhand[Proposal No. IA/UK/IND/81010/2018; F.No. IA-J-11011/310/2018-IA-II(I)] – Terms of Reference.

1.0 The proponent has made online application vide proposal no. IA/UK/IND/81010/2018 dated1st October, 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. 5(i) Pulp and Paper Industry under Category "A" EIA Notification; 2006. The proposal of expansion is submitted and appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s Naini Papers Limited proposes to install 300 TPD Hard Wood Fibre line & 400 TPD Duplex Board machine, 16 MW co-generation power plant and 700 TDS/day conventional chemical recovery plant along with 12 MW power generation in existing 140 TPD Writing & Printing Paper at 7thK.M. Stone, Moradabad Road, Kashipur, Tehsil Jaspur District Udham Singh Nagar, Uttarakhand.

3.0 The existing project was accorded environmental clearance vide letter no. J-11011/360/2008-IA-II (I) dated 22nd April, 2016. Consent to Operate was accorded by Uttarakhand Environment Protection and Pollution Control Board vide letter no.UEPPCB/HO/Con/N-6/2018/494 dated 19th June, 2018, validity of CTO is up to 31.03.2023.

4.0 The proposed unit will be located at 7th K.M.Stone, Moradabad Road, Kashipur,Tehsil Jaspur District Udham Singh Nagar, State: Uttarakhand in the same premises of existing unit.

5.0 Total Existing plant area is 24 acres(9.7 Hectares) and additional land of 16 acres(6.5 Hectares) have been acquired for the proposed installation. No /forestland is involved. The entire land has been acquired for the project. Of the total area 33 % of existing plant area i.e. 3.2 ha has already been developed under greenbelt and for proposed area 33 % of total additional area i.e. 2.2 Ha will be developed.

6.0 No National Park, Wild Life Sanctuary, Biosphere Reserve, Tiger / Elephant Reserve, Wildlife Corridor etcare reported to be located in the core and buffer zone of the project. Three Reserve Forests are located within study area i.e. Sheorajpur RF (7.0 km in North), Jaspur RF (~9.0 km in North), Tumaria Ravines RF (~5.5 km in East).The area also does not report to form corridor for Schedule-I fauna.

7.0 Total project cost is approx. 785 Crore rupees. Total employment generation after proposed expansion by installation project will be 700 direct employments and 700 indirect employment.

8.0 The targeted production capacity is 540 TPD (140 TPD existing and 400 TPD proposed), 16 MW co-generation power plant and 700 TDS/day conventional chemical recovery plant along with 12 MW power generation in existing 140 TPD Writing & Printing Paper. The agro raw material for the existing plant i.e. bagasse/wheat straw (OD depithed/dusted)is procured from local farmers/suppliers, importedsoft wood pulp from USA, Netherlands, Australia, soap stone powder from Rajasthan. The raw material for proposed plant i.e. wood /wood chips from local suppliers, BCTMP (bleached chemi-thermo mechanical pulp) will be imported. The raw material transportation will be done through road/sea. The existing and proposed capacity for different products for new site area is as below:

S. No.	Name of unit	Existing capacity	Additional capacity	Total capacity
1	Writing and printing grade of paper	140 TPD	-	140 TPD
2	Hard Wood Fibre line	Nil	300 TPD	300 TPD
3	Duplex Board Machine	Nil	400 TPD	400 TPD
4	Co-generation Plant	Nil	16 MW	16 MW
5	Conventional chemical recovery plant	Nil	700 TDS/day and 12 MW Turbine	700 TDS/day and12 MW Turbine

9.0 Total electricity load is29.89 MW from which 16 MW will be sourced from proposed 16 MW Co-generation plant, 12 MW from proposed 12 MW Turbine to be installed at New Conventional Recovery Plant (8 MW Power will be used by proposed installation of Naini Papers and 4 MW to be supplied to existing Naini Papers Limited), 1.4 MW will be sourced from 1.4 MW Turbine (existing) and 0.49 MW from Grid will be procured.Existing DG sets are 3 x 750 KVA, 2 x 625 KVA and Company has also proposed to install 1 x 625 KVA DG Set.

10.0 Raw material for existing project are Bagasse/wheat straw (253.7 MT/day), Imported soft wood pulp (4.7 MT/day), Soap stone powder (22.4 MT/day) and for proposed project are wood/wood chips (710 BDMT), BCTMP (bleached chemi-thermo mechanical pulp) (111

MT/day), Caustic lye (47 MT/day), sodium sulphate (16 MT/day),Chlorine di-oxide (5.4 MT/day), Oxygen gas (9 MT/day) and Hydrogen peroxide (4 MT/day).The requirement will be fulfilled by local suppliers/ markets or imported from USA, Netherlands, Australia. Fuel consumption will be mainly Rice husk (70%) & pith (30%)(1057 TPD) or Indian Coal (650 TPD) or Imported coal (335 TPD) procured from local suppliers or imported.

11.0 Total water Consumption for the existing and proposedexpansion by installation project will be 18200 KLD(6500 for existing agro waste based and 11700 for proposed hard wood fibre line and duplex board machine) and waste water generation 5900 KLD from agro based process and 10500 KLD from hard wood fibre line and duplex board machine. Domestic waste water is being/will be disposed off in soak pit through septic tank. Part of treated effluent will be reused in plant process (sprinkling on bagasse stacks and washing of raw material, greenbelt development, dust suppression) whereas 15500 KLD will be discharged in nearby drain. Black liquor will be completely treated in conventional chemical recovery plant. Black liquor will be processed in conventional Chemical Recovery Plant for the recovery of Caustic Soda (White Liquor) which will be reused in the pulping process.

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

13.0 EIA Consultant: JM Environment, Gurgeon.

Observations of the Committee: -

14.0 The committee observed that the instat proposal is expansion adjacent to the existing project and the site is located in the Ganga basin. Therefore, the provisons of notification vide SO 3187 (E) dated 7th October, 2016 issued by the Ministry of Water Resources for the industries located in Ganga basin will be applicable.

Recommendations of the Committee: -

15.0 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed **at Annexure I read with additional ToRs at Annexure-2:**

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

ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.

iii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

iv. The project proponent shall plan for discharge of effluent in compliance of the notification vide SO 3187 (E) dated 7th October, 2016 issued by the Ministry of Water Resources for industries located in the Ganaga Basin.

1.11 Enhancement in Production Capacity of Sinter Plant from 0.6 MTPA to 1.0 MTPA through Process Modification by M/s. Usha Martin Ltd at Adityapur Industrial Area, Village: Jhurkuli, Tehsil: Gamharia, District: Seraikela- Kharsawan (Jharkhand) – [Proposal No. IA/JH/IND/81558/2018; F.No. IA-J-11011/311/2018-IA-II(I)] – Terms of Reference.

The Committee noted that the project proponent vide letter dated 21/11/2018 requested the Ministry to withdrew the proposal as the proposal submitted needs further revision. After detailed deliberations, the Committee recommended forreturning the proposal in the present form.

1.12 Paper manufacturing unit by M/s. Genus Paper and Boards Limited at Nandurbar District, Maharashtra – [Proposal No. IA/MH/IND/81575/2018; F.No. IA-J-11011/370/2018-IA-II(I)] – Terms of Reference

1.0 M/s. Genus Paper and Boards Limited made an application vide online proposal no. IA/MH/IND/81575/2018 dated 23rd October, 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. 5(i) Pulp and Paper Industry under Category "A" EIA Notification; 2006.The proposal of expansion is submitted and appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. Genus paper and Board Ltd (GPBL) proposes to install a new manufacturing unit for Kraft-Duplex Grade of Paper with Deinking Plant and 22 MW Thermal Power Plant (CPP). It is proposed to set up the plant for Integrated Unit of Paper and CPP based on Recycle of Waste Paper technology.

3.0 The project proponent submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on 23rd October 2018 vide Online Application No. IA/ MH/IND/81575/2018.

4.0 The proposed unit will be located at Village: Prakasha, Taluka: Shahada, District: Nandurbar, State: Maharashtra.

5.0 The land area required for the proposed plant is 40.5 Ha .No forest land involved. 22 Ha (55%) has been acquired for the project. Of the total area 7.26 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 573 crores for Kraft Paper project and 101 crores for Thermal power Plant. Proposed employment generation from proposed project will be 600 direct employments and 1600 indirect employment.

8.0 The targeted production capacity of the Kraft Paper is 300,000 TPA. The proposed capacity for different products for new site area as below:

Name of the Unit	**No. of Units**	**Capacity of Each Unit**	**Production Capacity**
Kraft Paper manufacturing Unit	1	300,000 TPA	300,000 TPA
22 MW Thermal Power Plant (CPP)	1	22 MW	22 MW

9.0 The electricity load of 22 MW will be procured from integrated unit of 22 MW coal based power plant. Company has also proposed to install 2000 KVA DG Set.

10.0 Proposed raw material and fuel requirement for project are old corrugated cuttings, waste paper, imported coal with low ash and sulphur content. The Requirement would be fulfilled by vendor as well as open market. Fuel consumption will be mainly imported coal.

11. Water Consumption for the proposed project will be 4000m3/day and waste water generation will be 2500 m3/day. Domestic waste water will be treated 300 m3/ day and Industrial waste water generated will be treated ETP and reused in process and green belt.

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

13. Name of the consultant – EQMS India Pvt. Ltd. QCI Certificate No.– NABET/EIA/1619/SA070

Observations of the Committee: -

14.0 The committee observed that the proposed site is adjacent to the river and informed that the site does not fall in the RRZ. The project proponent has planned for ZLD.

Recommendations of the Committee: -

15.0 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed **at Annexure I read with additional ToRs at Annexure-2:**

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

ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.

iii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

iv. The project proponent shall confirm that the site does not fall in the RRZ with substataiting document.

v. The PP shall plan for ZLD.

vi. The PP shall submit the conversion of land use from agriculture to industrial purpose along with the EIA/EMP.

1.13 **Proposed expansion of existing plant and set up additional units to reach capacity of 3 MTPA capacity by M/s. JSW Steel (Salav) Limited at village Salav, PO Revanda, Taluka Murud, District Raigad, Maharashtra [Proposal No. IA/MH/IND/28953/2015; F.No.IA-J-11011/166/2015-IA-II(I)] – Amendment in ToR for inclusion of 3MTPA Recovery type coke oven along with by-product plant, BTX plant and 100 MW gas based power plant.**

1.0 JSW Steel (Salav) Ltd. is a subsidiary of JSW Steel and was earlier granted TOR vide MOEF&CC F. No. J-11011/166/2015-IA.II(I) dtd. 22nd June 2016 for setting up of a 3.0 Mtpa Integrated Steel Plant at Village - Salav, PO Revdanda, Taluka Murud, District Raigad, Maharashtra. The project proponent sought amendment in the ToR dated 22/06/2016.

Details submitted by the project proponent

2.0 However, due to the changes in market conditions and expansion of the capacities of steel making at other locations by JSW Steel, the configuration of the proposed steel plant has been changed. Further considering the irregular supplies of natural gas, it is now proposed to build a 3.0 MTPA Coke oven plant along with tar and benzol processing facilities within the existing plant area utilizing the existing infrastructure. The coke oven gas from the Coke ovens will be used to replace natural gas in the DRI kilns and to generate power.

3.0 JSW Steel (Salav) Limited now proposes to set up a 3.0 Mt/yr Coke Oven Plant, By Product Plant and BTX Plant for the substitution of Natural Gas with Coke Oven Gas in the Sponge Iron Plant along with a 100 MW gas based power plant, in place of the earlier planned 3.0 Mtpa Integrated Steel Plant at Village – Salav, PO Revdanda, Taluka Murud, District Raigad, Maharashtra.

4. **Project details**:

a. The project will be Located within existing premises of JSW Steel (Salav) Ltd. (formerly known as Welspun Maxsteel Ltd.) at Village Salav, Raigad District, Maharashtra.

b. The existing plant is located at village Salav, about 150km from Mumbai city. The national highway NH-17 passes about 50 km from the plant. The nearest railway station is Roha, about 50km away and the nearest airport is Mumbai, about 150 Km away.

c. The land area for the proposed plant is 16.2 Ha, which is within the existing plant boundary of 58.7 Ha and the entire land is owned by and in control of JSW Steel (Salav) Limited. The area is declared as Industrial Growth Centre under Murud Taluk by the Govt. of Maharashtra in 1992. There is no agricultural, grazing, forest or government land.

d. The Phansad wildlife sanctuary is located at a distance of 4.7km from the site and it does not fall in the Eco Sensitive Zone of the sanctuary as per the final ESZ Notification of MoEFCC dated 17th May 2017.

e. The estimated cost of the project is Rs 4600 Cr. Proposed employment generation from the project will be 650 direct and 2000 indirect employment. It is expected to be commissioned within 36 months after obtaining the environment clearance. The CDQ will however be commissioned within 48 months after obtaining environmental clearance.

f. The targeted production capacity of plant shall be as per the following configuration:

1. Coke Oven & By Product Plant 3.0 Mt/yr
2. BTX Plant 41,000 t/yr and
3. Gas based Power Plant 100 MW

g. The raw material type, quantity, source and mode of transportation shall be:

Sl. No.	**Raw material**	**Quantity**	**Source**	**Transportation**
1	Coking Coal	4,200,000 t/yr	International Market	Sea
2	40% NaOH	9,400 t/yr	Domestic	Road
3	Wash Oil	4,200 t/yr	Domestic	Road

h. The production process adopted isCarbonization of coal at high temperature in recovery type coke oven batteries with Dry Quenching and By-product recovery plant. The by- products, namely Crude tar and crude benzol, recovered in the by-product plant will be further processed to produce valuable chemicals.

i. The products from the proposed plant will be:

Sl. No.	**Description**	**Unit**	**Output**
1.	Coke oven gas (dry)	Nm^3/hr	150,000
1.1	Used for heating in COP	Nm^3/hr	60,000
1.2	Net surplus gas	Nm^3/hr	90,000

	available		
2.	Gross coke (dry)	t/yr	3,000,000
3.	Tar	t/yr	135,000
4.	Sulphur	t/yr	9,000
5.	Crude Benzol	t/yr	41,000
6.	Benzene	t/yr	28,700
7.	Toluene	t/yr	5,350
8.	Xylene	t/yr	2,250
9.	Power	MW	100

j. The coke oven gas generated from the coke ovens will be used as fuel and no additional fuel is required.

k. The fresh water consumption will increase from 5.6 MLD to 25.6 MLD and will be made available from the existing allocation of 47 MLD, from Kundalika river.

l. The wastewater generation will be about 300 m3/h and will be treated and marine-discharged to the sea meeting the applicable standards.

m. The coke fines will be used in the sinter plant feed in the steel plant of JSW Steel at Dolvi.

n. The sludge from the wastewater treatment plant will be recycled. The waste oil will be sold to authorised parties.

o. It is proposed to install the state of the art air pollution control facilities including Coke Dry Quenching unit and charging emission control systems.

p. The socio economic development of the area will be carried out by JSW Foundation and the adequate funding will be arranged.

q. There is no court case or violation under EIA Notification against the project or related activity.

5. **Amendment required**: It is requested to issue an amendment to the existing TOR only for the above mentioned configuration of the project of Coke ovens, By-product plant and Gas based Power plant and excluding all other facilities listed earlier in the TOR issued for the 3.0 MTPA integrated steel plant complex. Details of facilities envisaged for amendment of TOR for inclusion of proposed 3 MTPA Coke Oven Plant along with By-Product Plant, BTX Plant, and 100 MW Gas based power plant in place of the earlier proposed 3 MTPA Integrated Steel Plant at the same location of JSW Steel Salav Ltd.

S. N.	Facilities	Unit	Existing	Proposed in TOR vide MOEF&CC F. No. J-11011/166/2015-IA.II(I) dtd. 22nd June 2016	Proposed Amendment in TOR	Total Capacity after TOR amendment
1.	RMHS	MTPA	1.5	8.5	4.5	6.0
2.	DRI	TPM	85,500	85,500	-	85,500
3.	Pellet Plant	MTPA	-	4.0	-	-
4.	Coke Oven & By-Product Plant	MTPA	-	-	3.0	3.0
5.	BTX Plant	TPA	-	-	41,000	41,000
6.	Corex	No. x MTPA	-	2 X 0.85	-	-
7.	SMS-EAF	No. x T	-	2 x 240	-	-
8.	Ladle Furnace	No. x T	-	2 x 240	-	-
9.	RH-Degasser	No. x T	-	1 x 240	-	-
10.	Slab Caster	-		-	-	-
11.	Thin Slab Caster	Strands		2 x 1 strand	-	-
12.	Compact Strip Mill	MTPA		3.0	-	-
13.	Beam Blank/Bloom Caster	Strands	-	1 x 3 strand	-	-
14.	Medium Section Mill	MTPA	-	0.7	-	-
15.	Heavy Section Mill	MTPA	-	0.8	-	-
16.	Tin Plate incl. of PLTCM, CAL & ARP	MTPA	-	0.4	-	-
17.	Lime Plant	TPD	-	600	-	-
18.	Dolo Plant	TPD	-	300	-	-
19.	Oxygen Plant	TPD	-	2 x 2200	-	-

S. N.	Facilities	Unit	Existing	Proposed in TOR vide MOEF&CC F. No. J-11011/166/2015-IA.II(I) dtd. 22nd June 2016	Proposed Amendment in TOR	Total Capacity after TOR amendment
20.	Captive Power Plant (Coal Based)	MW	-	330	-	-
21.	Power Plant (Gas Based)	MW	-	-	100	100
22.	Cement Plant	MTPA	-	1.5	-	-
23.	DG	MW	1x2.5	-	-	1x2.5
24.	Township	-	√	-	-	√
25.	Jetty	MTPA	5.0	#	-	

TOR for Jetty has been obtained by JSW Salav Port Ltd. vide TOR No. F.No.10-60/2016-IA-III dated 5th June 2017.

Recommendations of the Committee: -

7.0 After detailed deliberations, the committee recommended for amendment in Terms of Reference with following additional ToRs.

1.0 The other terms and conditions prescribed in the Terms of reference granted on 22nd June 2016 shall remain unchanged.

2.0 The PP shall plan for ZLD and no marine discharge shall be allowed.

3.0 The PP shall explore the possibility of combined cycle power plant based on coke oven gas for enhancing the proposed power.

1.14 Installation of four Induction Furnaces of 15 MT each in existing plant premises of M/s J.B. Rolling Mills atRoad Kala Amb, village Johran, Tehsil Nahan and Dist. Sirmaur [Proposal No. IA/HP/IND/32166/2015; F.No.IA-J-11011/218/2015-IA-II(I)] – Terms of Reference validity extension.

1.0 **M/s J.B. Rolling Mills**made an application vide Online Proposal No.IA/HP/IND/32166/2015 dated 18th October 2018 seeking extension of validity of Terms of reference granted vide IA-J-11011/218/2015-IA-II(I) dated 3rd December, 2015 for the above mentioned project.

Details submitted by the project proponent:

2.0 It was informed that baseline data was collected during December 2015 to Febrauary, 2016, Draft EIA/EMP was prepared and Public hearing was conducted on 18th June, 2018. In view of the completion of the validity of the ToR by 2nd December, 2018, requested for extension of validity for one more year as per the OM dated 29th August, 2017.

Observations of the Committee: -

3.0 The committee observed that the baseline data was collected during December 2015 to Febrauary, 2016 and validity of ToR will expire on 2nd December, 2018. As per the OM dated 29th August, 2018, the base line data collected shall not be older than 3 years at the time of application for EC to the Ministry. Therefore, the committee advised the PP to submit the Final EIA/EMP before expiry of the validity of the ToR.

Recommendations of the Committee: -

4.0 The committee recommended for extension of validity of the ToR for another period of one-year subject to the condition that the base line data collected shall not be older than 3 years at the time of submission of the EIA/EMP for environmental clearance as per the ministrys' OM dated 29th August, 2017.

1.15 Expansion of Sponge Iron Plant (6,00,000 TPA to 13,20,000); Ferro Alloy Plant (72,000 TPA to 1,44,000) with Briquette plant and addition of New Steel Melting Shop- (9,00,000 TPA) with Slag crushing unit, Hot Rolling Mill- (5,50,000 TPA; Cold Rolling Mill with Pickling line & Galvanizing line- (3,00,000 TPA); Lime Dolime Plant- (200 TPD); Oxygen Plant- (200 TPD); CPP- [45 MW to 159 MW (50 MW Coal &Dolochar Mix based and 109 WHRB] of **M/s. Rashmi Cement Limited** at atMouja-Jitusole (J.L No.-702 & 703), Junglekhas (J.L. No.731) and Baghmundi (J.L. No.928), Village-Jitusole, PS-Jhargram, District- PaschimMidnapore, West Bengal [Proposal No. IA/WB/IND/69919/2017; F.No.J-11011/604/2008-IA-II(I)] – **Amendment in ToR for inclusion of revised production and unit configuration of DRI plant.**

1.0 M/s Rashmi Cement Limitedmade application vide online proposal no. IA/WB/IND/69919/2017 dated 13th November, 2018 seeking amendment in Terms of Reference granted vide J-11011/604/2008-IA-II(I) dated 11th November, 2017 for inclusion for revised production and unit configuration of DRI plant.

Details submitted by the project proponent

2.0 It proposes to Increase the production capacity of existing (10 x 100 + 1 x 350 + 1 x 600 TPD) sponge iron plant from 6,00,000 TPA to 8,00,000 TPA and proposed upcoming sponge iron plant (3 x 600 TPD) from 5,40,000 TPA to 6,90,000 TPA making it total 14,75,000 TPA instead of 11,25,000 TPA.

3.0 The existing project was accorded environmental clearance vide File No-. J-11011/604/2008.I A II (I) dated 12.02.2009 &07.07.2017 and ToR for expansion project was awarded vide File No- J -11011/604/2008.I A II (I) dated 27.02.2018. Consent to Operate was

accorded by West Bengal State Pollution Control Board vide Co No-102823 issued vide memo No-5683-hl-co-5/10/0399 dated 14-12-2016 validity of CTO is up to 31-Dec-2021.

4.0 The existing unit located at Mouza – Jitusole (J.L No.-702 & 703), Junglekhas (J.L. No. 731) and Baghmundi (J.L. No.928), at Village: Jitusole, P.O – Garhsalboni, P.S – Jhargram, District: Paschim Medinipur, State: West Bengal.

5.0 No additional land is required for the proposed amendment proposal.

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 The targeted production capacity of the revised proposal is Sponge Iron Plant (6, 00,000 TPA to 14, 75,000 TPA); Rest of the production figure for different units will remain same as per the awarded ToR figure. The Iron ore for the plant would be procured from Barbil-Joda, Orissa (from our current mines owner like, Rungta Mines, Sirajuddin Mines & TP Sahoo Mines), Iron ore pellet from captive production and Coal would be procured from E-Auction or Imported. The ore transportation will be done through Rail/Ship/ Road. The proposed capacity for different products for new site area as below:

Configuration for which ToR awarded			Amendment Desired: Enhancing the production capacity of existing sponge iron plant capacity by change in the raw material mix and increasing annual working days						Final Configuration for which TOR Desired		
			Existing Unit			Proposed New Unit					
Plant	Config.	Cap.	Plant	Existing Permission as per EC	Additional Production	Plant	Permission as per TOR	Additional Production	Plant	Config.	Capacity
DRI	10 x 100 + 1 x 350 + 4 x 600 TPD	1125000 TPA	DRI (10 x 100 + 1 x 350 + 1 x 600 TPD)	6,00,000 TPA	2,00,000 TPA	DRI (3x600 TPD)	5,40,000 TPA	1,50,000 TPA	DRI	10 x 100 + 1 x 350 + 4 x 600 TPD	14,90,000 TPA
SAF(Ferro Alloy Plant) with FeCr Briquette Plant	8 x 9 MVA	96000 TPA	No Change						SAF(Ferro Alloy Plant) with FeCr Briquette Plant	8 x 9 MVA	96,000 TPA
SMS with Slag Crushing	8 x 20 T I.F. with L.R.F, AOD & CCM	570000 TPA							SMS with Slag Crushing	8 x 20 T I.F. with L.R.F, AOD	5,70,000 TPA

					& CCM	
Hot Rolling Mill	****	250000 TPA		Hot Rolling Mill	****	2,50,000 TPA
Cold Rolling Mill/ Wire Drawing with Picklin g Line & Continuous Galvanising Line	****	300000 TPA		Cold Rolling Mill/ Wire Drawing with Pickling Line & Continuous Galvanising Line	****	3,00,000 TPA
Captive Power Plant	88 MW WHRB based + 1 x 25 MW CFBC	113 MW		Captive Power Plant	88 MW WHRB based + 1 x 25 MW CFBC	113

8.0 The electricity load for the ToR awarded project of 187.4 MW. Additional 9.2 MW power will be required for proposed proposal making total power requirement 196.6 MW. Power will be procured from proposed and operational Captive Power Plant and the remaining will be drawn from WDSEDCL/Open Access. Company has also proposed to install 10 Number DG Set of 720 KVA.

9.0 Raw materials requirement details are as :

Sr. No.	Name of the Raw Materials	Quantity (TPA)			Source	Mode of Transportation
		Existing (As per TOR approved capacity)	For Proposed Proposal	Total		
1	Iron ore lump	5,06,250	(-) 59,250	4,47,000	Applied for captive iron ore mines Alternate source: Purchased from Barbil-Joda, Orissa	Train

2	Iron ore Pellet	11,81,250	(+) 6,06,750	17,88,000	From other unit of group company	By Road
3	Non-coking coal	14,35,200	(-) 1,58,000	12,77,200	CCL, MCL & Imported Coal	Ship/Train
4	Coke	62,400	---	62,400	Imported	Ship/Train
5	Dolomite	57,690	(+) 35,550	93,240	From Birmitrapur, Orissa / Bilaspur, CG	Train
6	Limestone	40,279	---	40,279	From Birmitrapur, Orissa / Bilaspur, Raipur CG / Katni MP	Train
7	Manganese ore	2,49,600	---	2,49,600	Captive mines in Balaghat, MP	Train/By Road
8	Chromium Ore	2,11,200	---	2,11,200	Orissa, Jharkhand etc.	Train/By Road
9	Quartzite	24,000	---	24,000	From Belpahar Orissa / Bilaspur, Raipur CG	Train
TOTAL		37,67,869	(+) 4,25,050	41,92,919		

Fuel consumption will be mainly **Electricity & Diesel (If required).**

10.0 The existing plant water requirement for EC Sanctioned Sponge iron configuration after surrendering some units (10 x100 + 1 x 350 +1 x 600 TPD) and 48,000 TPA Ferro with 43 MW CPP is 744 KLD and additional water requirement for ToR approved capacity is 3792 KLD making it in total 4536 KLD. For additional 3, 50,000 TPA Sponge Iron productions no additional fresh water will be used. The Cooling tower Blow down will be used in DRI Plant. Domestic waste water will be treated in Septic Tank followed by Soak Pit and Industrial waste water generated will be treated and reused in the process and for green belt development and dust depression after treatment.

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

Recommendations of the Committee: -

12.0 The committee recommended for amendment in the ToR for inclusion of revised production and unit configuration of DRI plant.

27th November, 2018 (Narmada)

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

1.0 The proponent has made online application vide proposal no. **IA/OR/IND/75723/2018**dated 9thNovember 2018 seeking environmental clearance under para 7(ii) of EIA Notification, 2006 for change in the product mix at the Rourkela Steel Plant by addition of new slab caster#4 within existing SMS-II to achieve production of M/s SAIL Rourkela Steel Plant as per EC vide letter no J-11011/66/2014-IA.II (1) dated 15/12/2016" located at SAIL Rourkela Steel Plant Rourkela Orissa.

Details submitted by the Project Proponent

2.0 M/s SAIL obtained environmental clearance for expansion of Steel Plant (4.2 MTPA) from MoEF&CC vide File No. J-11011/757/2007-IA.II dated 29/01/2008. Further, the environmental clearance for the modernization of Steel Plant by adding 3 MTPA Hot Strip Mill, 3.3 MTPA Beneficiation Plant, 2 MTPA Pelletisation Plant & Enhancement was obtained vide File No. J-11011/66/2014-IA.II(1) dated 15/12/2016.

3.0 The certified Compliance Report regarding earlier EC was obtained vide Regional office letter no 101-964/EPE/3414 dated 05/11/2018.

4.0 After recent Modernization & Expansion of 4.2 MTPA RSP, the liquid steel production capacity in SMS-1 is 0.5 MTPA and SMS-II has gone up to 3.7 MTPA, whereas Caster capacity of SMS-II remains at 3.3 MTPA, as up-gradation of Caster#1 &#2 of SMS-II could not be taken up. So the present combined capacity of Casters- 1 & 2 in SMS-II is 1.8 MTPA as against the requirement of 2.2 MTPA to produce Total Crude Steel of 4.2 MTPA for which EC granted. To bridge this gap and enhance the flexibility in operation, it is envisaged to install a new Slab Caster #4 in SMS-II in extended portion of SMS-II shop. The project will be commissioned in 37 months. Caster 4 is a shaping devise and having physical operation only. Commissioning and stabilization of the proposed Caster#4 in SMS#2 will reduce the overall energy & water requirements of SMS#2, as Caster#1 & #2 will be operated at reduce loads which are highly energy and water intensive

5.0 Change in Product Mix after incorporating new unit are as given below:

SN.	Plant Unit/Product	As per existing EC dated 29/01/2008 and 15th Dec., 2016	Present Proposal & change considering this proposal	Remarks
1	Coke Ovens • No. of ovens • Gross coke	 437 ovens 2,170,000	 437 ovens 2,170,000	No change

SN.	Plant Unit/Product	As per existing EC dated 29/01/2008 and 15th Dec., 2016	Present Proposal & change considering this proposal	Remarks
2	Sinter Plant (Sinter)	6,760,000	6,760,000	No change
3	Blast Furnace – Hot Metal Production	4,500,000	4,500,000	No Change
4	Steel Melting Shops – Crude Steel	4,200,000 SMS#1 : 1 Caster SMS#2 : 3 Casters	4,200,000 SMS#1 : 1 Caster SMS#2 : 3 Casters + Caster#4	No change in Crude Steel Production. Caster#4 Addition for achieving the Crude Steel Capacity for which EC granted
5	Rolling Mills – • Total Saleable Steel	3,880,000	3,880,000	No change
6	Hot Strip Mill – Hot Rolled Steel	3,000,000	3,000,000	No change
7	Plate Mill – Plates	2,135,000	2,135,000	No change
8	Cold Rolling Mill – Cold Rolled Steel • CR coils • CR sheets • Galv. Sheets • Tin Plates	 345,000 25,000 196,000 75,000	 345,000 25,000 196,000 75,000	No change
9	Silicon Steel Mill – CRNO Steel	255,000	255,000	No change
10	Pipe Plant – • Spiral welded pipes • ERW Pipes	 55,000 75,000	 55,000 75,000	No change
11	LDBP	Lime : 414,900 Dolo : 130,000	Lime : 414,900 Dolo : 130,000	No change
12	Beneficiation Plant	3,300,000	3,300,000	No change
13	Pellet Plant	2,000,000	2,000,000	No change
14	Special Plate Plant	15,000	15,000	No change
15	Sulphuric Acid Plant*	60TPD	125 TPD*	*7th EAC dated 17-18/05/2018 recommended for

SN.	Plant Unit/Product	As per existing EC dated 29/01/2008 and 15th Dec., 2016	Present Proposal & change considering this proposal	Remarks
				grant of EC. Formal EC awaited.

6.0 The Maximum ground level concentration due to proposed change in the product mix is found as 0.11158 µg/m^3 at a distance of 2 km in the North-East Direction. This ground level concentration of PM_{10} when superimposed on the Ambient Air PM_{10} data of February 2018, i.e. 68 µg/m3 (Highest value) the resultant concentration is 68.112 µg/m^3. This air quality study shows that there is insignificant increase in the concentration of PM10 due to the implementation of LHF in the proposed Caster#4 project.

7.0 The plant management has committed to reduce the fresh makeup water through recycling of water from existing plant units. The various methods have been proposed to conserve water by utilizing waste water generated within plant by treating it suitably and recycling for lower grade use.

8.0 The solid wastes generated from the proposed project will be gainfully utilised back in steel making process.

9.0 RSP has already installed 4 no of on-line ambient air quality monitoring stations to monitor ambient air quality of surrounding ambient air. The monitoring data is uplinked with the servers of SPCB and CPCB

10.0 To offset the pollution, RSP has created a green canopy by planting around 45 lakhs trees since inception. RSP is expanding this Green Cover every year by planting samplings under the guidance of DFO, Dept. Of Forests, Govt. of Odisha and also distributing the samplings free of cost to NGO, Educational Institutions, Villagers etc. Greening efforts of RSP in the last 4 years is given below;

SN.	**Year**	**Saplings planted**	**Free Distribution**
1	2015-16	1,44,000	2,00,000
2	2016-17	70,000	1,00,000
3	2017-18	1,62,400	1,00,000
4.	2018-19	88,500	1,05,000

11.0 Water Consumption in Casters: Overall water consumption shall be reduced by about 20% from existing level due to Dynamic spray cooling and sparing use of older caster require more specific water consumption.

Observations of the Committee: -

12,0 The committee observed that the instant proposal is for installation of 1.5 T SMS without increasing the permitted hot metal production of 4.5 MTPA and crude steel production of 4.2 MTPA.

Recommendations of the Committee: -

13.0 After detailed deliberations, the committee recommended for environmental clearance for installation of 1.5 T slab caster in SMS-3 without increasing the permitted hot metal production of 4.5 MTPA and crude steel production of 4.2 MTPA subject to following specific conditions:

1.0 The maxiumum hot metal production of 4.5 MTPA and crude steel production of 4.2 MTPA shall remain unchanged.

2.0 The specific water consumption shall not be more than 3.6 m^3/tonne of crude steel production

3.0 The specific energy consumtion shall be reduced by 10% below 2017-18 value.

4.0 The greenbelt shall be developed in an area 35% of the total project area with native, broad leaved tree speicies @ 1500 plants/ha.

5.0 The project proponent shall install bio-digester for kitchen waste.

6.0 The project proponent shall develop master plan for solarization indicating the maxium potential for switching over to solar power. This should include township as well. This plan will be executed fully within 5 years.

7.0 Emissions from the bag filter shall not be more than 30 mg/Nm^3.

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

1.0 The proponent has made online application vide proposal no. **IA/WB/IND/21443/2014**dated 4thOctober 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The application of M/s Tata Metaliks Ltd. (TML) located in Village Gokulpur, Tehsil Kharagpur-I, District Paschim Medinipur, State West Bengal was initially received in the Ministry on 14th December 2017 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 27 th meeting held on 4th January 2018 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 16th January 2018 vide Lr. No. F. No. J-11011/377/2013-IA.II(I).

3.0 The project of M/s TML located in Village Gokulpur, Tehsil Kharagpur-I, District Paschim Medinipur, State West Bengal is for enhancement of production of Hot Metal from 0.5 to 0.75 million tonnes per annum (million TPA), DI Pipes from 0.3 to 0. 5 million tonnes per annum (million TPA) & setting up new facilities for production of 0.1 MTPA castings & fittings. The existing project was accorded environmental clearance vide lr.no. F. No. J-11011/377/2013-IA.II(I) dated 28th November 2016 and F. No. J-11011/173/2007-IA.II(I) dated 6th November 2017. The Status of compliance of earlier EC was obtained from Regional Office, **Bhubaneshwar** vide Lr. No. Nil, dated 28th August 2018. There is no non-compliances reported by Regional officer. The proposed capacity for different products for new site area as below:

Sl. No.	**Unit**	**Facility**		
		Existing	**Proposed**	**Final Configuration**
1	Sinter plant	44,000 tons per month	50,000 tons per month (augmentation of existing)	50,000 tons per month
2	Pellet Plant	-	450,000 TPA	450,000 TPA
3	Blast furnace	2 x 259 m^3 (0.5 MTPA Hot Metal)	2 x 305 m^3 (0.75 MTPA Hot Metal) [augmentation of 2 x 259 m^3]	2 x 305 m^3 (0.75 MTPA Hot Metal)
4	Pig Casting Machine	0.345 MTPA	-	0.345 MTPA
5	Oxygen Plant/ Air Separation Unit	-	Oxygen - 3,600 Nm^3/hr Nitrogen - 1,000 Nm^3/hr	Oxygen - 3,600 Nm^3/hr Nitrogen - 1,000 Nm^3/hr
6	DI Pipe Plant	0.3 MTPA	0.2 MTPA	0.3 MTPA + 0.2 MTPA
7	Foundry	-	0.1 MTPA	0.1 MTPA
8	Captive Power Plant	CPP#1- 2.76 MW CPP#2 - 4 MW (BF Gas Fired) CPP#3 - 10 MW Coke Oven Gas WHRB	CPP#1 - 10 MW BF Gas Fired (augmentation of existing) CPP#2 - 4.5 MW (Augmentation of existing 4 MW) CPP#3 - No change CPP#4 - 10 MW Coke Oven Gas WHRB	CPP#1 - 10 MW BF Gas Fired (augmentation of existing) CPP#2 - 4.5 MW (Augmentation of existing 4 MW) CPP#3 - 10 MW Coke Oven Gas WHRB CPP#4 - 10 MW Coke Oven Gas WHRB

4.0 The total land required for the project is within the existing 79.72 ha area under the ownership of TML. No forestland involved. The entire land is within the existing plant boundary of TML. It has been reported that Kasai River flow along the northern side of the plant premises

at a distance of about 1.5 km and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the project area is flat and reported to lie between 22°22'45" to 22°23'25" N Latitude and 87°16'55" to 87°17'30" E Longitude in Survey of India topo sheet Nos. F45J3 & F45J7 at an elevation of 35 m AMSL. The ground water table reported to ranges between 18.37 m below the land surface during the post-monsoon season and 22.12 m below the land surface during the pre-monsoon season. Further, the stage of groundwater development is reported to be 50.25% in the study area 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 does not report presence of schedule-I fauna in the study area (Appendix 3-2 to 3-7 of EIA Report (October 2018)).

7.0 The process of project and the various processes involved to produce the final output is shown in Drg. 11454-97A-000-ENV-0003 and in Appendix 2-1, waste generated in process is shown in Table 2-2 and the list of raw materials is shown below:

Sl. No.	Major Raw materials	Estimated Quantity, tons	Mode of transportation
Hot Metal			
1	Iron Ore Fines	1,017,000	Rail
2	Sized Iron ore	187,500	Rail
3	Quartzite	7,500	Rail (80%)/Road (20%)
4	PCI Coal	90,000	Imported (Sea) - Rail
5	Limestone	60,600	Rail (80%)/Road (20%)
6	Dolomite	28,000	Rail (80%)/Road (20%)
7	Coke	345,750	Imported (Sea) - Rail (70%)/ Road (30%)
DI Pipes			
8	Steel Scrap	68,000	Rail
9	Magnesium	7,500	Road
10	Inoculants	600	Road
11	Zinc	4,000	Road
12	Bitumen, kl	2,700	Road
13	Cement for lining	58,500	Road
14	Sand for lining	91,000	Road
15	Resin, Hardener, catalyst, paints	870	Road
16	Foundry Sand	8,400	Road

8.0 The targeted production capacity of hot metal is 0.75 million TPA. The ore for the plant would be procured from TSL Noamundi, Joda mines & Khanband (linkages attached with Form 2). The ore transportation will be done through rail.

9.0 The water requirement of the project post expansion is estimated as 5904 m3 /day, which will be obtained from the existing 23 Nos. borewells approved by SWID The permission for drawl of groundwater is obtained from SWID vide Permit dated 8.6.2015.

10.0 The power requirement of the project post expansion is estimated as 44.5 MW, out of which 34.5 MW will be obtained from captive power generation and the balance from State grid.

11.0 Baseline Environmental Studies were conducted during summer season i.e. from February to May, 2018. Ambient air quality monitoring has been carried out at 8 locations during February to May and the data submitted indicated: PM10 (89 µg/m3 to 93.2 µg/m3), PM2.5 (44.9 to 53.9 µg/m3), SO2 (bdl to 14.5 µg/m3) and NOx (16.9 to 34 µg/m3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 5.3 µg/m3 with respect to the PM10, 0.8 µg/m3 with respect to the SO2 4.5 µg/m3 with respect to the NOx.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 6.78 to 6.98, Total Hardness: 56 to 280 mg/l, Chlorides: 12.9 to 73.74 mg/l, Fluoride: <0.1 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 7.1 to 7.2; DO: 5.4 to 5.7 mg/l and BOD: 6.7 to 10mg/l. COD from 24.1 to 34.1 mg/l.

13.0 Noise levels are in the range of 55.6 to 70.7 dB(A) for day time and 46.2 to 60.2 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 Solid waste generation and disposal/utilization is shown below:

Industrial Solid wastes	**Expected generation**	**Management Scheme**
	TPA	
BF Slag	322,500	Granulation in Slag granulation plant and used in cement manufacturing/construction purposes.
BF GCP Sludge & Flue dust	24,000	Recycled in Sinter making process
Iron Scrap (from DI plant)	1,250	Recycled in process
Waste Core Sand	17,500	Used in filling of low lying areas
Waste sand from foundry mould making	7,000	Used for brick manufacturing, concrete making, road sub-grade preparation and filling of low lying area
Hazardous Wastes		
Wastes	**Expected generation (TPA)**	**Management Scheme**
Used Oil	15 KL	Sold to authorized external agencies for recycling/ disposal

Zinc Dust	1,000	Sold to authorized external agencies for recycling/ disposal
Resin Hardener	20	Sold to authorized external agencies for recycling/ disposal
Paint Drums	7	Sold to authorized external agencies for recycling/ disposal

16.0 It has been reported that the Consent to Operate from the West Bengal Pollution Control Board obtained vide Lr. No .CO106542 dated 30.10.2017 valid up to 30.06.2022 and Lr. No. CO106566 dated 05.02.2018 valid up to 30.01.2019.

17.0 The Public hearing of the project was held on 7th September 2018 at Block Office, Kharagpur I Block under the chairmanship of ADM, Paschim Medinipur for the expansion project. The issues raised during public are enlisted in Appendix 7-1 of EIA EMP Report. An amount of 400 Lakhs (0.5 % of Project cost) has been earmarked for CER based on public hearing issues and socio economic development activities.

18.0 The capital cost of the project is Rs 800 Crores and the capital cost for environmental protection measures is proposed as Rs 4900 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 200 Lakhs .The detailed CER plan has been provided in the EMP in Table 7-3. The employment generation from the proposed expansion is 1000.

19.0 Existing greenbelt of 33% is already present. Greenbelt will be further strengthened by plantation of 2000 trees in about 3 acres of land. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 1600 trees per hectare.

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 EIA Consultant: M. N. Dastur & Co. (P) Ltd., QCI Sl. No. – 99 (Sep 05, 2018)

Observations of the Committee: -

22.0 The committee observed that ToR points 7(xiii); 9, 11, CER, HIRA provided in the EIA report is not satisfactory. The PP did not provide additional measures for containing the background particulate matter. As desired by the committee, the project proponent has submitted the reply to the observations made during the course of the meeting. The details submitted by the project proponent is given below:

I. Post project environmental monitoring (location/ point specific):

Sl. No.	Parameter	Location	Schedule of monitoring
1.	Meteorology: Dry bulb temp, wet bulb temp, relative humidity, wind speed, wind direction and rainfall	Continuous meteorologicalmonitoring station will be installed at the rooftop of the administrative building.	Online continuous monitoring
2.	Air Quality Monitoring Parameters: $PM_{2.5}$, PM_{10}, SO_2 , NOx, CO, NH_3& O_3	One continuous monitoring station within the plant premises at Gate 2. Three monitoring locations outside plant premises – Around the plant premises at Tentuliya village (22^o 24' 11'' N, 87^o 16' 52'' E), Gokulpur village (22^o 22' 40" N, 87^o 17' 18" E), &Prithimpur (22^o 23' 40"N, 87^o 17' 30" E).	One 24 hourly sample per day, two days per week
	Work zone air quality	Two locations near the fugitive dust emitting operations (1 near cast house of MBF & 1 near DI Pipe Core Shop) Two more locations near the dust prone raw material stockpile areas (1 near Iron Ore Fines storage area & 1 near Coal Stockyard)	Quarterly once for 8 hours duration each location
3	Stack Emission Monitoring: PM, SO_2, NO_x, CO	PM for DE stacks- Installation of opacity meter (Total 13 stacks) PM, SO2, NOx and CO for combustion stacks - Installation of sensors (Total 4 stacks)	Online continuous monitoring system as per WBPCB's guidance
4	Water Quality - effluent water, surface and ground as per CPCB	Ground water – 4 locations, One location within plant at raw water tank (Borewells), one tubewell at Tentuliya	Ground water quality analysis- Quarterlyas per IS 10500:2012

	standard.	village, one tubewell at Gokulpur village and one near BF Slag storage area Waste water - ETP outlet	 ETP - All parameters monthly once and daily monitoring of common parameters for performance assessment
6	Ambient noise level	One near plant main gate and at four locations at Material gate, Guest House, Amba Primary Health Center& Main Gate	Once every six months for each location
	Work zone noise level	Four locations at 3 m distance from the noise generating equipment at Blower House, CPP, Pig Casting Machine & Zinc Coating Area of DI Pipe plant	Once every three months for each location
7	Soil quality	One within plant area (greenbelt) and one from outside plant area (agricultural land at Latibpur village)	Once in a year for each site
8	TCLP test for solid wastes	One location for BF Slag to ascertain the heavy metals & toxic elements	Yearly for both locations
9	Inventory of hazardous waste	Within plant	Monthly or as directed by WBPCB

II. Onsite and offsite Disaster (Natural & man-made) preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan:

Unit	Source	Nature of Hazard	Hazard Potential	Mitigation
Raw materials handling	PCI Coal, coke	Fire	Major	PCI Coal will be kept in a closed enclosure with fire alarms
	Handling & storage of bitumen	Fire & Toxic	Moderate	Fire hydrant will be provided at strategic locations

	Water Treatment Chemicals like acids/alkalis	Toxic	Major	Will be stored on concrete floor with dyke wall
	Lube oils/greases	Fire	Moderate	Will be stored on concrete floor with dyke wall
Production units				
Agglomeration	Dusts	Respiratory	Moderate	DE system will be provided. Worker shall use dust masks
Iron making in MBF	Release of untreated wastewater	Toxic	Major	Catch pits will be provided
	BFG	Fire	Major	All sealing areas (drip pots) will have CO detection system with alarm and it is coupled with plant control room. Safe evacuation guide signs, public addressal system and assembly points will be provided
	Hot metal & slag handling	Fire	Major	Secondary runner with emergency pit to control hot metal splashing in the cast house area. Cross over on the runner will be provided. Slag runner will be covered.
DI Pipe Plant & Foundry	Hot metal & pipe handling	High temperature	Major	Heat resistant safety jackets will be provided to shop floor workers
	Mould & core making	Respiratory	Moderate	DE system will be provided. Worker shall use dust masks
Captive Power Plant	Boiler fuel	Fire	Major	Fire alarm with fire fighting system
Utilities				

Fuel gas	Gas leaks	Fire & Toxic	Major	All sealing areas (drip pots) will have CO detection system with alarm and it is coupled with plant control room. Safe evacuation guide signs, public addressal system and assembly points will be provided
Electric Power Supply	Short circuit	Fire	Major	Circuit breaker, fire alarm and firefighting system (foam and CO2 based)
Liquid Fuel	Fuel Handling & storage area	Fire & Toxic	Major	Will be stored in a separate area with foam based firefighting system
Hydraulic oil & lubricant	Accidental discharge of hydraulic oil under pressure	Fire & Toxic	Moderate	Use of PPE(apron, jacket, safety goggles, hand gloves etc.) and installation of firefighting system with exhaust and alarm. Hydraulic oil collection pit will be provided

III. 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.

1) The Company has well laid down Integrated Management System Policy, which includes Environment Policy approved by Managing Director (MD). MD has been authorized by the Board to sign, issue & modify the environment policy.

2) Based on the directives received from Board, Company Secretary in consultation with Managing Director (MD) has taken the compliance monitoring system of all applicable laws including environmental laws on the IT platform.The SOP for monitoring and review of statutory compliances related to environmental norms throughIT platform is enclosed as Annexure - 3A.

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.

The Organisation has procedure detailing compliance with all aspects of environmental laws including the process of corrective actions for its improvement.

The policy provides a framework for setting and reviewing environmental objectives which includes a commitment to fulfil its compliance obligations, to the protection of the environment, including prevention of pollution and other specific commitment(s) relevant to the context of the organization.

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 the system may be given.

Company Secretary acts as the Compliance Officer of the Company.

The in-house "Apex" Committee (Chaired by MD) meets every fortnight, where Company Secretary draws attention of MD on compliance status including ensuring compliance to environmental clearance conditions. Hierarchical system to address EHS aspects is enclosed as Annexure – 3B.

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.

The quarterly compliance report is placed in the Board meeting for review. This is certified by MD & the same is discussed at the board level for any action. MD takes the Board through it and explains / comments against non-compliance if any, on environmental norms.

The Directors' Report, *inter alia*, addresses compliances to stakeholders at large on yearly basis.

The SOP followed for reporting the compliance issue to the board of directors is enclosed as Annexure – 3C.

The relevant extracts from the Integrated Management System Manual of the company addressing all the above aspects is enclosed as Annexure – 3D.

IV. Details of activities under CER (Corporate Environment Responsibility) with budgetary provision and timeline for implementation:

An amount of Rs. 555 Lakhs has been earmarked for CER based on issues raised in public hearing and social need assessment carried are as detailed below

S.N.	**Public Hearing discussion reference No.**	**Issue**	**Action Plan**	**Time line for completion**	**Fund allocation (INR in Lakh)**
1.	S.N. 8	Further strengthening of drinking water projects	One toilet block & one drinking water project inSamraipur village.	2019 December	65.0
2.	S.N. 9	Providing beds in	Take approval of	2019 July	5.0

		local primary health centre	health department & plan for 10 beds in Samraipur village		
3.	S.N. 11	Improvement of village road	Plan for providing road at Maheshpur village	2020 July	100.00
4.	S.N. 13	Providing street light from TML to Saha Chawk	To provide solar street light on road	2020 December	25.0
S.N.	**Social Impact Assessment reference**	**Assessment point**	**Action Plan**	**Time line**	**Fund allocation**
1.	S.N. 1	Drainage & sanitation facility improvement	Construction of drain & toilet block in Mollachak, Sadatpur&Keshupal village	2020 December	150.00
2.	S.N. 1	Absence of approach road	Laying of approach road in Latibpur&Kenduapal. Lay of approach road in Pirthimpur,Walipur, Keshpur	2019 December	150.00
3.	S.N. 2	No centre for vocational training for women	Construction of training centre in Latibpur for tailoring, spoken English & computer.	2019 December	35.0
4.	S.N. 3	Repair of school in Tentuliya	Repair of primary school building in Tentuliya	2019 October	5.0
5.	S.N. 5	Demand for potable water	Construction of bore well in Kendupal, Gholagharia&Latibpur	2019 December	20.0

Recommendations of the Committee: -

22.0 After details deliberations, the committee recommended for environmental clearance for the proposed expansion cum modification of 0.85 MTPA Integrated Steel Plant with 184 MW CPP under the provisions of EIA Notification, 2006 subject to following General Conditions:

I. Statutory compliance:

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

ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (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.

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

iii. The project proponent shall install Continuous Ambient Air Quality monitoring for monitoring of 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.

iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring alongwith results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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

vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better operation of baghouse.

vii. Provide pollution control system in the sponge iron plant as per the CREP Guidelines of CPCB.

viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

ix. 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.

x. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation;

xi. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

iv. Adhere to 'Zero Liquid Discharge'.

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

vii. The project proponent shall practice rainwater harvesting to maximum possible extent.

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

IV. Noise monitoring and prevention

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of this Ministry as a part of six-monthly compliance report

ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

V. Energy Conservation measures

i. The project proponent shall provide waste heat recovery system on the DRI Kilns.

ii. The dolochar generated shall be used for power generation.

iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.

iv. Provide LED lights in their offices and residential areas.

VI. Waste management

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

ii. 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.

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

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

VII. Green Belt

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

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

VIII. Public hearing and Human health issues

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

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

iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

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

IX. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

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

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

ii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

iv. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

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

X. Miscellaneous

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

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

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

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

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

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

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

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

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

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

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

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

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

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

xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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

1.18 Enhancement of Ferro Alloys Plant (145000 TPA to 160000 TPA) by M/s. Balasore Alloys Limited through process optimization within existing plant premises at Balgopalpur Industrial Estate, Balgopalpur, District- Balasore (Odisha) [Online proposal No. IA/OR/IND/79886/2018 dated 13/10/2018; MoEFCC File No. J-11011/245/2008-IA.II(I)] – Environmental Clearance – Expansion under para 7(ii) of the EIA Notification, 2006.

1.0 M/s. Balasore Alloys Limitedhas made online application vide proposal no. IA/OR/IND/79886/2018 dated 13thOctober 2018 seeking environmental clearance under para 7(ii) of EIA Notification, 2006 for enhancement of Ferro Alloys Plant (145000 TPA to 160000 TPA) by M/s. Balasore Alloys Limited through process optimization within existing plant premises at Balgopalpur Industrial Estate, Balgopalpur, District- Balasore (Odisha).The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent:

2.0 Environmental Clearance for the existing plant was issued by MoEFCC, New Delhi vide letter no. J-11011/245/2008-IA II (I) dated 25th August, 2008, and revalidated on 3rd March, 2016. Consent to Operate vide letter number 15883/IND-I-CON-1616 dated 31st Oct., 2016 has already been obtained by the company.

3.0 Certified compliance for the existing EC was obtained from Eastern Regional Office of MoEFCC, Bhubaneshwar vide letter number 101-456/EPI/3485 dated 12th Dec., 2017 and closure report of all the observations made during the issuance of certified compliance report via letter no. 101-456/EPE/496 dated 20th Feb., 2018.

4.0 The detailed design engineering undertaken after the grant of environmental clearance, it was inferred that the production quantity can be increased without incurring any change in the existing facility or any extra pollution load due to the cumulative result of effective furnace operation, consistency in feed raw material quality, monitoring of process parameters, preventive maintenance, zero breakdown & automation of furnace operation achieving by adopting various efficiency measures like Six Sigma & TPM. For this proposed enhancement there will be no change in the existing plant and machinery and no additional requirement of land and water.Proposed enhancement will be done by

- Process optimization within existing plant facility.
- Improvement in power factor from 0.82 to 0.87 - by optimizing the furnace operation
- Improvement in the load factor from 0.90 to 0.92 - by improving the maintenance practices
- Improvement in operating load factor from 0.93 to 0.96 - by introducing automation and controls
- By sourcing good quality sized ore
- By increasing the number of working days from 338 to 342 days/annum.

5.0 Moreover, this is a part of the organizations policy to produce more from less thus, the Specific consumption of raw material will come down because of increased scale of production.Also, there will be no additional pollution load. However specific power consumption per ton of power is decreasing from 3.47 to 3.45 MWH.Therefore, with the increase in number of operating days from 338 to 342 days/ annum and process optimization the company will be able to achieve enhanced capacity (from 145000 TPA to 160000 TPA).

6.0 The project has environmental benefits as well. There will be no change in water consumption however specific power consumption per ton of power is decreasing from 3.47 to 3.45 MWH. Further the company commits to voluntarily reduce emissions from 100 mg/Nm^3 (as per last granted EC) to 60 mg/Nm^3 by changing the filter cloth. For this there will be no change in the capital expenditure but will come into revenue expenditure. This will further reduce the stack emissions to more than 30%.

Observations of the Committee: -

7.0 The project proponent has made a detailed presentation which brought the following to the notice of the Committee:

The proposal involves change in the raw material quality to optimize power consumption, reduce water consumption and consumption of raw materials, while increasing the production by about 10%, thereby resulting in to reduced capacity of power plant from 3.47 MWh to 3.45 MWh; reduction in stack emission from 100 mg/Nm^3 to 60 mg/Nm^3 andno change in water consumption i.e. 900 KLD. The pollution load is also expected to come down as the carbon and water foot print reduced. It also follows that the specific consumption of water and energy and also the specific pollution load would also come down.

In view of above, the proposed changes are welcome from the environmental point of view and merit consideration under para 7(ii) of the EIA Notification, 2006. However, the Committee also noted that the project proponent had not gone for public hearing while the current ECwas granted as condition of PH was not mandatory at that point of time. The Committee deliberated the matter at length. Normally, in cases where PH has not been gone through in the past, fresh public hearings are prescribed. But PH would require prepration of fresh EIA report which may take atleast 6 months to one-year time. On the other hand, the PP proposes to reduce the required quantum of raw material, energy and water and also proposes to reduce the pollution load. These estimated reductions are not only in specific terms (per ton of production) but also in absolute terms. In such a situation, asking them to go for fresh EIA report and PH would amount to asking the PP continue to operate at higher pollution and resource consumption levels and these demands serious consideration.

Recommendations of the Committee: -

8.0 The Committee, after detailed deliberations as mentioned above, suggests that the MoEF&CC may consider accepting the proposal without necessity of EIA/EMP and PH.

1.19 Proposed expansion of Pig Iron Plant (from 0.21 MTPA to 0.587 MTPA), Integrated Steel Plant comprising of 0.387 MTPA TMT Rods, Angles and Channels and 0.20 MTPA of Pipes by M/s KIC Metaliks Limited located at Raturia Industrial Area, Angadpur, Durgapur, Distt. PashimBardhaman, West Bengal – [Proposal No. IA/WB/IND/60981/2016; F.No. J-11011/556/2009-IA-II-(I)] – Environmental Clearance.

1.0 The proponent has made online application vide proposal no. IA/WB/IND/60981/2016dated 7th September 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2. The expansion project of M/s KIC Metaliks Ltd located in Village-Angadpur Tehsil Kanksa, District Bardhaman (West), State-West Bengal was initially received in the Ministry on09.12.2016 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 20th meeting held on 01.06.2017 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 20.07.2017 vide Lr. No. J-11011/556/2009-IA-II(I)]

3.0 The project of M/s.KIC Metaliks Ltd located in Angadpur Village, Kanksa, Tehsil, Bardhaman (West)District, West Bengal State is for Expansion and Modification of 0.21 MTPA Pig Iron Plant to 0.578 MTPA Integrated Steel Plant. The existing project was accorded environmental clearance vide lr.no. J-11011/556/2009-IA II (I) dated 24.05.2011. The Status of compliance of earlier EC was obtained from RegionalOffice, Bhubaneshwar vide Lr.No.102-/385/EPE/205, dated 27.07.2018 shows there is no non-compliances reported by Regional officer. The proposed capacity for different products for new site area as below:

Name of unit	No. of unit	Capacity of each unit	Production Capacity
MBF	1	245m3	2,35,000 TPA
EAF,	1	30T	384000 TPA
IF	4, 2	15T, 20T	
LF & VD+ matching	1	30T	
CCM	1	1200TPD	
DI PIPES	1	200000	200000 TPA
DRI	2	350TPD	224000 TPA
Rolling Mill	1	1200TPD	378000 TPA
Sinter	2	25m2	360000 TPA
Nitrogen Plant	1	50T	80000 N/m3/Day
Oxygen Plant	1	50T	80000 N/m3/Day
CPP-AFBC	1	11MW	11 MW
CPP-WHRB	1	19MW	19 MW
PCI	1	100 TPD	3200 TPA
Cement Grinding Unit	1	100000 TPA	100000 TPA

5. The total land required for the project is 34.80ha. Noforestland involved. 30.75 ha out of total land has been acquired and another 4.05ha land is under acquisition. No River passes through the project area. It has been reported that no water bodyexist 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 isFlat (flat/undulated) and reported to lies between to $23^0$30' 24.58'' N,to$23^0$30' 48.75'' N Latitude and $87^0$16' 22.70''E to87^0 16'43.23'' E Longitude in Survey of India topo sheet No. F45D6 at an elevation of 72mAMSL. The ground water table reported to ranges between 2m-5mbelow the land surface during the post-monsoon season and 5m–10mbelow 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 3000 ham. Further, the stage of groundwater development is reported to be16% and 41% in core and buffer zone respectively and thereby these are designated as safe.

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 area also does not report to form Page 9 of 38 corridors for Schedule-I fauna. The authenticated list of flora and fauna provided through the Base Line study. NoSchedule-I fauna is reported in the study area.Details given in section 3.7 Chapter 3 in the EIA/EMP report

8.0 The Process involves production of TMT rods and DI pipes using DRI-IF-CCM &SINTER-MBF-EAF-VOD routes utilizing I/o lumps, fines, Dolomite, Coal etc.

9.0 The targeted production capacity of the projectis0.578million TPA. The ore for the plant would be procured from Barbil Odisha (linkages-MoU between Mideast Integrated Steels Ltd. on 20.06.2017 & KIC Metaliks Ltd. The ore transportation will be done through Rail & Road.

10.0 The fresh water requirement of the project is estimated as 5530m^3/day,the required water will be drawn from Durgapur Valley Corporation and Durgapur Projects Ltd. The permission for drawl of surface water is obtained from DVC & DPL vide Lr. No. DP/7W/14N-I/1122 dated 08.12.09.

11.0 The power requirement of the project is estimated as 54.10MW, out of which 24 MW will be obtained from the DPL.

12.0 Baseline Environmental Studies were conducted during Winter season i.e. From01.12.2016*to*28.02.2017, Ambient air quality monitoring has been carried out at 8 locations during baseline, and the data submitted indicated: PM_{10} (75.0 µg/m^3 to 92.0 µg/m^3), $PM_{2.5}$ (38.0 to 52.0µg/m^3), SO2 (13.9 to 22.0 µg/m^3) and NOx (25.6µg/m^3 to 34.7 µg/m^3). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 3.72 µg/m^3 with respect to the PM_{10}, 3.88 µg/m^3 with respect to the SO_2 27.9. µg/m^3 with respect to the NOx.

13.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH:7.8to 7.0; Total Hardness144.to 192 mg/l; Chlorides: 40 to 80 mg/l; Fluoride:0.24to 0.28 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 6.6 to 7.4; DO: 7.0to7.5 mg/l and BOD: 3.0 to 6.0mg/l. COD from 0 to 0mg/l.

14.0 Noise levels are in the range of 49.5to54.5dB(A) for daytime and 36.8to43.3dB(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.

16.0 It has been reported that a total of 407720tons of waste will be generated due to the project, out of which 46600 tons will be used in Power Plant & Co-processing,230520tons will be given to recyclers and130600will be dumped in the earmarked dump yard. It has been envisaged that an area of 11ha 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.

17.0 It has been reported that the Consent to Operate from the West Bengal. State Pollution Control Board obtained vide Lr. No COO90244 dated18.03.2016and consent is valid up to 31.03.2019.

18.0 The Public hearing of the project was held on 17.11.2017atTathya Municipal Corporation Building. under the chairmanship of A. Samanta, Dy. Magistrate &Dy. Collector (designation) for the proposed expansion project of pig iron plant (from 0.21 MTPA to 0.587 MTPA) Integrated Steel Plant Comprising of 0.387 MTPA TMT rods. Angles,Channels and 0.20MTPA DI pipes. An amount of 480 Lakhs has been earmarked for CER, based on PH issues.

Sl. No	**Points/questions raised by Public**	**Commitment of PP**
1	Measures for local development through CSR activities	Development of local roads, providing health care facilities etc will be taken up in consultation with local administration.
2	Provide job to local youth	Industry provides skilled training program for technical grade, the benefits which can be availed by local people.
3	Measures to prevent environmental degradation	WHRB, ESP, Bag filters will be installed and they will strictly comply with the prevailing environmental norms.

19.0 the activities and fund provision for Corporate Environment Resposnibility (CER) is as follows:

S.No.	Item	Description	IstYr (in lacs)	2nd Yr (in lacs)	Total (in lacs)
1	Repair and widening of village Roads	6 km road of 1)Tamulipada 2)Bauripada 3) Bagadipada ,	75	75	70
2	Erection of Bus stops	two no of Bus stop	-	10	10
3	Setting up upper primary school	Development of existing primary school and set up of one upper primary school	10	30	10
4	Education & Training program	100 no of local youth to be trained on developed farming	05	05	05
5	Overhead tank erection, with deep bore well	Bore well to be set up, water to be stored on over head tank and single point supply to each village.	30	30	20
6	Development of MSW dump yard	Dump yard to be created for MSW & supply of bins for waste collection	20	15	15
7	Electrification of village roads	Street LED lights to be setup	15	15	15
	TOTAL		480		

19.0 The capital cost of the project is Rs. 595Crores and the capital cost for environmental protection measures is proposed as Rs. 3000.Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 351Lakhs.The detailed CER plan has been provided in the EMP in its section 7.10 in Chapter 7 of EIA/EMP report. The employment generation from the proposed project / expansion is1200.

Category	Capital Cost (INR Cr)	Recurring Cost (INR Cr)
Air pollution Equipment	21.0	1.75
Water Pollution Control Machinery & Construction	4.2	0.65
Rainwater Harvesting	0.82	0.07
Occupational Health	0.25	0.15
Green Belt Development	0.48	0.15
Environmental Monitoring	0.69	0.12
Solid Waste management	1.86	0.12
Safety & Disaster Management	0.25	0.05
EMS & Capacity Development	0.45	0.45
Total	30.0	3.51

20.0 Greenbelt will be developed in 11.40 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 1500 trees per ha. Total no. of 5884saplings will be planted and nurtured in 4 ha in next two 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: Global Envirotech, Bhubaneshwar.

Observations of the Committee: -

23.0 The committee observed that the baseline data does not reflect the ground reality and data needs to be validated. The committee also felt that the proposed units will cause congestion in the layout. Therefore, the committee advised to submit revised EIA/EMP with fresh data and de-congested layout.

Recommendations of the Committee: -

24.0 The committee recommended for returning the proposal in the present form**.**

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

1.0 The proponent has made online application vide proposal no. IA/OR/IND/80405/2018 dated 28th September 2018seeking expansion of pellet plant from 0.6 MTPA to 1.2 MTPA in the 1.44 MTPA Integrated Steel Plant located at Rengali, Sambalpur, Sambalpur, Odisha of M/s Shyam Metaliks and Energy Limited under para 7(ii) of EIA Notification, 2006.

Details submitted by the Project Proponent

2.0 M/s Shyam Metalics and Energy Ltd, at- Pandoloi, Sambalpur, Odisha was accorded EC for 1.44 MTPA Integrated steel Plant vide letter no J-11011/495/2006-IA.II(I), dated 10thDecember, 2008 for the following capacities:

SL. No.	Shop	Ultimate capacity(TPA)
1	Sponge Iron	8,00,000
2	Billet Caster	2,00,000
3	Rolling Mill	6,60,000
4	Sinter Plant	8,82,000
5	Blast Furnace	7,42,000
6	Ferro alloy	2,50,000
7	SMS	14,44,286
8	Coke Oven	5,50,000
9	Pelletization & beneficiation plant	3,00,000
10	Coal washery	18,00,000
11	Power(MW)	225
12	Bloom caster	3,53,500
13	Lime Plant	60,000

4.0 Present status of the project and changes proposed are given below:

Sl. No	Facilities	ULTIMATE CAPACITY As approved in EC(TPA)	Project implemented	Construction completed awaited for CTO	change in EC configuration	Final EC capacity In TPA.
1	Sponge Iron	8,00,000	5,00,000 TPA+300000TPA	300000TPA	No Change	8,00,000
2	Billet caster	2,00,,000	2,00,000 TPA		No change	2,00,000
3	Rolling Mill	6,60,000	60,000TPA+600000 TPA	600000	No Change	6,60,000
4	Sinter Plant	882000	Nil	NIL	To be dropped	0
5	MBF	742500	Nil	NIL	To be dropped	0
6	Ferro alloys	250000	1,33,000TPA+ 117000 TPA	1,17,000 TPA	No Change	2,50,000

7	SMS	1444286	3,73,000TPA+ 1071286TPA	10,71,286TPA	No change in	14,44,286
8	Coke oven	550000	Nil	NIL	To be dropped	0
9	I/O Pelletization& beneficiation	300000	3,00,000 TPA	9,00,000TPA Seeking approval. Capacity enhancement of existing 3,00,000 to 6,00,000 and addition of new capacity of 6,00,000	Capacity Enhancement by9,00,000TPA.	12,00,000
10	Coal washery	18,00,000	3,00,000TPA+ 700000 TPA	7,00,000 TPA	Capacity reduction by 8,00,000 TPA	10,00,000
11	Power	225MW	85MW+73 MW	73 MW	Reduction by 67 MW	158 MW
12	Bloom Caster	353500	1,73,000TPA+ 1,80,500 TPA	1,80,500 TPA	No Change	3,53,500
13	Lime Plant	60000	60,000 TPA	60,000 TPA	No change	60,000

5.0 Regional Office, Bhubaneswar issued the certificate of compliance of earlier environmental clearance videbletter no 101-258/EPE dated 14.09.18. The Regional officer has pointed out some of the observation and the proponent has taken necessary actions on the observations. The details are as follows:

Observation of the Regional officer	Corrective action of the project proponent and the same has been submitted to regional office on 09.10.18
Employees do not use PPE	Action has been initiated not to enter the employees without PPE
Green belt development was not sufficient around the boundary wall	10,000 saplings have already been planted around the boundary wall
Construct and maintain garland drain and settling tank around reject storage	Construction of garland drains along with collection pits around the waste storage area are in progress and will be completed by monsoon
Continuous monitoring to be carried out for total organic carbon at the outlet of ETP and the report to be submitted to Regional Office	Order has been placed for procurement of online Total Organic Carbon meter to install at the outlet of ETP
Overall housekeeping to be improved for entire plant on priority basis	Scraps and other unused materials have been segregated and stored in earmarked areas. All HODs have been given the responsibility to

	look after the housekeeping

6.0 The proposal is for enhancement of pellet capacity from 0.3 MTPA to 0.6 MTPA and to add an additional 0.6 MTPA pellet plant with dropping of MBF, Sinter, Coke oven and reduction in capacity of coal washery and power plant. The impact predicted due to modernization of the project under 7(ii) are:

Sl. No.	**Plant Unit**	**Existing EC Status / Proposed**	**Capacity in TPA**	**Pollutant Quantity**			
				SPM (TPA)	**SO_2 (TPA)**	**NOx (TPA)**	**CO (TPA)**
1	Pellet	Existing	300000	79	382	42	5
1		Proposed	1200000	318	563	144	19
2	DRI	Existing	800000	481	17	73	581
2		Proposed	800000	481	17	73	581
3	Power Plant	Existing	225 MW	14455	1233	83	652
3		Proposed	158 MW	10151	577	39	305
4	SINTER	Existing	882000	60	20	9	18
4		Proposed	Dropped	0	0	0	0
5	MBF	Existing	742500	9	NA	NA	2302
5		Proposed	Dropped	0	0	0	0
6	SMS	Existing	1444286	42	133	144	118
6		Proposed	1444286	98	144	144	118
7	SAF	Existing	250000	35	8	NA	5
7		Proposed	250000	35	8	NA	5
8	Coal Washery	Existing	1800000	Wet Processing			
8		Proposed	1000000				
9	Coke Oven Plant	Existing	550000	65	731	409	170
9		Proposed	Dropped	0	0	0	0
Net Existing Pollution Load				**15227**	**2525**	**760**	**3850**
Net Proposed Pollution Load				**11083**	**1310**	**400**	**1027**
Net Change in Pollution Load				**-4145**	**-1215**	**-360**	**-2823**

7.0 **TRANSPORTATION LOAD is as follows:**

Mode of Transportation	Existing	Proposed
By Rail Rack	5336753	3689370
By Road	425779	449405
No, of Trucks (16T) in to-and-fro traffic	53222	56176
No. of PCU equivalents	170313	179764
Area of the Railway Siding	28752 m2	28752 m2

All estimations are based on the AP-42 Volume I Ch-12, Estimations for Steel Manufacturing.

8.0 **POLLUTION LOAD PER PCU:**

PM10	µgm/m^3	No. of PCU x 0.01
CO	µgm/m^3	No. of PCU x 0.048
NOx	µgm/m^3	No. of PCU x 0.032
TOC	µgm/m^3	No. of PCU x 0.007

Existing Pollutant Quantity						
	PM10 mg/m^3	TOC mg/m^3	NOx mg/m^3	CO mg/m^3	Total No. of Vehicles in PCU	Fugitive emissions TPA
Traffic Pollution	1.70313	1.192191	5.450016	8.175024	170313	0.005007
Railway Siding						77.09
Proposed Pollutant Quantity						
Traffic Pollution	1.79762	1.258334	5.752384	8.628576	179762	0.005285
Railway Siding						64.39

9.0 Management Plan: After proposed modification the pollution load will decrease significantly. But still APC systems will be provided and measures will be taken to further reduce the pollution.

1. The entire stretch of belt conveyor will be covered to avoid escape of air borne dust particles into open atmosphere.

2. The pellet process except for mixing the raw material- the beneficiated ores and other materials, will be carried out in the wet condition, thereby air pollution from the process is negligible.

3. The pollution control equipment for Pellet Plant includes Electro-Static Precipitator 1.00; Bag Filter (Dust Extraction System) 2.00; Cyclone 1.00

10.0 EMP Budget is as follows:

Category	Capital Cost (INR Cr)	Recurring Cost (INR Cr)
Air pollution Equipments	91.45	10.24
Water Pollution Control Machinery & Construction	18.2	2.04
Rainwater Harvesting	3.39	0.38
Occupational Health	10.4	1.16

Green Belt Development	2.09	0.23
Environmental Monitoring	2.87	0.32
Solid Waste management	8.1	0.91
Safety & Disaster Management	1.04	0.12
EMS & Capacity Development	1.82	0.20
Total	**139.36**	**15.61**

11.0 Proposed mitigation plan for dealing of additional pollution load: After modification and expansion the pollution load will decrease. The measures adopted to control pollution are:

a. In order to control fugitive dust, following measures will be implemented in the raw material handling area:

b. Raw material storage area will be covered to control fugitive dust.

c. Water sprinkling system will be provided at raw material storage area for sprinkling water at regular intervals.

d. A closed conveyor system will be provided for transportation of raw material from the stock yard to the respective plant.

e. Conveyor systems, crushers, screens and finished product area will have independent dust extraction units of adequate capacity.

f. Dust extraction system will have bag filter unit provided with ducts, extraction fan and stack of appropriate height.

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

a. Road-side areas for Avenue Plantation with high canopy covers for absorption of Fugitive dust

b. Around the Boundary wall areas for Tall tree Plantation as a Air pollution and Noise barrier

c. Around various units in blank spaces for Area Plantation

d. Around the water channels with shrubs and tall grasses for prevention of erosion

e. Office and Canteen areas for land cover and beautification with shrubs and grass.

f. Peripheral plantation of fruit bearing trees to add to the livelihood strength and food security purposes.

13.0 **JUSTIFICATION FOR EXPANSION/MODIFICATION PROPOSED UNDER 7(ii)**

a. There will be no change in ultimate production capacity of steel with the proposed modifications and change in configurations under 7(ii) application.

b. There is scarcity of graded Hematite ore for DRI kilns and therefore steel production is hampered and at the same time iron ore fines are available at mine ends . To utilize these fines and meet the requirement of steel production, agglomeration of fines to make pellet for use in DRI kilns is a proposed solution. This can also reduce precious lumpy Hematite ore consumption.

c. Due to suspension of MBF route of hot metal production, there is no need for coke oven plant. Therefore, along with MBF Coke Oven unit is proposed to be dropped.

d. Use of low ash grade imported coal and reduction of thermal power generation from coal is the reason for reduction of coal washery capacity from 18,00,000 to 10,00,000TPA

e. Sinter was supposed to be used in MBF for production of hot metal, hence dropping of MBF has led to dropping of Sinter Plant.

f. The increase of pollutant emission due to increase of pellet production can be compensated by decrease of pollutant emission with reduction of power generation by 67MW. As the raw material consumption decreases, the fugitive emission inside and outside the project also decreases.

g. To conclude, the proposed changes under 7(ii) will have the same amount of steel production with complete integration of the units for steel manufacturing as a viable solution. Further with reduction in lumps and utilization of Fines is along the line of mineral conservation without additional Pollution Load

Observations of the Committee: -

14.0 After detailed deliberations, the committee observed that the entire land proposed was not completely acquired including 8 ha of forestland diversion. Therefore, the committee advised the project proponent to prepare the revised layout plan within the existing acquired land. The committee also advised to submit the load estimation along with the impact assessment, additional measures proposed for containing the fugitive emissions. Accordingly, the project proponent has submmited the details during the course of the meeting. The details submitted by the PP are as follows:

I. Revised Layout map with Greenbelt in existing acquired land.

- Land under possession = 350.97 Ac
- Existing Plant Area = 190.00 Ac
- Proposed Area for the units = 40.97 Ac
- Green belt area has been developed = 120.0 Ac

II Load Estimation Along with Impact Assessment.

- Capacity increase from 0.3 MTPA pellet production to 1.2 MTPA.
- Capacity of power generation decrease by 67 MW.
- Capacity of Coal washery decrease by 0.8 MTPA
- 0.882 MTPA Sinter completely dropped.
- 0.742 MTPA MBF completely dropped.
- 0.55 MTPA Coke Oven completely dropped

STACK EMISSIONS:

Facilities	**Stack ht (in m)**	**Top Dia (in m)**	**Velocity (in m/s)**	**Temperature (in K)**	**Flow rate (Nm3/hr)**	**TSP in g/s after APC**	**SOx in g/s**	**NOx in g/s**
Increase from 0.3 MTPA to 0.6 MTPA Pellet	45	1.5	8.4	353	53,850	0.105	8.76	-
Addition of new 0.6 MTPA Pellet	45	1.5	8.4	353	53,850	0.105	8.76	-
Dropping of 0.882 MTPA Sinter	62	1.2	10.0	373	1,61,300	0.017	41.0	28.0
Dropping of	30	1.6	10.25	300	74,155	0.062	-	-
0.74 MTPA MBF	30	1.6	10.25	300	74,155	0.062	-	-
Reduction of 67 MW power	75	2	9.3	373	1,06,236	0.045	8.76	

III. ESP CALCULATION for each pellet plant:

- Flow rate Q=14.96 Nm3/s,
- Assumptions: Dust Migration Velocity, Vpm=0.2 m/s, Dust Separation Efficiency, η @ 99.9%
- Area of collecting plate using Anderson- Dutsch formula η=1-e-vpm/A/Q
- Where A is area of collecting plates
- A=ln(1-0.999)/- Vpm/Q = -6.90/-0.0074 =932m2
- Taking 1.5 times as safety factor of efficiency 1398m2, plate height taken 9m, plate length=155.33m
- Number of rows taken 8, plate length of each row 20m. Individual plate width taking 0.5m corrugated SS no. of plates in each row =304.
- For reduction of Sinter, MBF and CPP , TSP will decrease by 0.634 µg/m3, NOx by 47.671 µg/m3 and SOx by 69.62 µg/m3.

- After proposed expansion of pellet plant, dropping of Sinter, MBF and reduction of Power plant the net GLC will decrease as follows:
- So, net change in GLC will be –ve 0.174 µg/m3 for TSP

` - ve 58.41 µg/m3 for SOX

-ve 47.61 µg/m3 for NOX

IV Pollution Control Measures will be taken:

- Development of thick green belt around the pellet plant and both sides of the road.
- RCC (Concreting) of Internal Roads
- Installation of Dry Fog system in material conveying Conveyors
- Use of high power dust sweeping machine and vacuum cleaner to control Fugitive emission to recover the dust.
- Use of high efficiency ESP for pellet plant so as to get stack emission within CPCB norms.

Recommendations of the Committee: -

15.0 The committee recommended for environmental clearance for the proposed expansion of pellet plant from 0.3 MTPA to 1.2 MTPA in the existing steel plant subject to following specific and general conditions:

i. The project proponent shall provide industrial vaccume cleaners for cleaning of roads and recycling of dust collected.
ii. The emission from bagfilters shall not be more than 30 mg/Nm^3
iii. The activity of beneficiation and pelletization, the activitiy of Iron ore beneficiation granted vide F.No. J-11011/495/2006-IA.II(I), dated 10thDecember, 2008 was dropped by the project proponent.
iv. The PP shall metal the internal roads so as to reduce the fugitive emissions.
v. The rain water harvesting shall be carried
vi. The PP shall develop greenbelt in an area of 120 Acres within the plant premises with native, broad leaved tree species.

1.21 Proposed expansion of Cement Production (capacity from 7,87,000 TPA to 9,00,000 TPA) located at located at Village(s) Mithapur&Surajkaradi, Taluka Dwarka, District Dwarka, Gujarat by M/s. Tata Chemicals Ltd. [Online proposal No. IA/GJ/IND/58896/2016; MoEFCC File No. J-11011/66/1999-IA.II(I)] – Environmental Clearance - Further consideration based on reply to ADS.

1.0 The proponent has made online application vide proposal no. **IA/GJ/IND/58896/2016** dated 8th June 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed

project activity is listed at Sl. No. 3(b) Cement Plants under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The proposed project for expansion of cement production capacity of M/s. Tata Chemicals Ltd. located in Villages: Mithapur and Surajkaradi, Tehsil:Dwarka, District: Devbhumi Dwarka, State Gujarat was initially received in the Ministry on 12thSept., 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 11thmeeting held on 26thSept., 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 10thJanuary, 2017 vide letter no.J-11011/66/1999-IA.II(I).

3.0 The project of M/s. Tata Chemicals Ltd. located in Mithapur and Surajkaradi Villages, Dwarka Tehsil, Devbhumi Dwarka District, Gujarat State is for enhancement of production of cement from 0.787 to 0.9 million tonnes per annum (million TPA). The existing project was accorded environmental clearance vide letter no. J-11011/66/99-IA-II (I) dated 20th Nov., 2000; amended on 17th Jan., 2001. The Status of compliance of earlier EC was obtained from Regional Office, Bhopal vide Letter No. 5-13/2000(ENV)/138 dated 23rd May, 2018. There are no non-compliances reported by Regional Officer. The proposed capacity for different products for new site area as below:

Name of Unit	No. of Unit (Existing Capacity)	Capacity of Each Unit (Proposed Additional Capacity)	Production Capacity (Total Capacity after expansion)
Clinker (TPA)	8,25,000	Nil	8,25,000
Cement (TPA)	7,87,000	1,13,000	9,00,000

4.0 The total land area for the project is 231 ha (existing complex). No forest land/agricultural land/ grazing land/ others Government Land involved. There is no additional land required for the project. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is more or less flat and reported to lies between 22° 23' 41.8" N to 22° 25' 04.3" N Latitude and 69° 00' 16.3" E to 69° 01' 19.1" E Longitude in Survey of India topo sheet No. 41 F/3 and 41B/15 at an elevation of 5 to 20 m AMSL. The ground water table reported to ranges between 1.9m to 5.2 m below the land surface during the post-monsoon season and 3.9 to 7.2 m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the stage of groundwater development is reported to be 67.11 % and thereby, these are designated as safe areas.

6.0 Marine National Park (~2.81 km in NW direction) and Gulf of Kutch Marine Sanctuary (~2.19 km in East direction) are located within 10 km radius of the plant site. The area also does

not report to form corridor for Schedule-I fauna. The list of flora and fauna provided through the Primary survey and Secondary data reports the presence of Schedule-I fauna in the 10 km study area (Chapter 3, Pg. No. 128 - 144 of Final EIA/EMP Report). The project proponent has mentioned that the proposed project site is outside of Eco-Sensitive Zone notified by MoEFCC. The project proponent prepared conservation plan and approved by Chief Wildlife Warden, Gujarat State.

7.0 From clinker silo, clinker is fed to cement mill, where in clinker along with fly ash and gypsum, in required proportion, is ground to form cement. No waste will be generated during Cement manufacturing process.

8.0 The targeted production capacity of the Cement is 0.9millionTPA. Existing clinker production capacities will meet the requirements. The clinker will be fed to cement mill through conveyor.

9.0 The water requirement of the project is estimated as 1942 m^3/day, out of which 822 m^3/day of raw water requirement will be obtained from Existing Sea water Desalination Units and the remaining requirement of 1120 m^3/day sea water will be met from existing sea water intake system.

10.0 The power requirement for the project is estimated as 14.28 MW which will be obtained from the Captive Co-generation Power Plant.

11.0 Baseline Environmental Studies were conducted during Post Monsoon Season from October to December, 2016. Ambient air quality monitoring has been carried out at 9 locations during 01stOct to 31st Dec., 2016 and the data submitted indicated: PM_{10} (36.52 to 74.21 µg/m^3), $PM_{2.5}$ (8.71 to 27.13 µg/m^3), SO_2 (4.63 to 12.40 µg/m^3) and NO_2 (6.55 to 15.21µg/m^3)**.** The results of the modeling study indicated that the maximum increase of GLC for the proposed project is1.56µg/m^3 with respect to the PM, 4.19µg/$m^3$with respect to the SO2, 1.39µg/m3 with respect to the NOx.

12.0 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH (7.23 to 7.96), Total Hardness (154.32 to 294.56 mg/l), Chlorides (95.94 to 328.09 mg/l), Fluoride (0.05 to 0.19 mg/l). Heavy metals are within the limits. Surface water samples were analyzed from 2 locations. pH – (7.45to 7.82), DO (5.90 to 6.80 mg/l), BOD (3.54 to 4.52 mg/l), COD (10.32 to 14.60 mg/l).

13.0 Noise levels are in the range of 44.42 to 66.91LeqdB(A) for day time and 36.04 to 60.25 Leq dB(A) for night time.

14.0 It has been reported that there is no population exist in the core zone of the project as the proposed expansion will be done on the existing project site. No R&R is involved.

15.0 No solid waste will be generated from the cement manufacturing process. Dust collected from various air pollution control equipment will be totally recycled into the process. Existing greenbelt area is 95 ha and additional 36 ha area will be developed under green belt/ plantation

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 Consolidated Consent and Authorization from Gujarat Pollution Control Board has been obtained vide Letter No. AWH- 91133 dated 12th Feb., 2018 and consent is valid up to 13th Feb., 2023.

17.0 The Public hearing of the project was held on 17th Feb., 2018 at Sabras Bhavan opposite Ashapura Mandir, Village: Mithapur, Taluka: Dwarka, District: Devbhoomi Dwarka, Gujarat under the chairmanship of Shri R.R. Raval, IAS, (Collector & District Magistrate, Devbhumi Dwarka) for Expansion in Cement Production Capacity from 0.787 million TPA to 0.9million TPA. The issues raised during public hearing are Local Employment, Environment, Health and Education. An amount of 338 Lakhs (2.5 % of total project cost i.eRs. 13,340Lakhs) has been earmarked for Enterprise Social Commitment based on public hearing issues.

18.0 The capital cost of the project is Rs. 133.40 Crores and the capital cost for environmental protection measures is proposed as Rs. 29.50 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 12.50 Crores / annum. The detailed CSR plan has been provided in the EMP in its page no. 241 to 242. The employment generation from the expansion project is 129persons.

19.0 Approx. 95 ha area has already been developed under greenbelt/plantation and additional 36 ha area will also be developed under green belt/ plantation which is about 33 % of the total project area. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 90,000 saplings will be planted and nurtured in 36hectares in 10 years.

20.0 There is no litigation pending against the proposed project or the land on which proposed project would be set up. However, the proposed project is going to use same channel for discharge of the waste water which is located on the land for which dispute is pending for its pre-existence rights, before the Hon'ble High Court of Gujarat. The Company has filed Special Civil Application no. 26530 of 2006 before the High Court of Gujarat to recognize its pre-existing rights over the land on which waste water discharge channel is situated. The Hon'ble Court has directed to maintain status quo by way of an interim relief till the final disposal of the case. In view of the same, Company is carrying out operations smoothly and using the channel to discharge the treated waste water into the sea. No, there is no litigation pending against the proposed project or the land on which proposed project would be set up. However, a complaint has been filed before Sub Divisional Magistrate, Dwarka (SDM) by resident of village Devpara alleging pollution from the Cement Plant bearing criminal case no. 1119 of 2015. There has been no order or direction by the SDM till date. The Company has submitted its interim reply and objections to the Complaint contending inter alia that the Gujarat Pollution Control Board (GPCB) has cleared all the activities of the Company at its plant and hence the complaint filed by the Complainant is false and frivolous and devoid of any substance. Company has submitted compliance reports/ action plans to the regulatory authorities within timelines for notices/ directions issued under the Environment (Protection) Act, Air and Water Acts.

21.0 EIA Consultant: J.M. EnviroNet Private Limited, Gurgaon.

22.0 The proposal was considered in the 33rd meeting of Expert Appraisal Committee (Industry-I) held during held during 9th-11th July, 2018. After detailed deliberation, the committee sought following additional information to be submitted by the project proponent for further consideration of the proposal:

i) The project proponent has mentioned that there are two wildlife protected areas within 10 kms of the project site. However, they have clarified regarding their distance from the eco sensitive zone about one protected area only. This needs to be clarified.

ii) The project proponents have shown the distance of the project area from one of the wildlife protected area which shows that the protected area falls outside the eco sensitive zone of the concerned wildlife area. However, on scrutinizing the Eco Sensitive Zone Notification issued by the MoEF&CC, it was noted that the ESZ also extends in an area of 250 mtrs of either side of 31 rivers in that area. The project proponent has not made any clarification whether the project site falls in the eco sensitive zone with respect to the 31 rivers. This needs to be clarified.

iii) The impact of the proposed expansion and the area of the Marine National Parka and Marine Sanctuary and its ESZ should be presented.

iv) There are a number of Archeological sites in this area including Bed-Dwarka. The project proponent should make a presentation on the likely impact of project activities on the nearby sites.

v) The project proponent should submit a plan for setting up of a monitoring system in collaboration with the State Forest Department for monitoring the air and sea water quality from the point of view of conserving marine biodiversity.

vi) The project proponent shall revise action plan related to the issues raised during the public hearing.

23.0 The proponent has uploaded online at MoEFCC web-portal on 02nd August, 2018 the point wise reply of additional details sought by EAC (Industry – I). The brief of which is given below:

Sl No.	**Additional Detail Sought**	**Reply**
i.	The project proponent has mentioned that there are two wildlife protected areas within 10 kms of the project site. However, they have clarified regarding their distance from the eco-sensitive zoneabout one protected area only. This needs to be clarified.	▪ Following National Park & Sanctuary falls within 10 km radius of the plant site: o Marine National Park(~2.9 km in NW direction) o Marine Sanctuary (~ 2.4 km in East direction) ▪ Eco-sensitive Zone of both the above mentioned protected areas have been notified *vide*MoEFCC Notification No. SO 2561 (E) dated 22nd Aug., 2013. ▪ The distance of the plant site from the notified Eco- sensitive zone is as given below:

Sl No.	Additional Detail Sought	Reply
		○ Marine National Park Eco-Sensitive Zone (~2.7 km in NW direction) ○ Marine Sanctuary Eco-Sensitive Zone (~1.4 km in East direction) ▪ A map showing location of Plant site and Marine National Park & Marine Sanctuary within 10 km radius of the plant site along with their Eco-Sensitive Zones, has been Authenticated by Chief Wildlife Warden, *vide* Letter No.WLP/32/C/144-45/2018-19 dated 19thJune, 2018.
ii.	The project proponent has shown the distance of the project area from one of the wildlife protected area which shows that the protected area falls outside the eco- sensitive zone of the concerned wildlife area. However, on scrutinizing the Eco-Sensitive Zone Notification issued by the MoEF&CC, it was noted that the ESZ also extends in an area of 250 mtrs of either side of 31 rivers in that area. The project proponent has not made any clarification whether the project site falls in the eco-sensitive zone with respect to the 31 rivers. This needs to be clarified.	▪ As per MoEFCC Notification No. SO 2561 (E) dated 22nd Aug., 2013; ESZ also extends in an area of 250 mtrs of either side of 31 Rivers. ▪ Out of the rivers mentioned (at Page no.41 to 43)in the MoEFCC Notification No. SO 2561 (E) dated 22nd Aug., 2013*;* thenearestRiverisShamlasar River (Taluka Dwarka), which isat a distance of about 9.70 km in SE direction from the plant site. ▪ Hence, the plant site falls outside the boundary of ESZ of the Shamlasar River i.e. width of 250 meter from the centre of river. ▪ All other rivers are outside the 10 km radius study area of Plant Site.
iii.	The impact of the proposed expansion on the area of the Marine National Park and Marine Sanctuary and its ESZ should be presented.	The impact of the proposed expansion on Marine National Park and Marine Sanctuary and its ESZ has been assessed by following methods: ▪ *The Air Quality Impact Prediction impact of the proposed expansion (cumulative for Soda Ash, Captive Cogeneration Power Plant & Cement Plant)* Resultant concentration of air quality parameters is well within the prescribed standards. ▪ *Study on Impact of Discharge of Treated Waste Water.* Following studies have been conducted to assess the impact of proposed expansion project on marine life and sea water quality. ✓ Marine Impact Assessment Study conducted by Central Salt and Marine Chemicals

Sl No.	Additional Detail Sought	Reply
		Research Institute, Bhavnagar run by Council of Scientific and Industrial Research (CSIR) in October, 2017. ✓ Water Quality Modeling for Treated Waste Water Discharged into Sea (Mithapur Bay) conducted by M/s. Kadam Environmental Consultants, Vadodara. ▪ *Study on Impact on Biodiversity* Impact on Biodiversity has been studied and mitigation measures has also been proposed. The same has been given in Wildlife Conservation Plan; which is duly certified by CWW, Gujarat *vide* letter no. WLP/32/C/144-45/2018-19 dated 19th June, 2018.
iv.	There are a number of Archaeological sites in this area including Bed-Dwarka. The project proponent should make a presentation on the likely impact of project activities on the nearby sites.	As per secondary data available on website of Archeological Survey of India, followingare the archaeological important sites present in the area namely: ▪ Dwarkadhish Group of Temples (~18km in SW direction) ▪ Kshatrapa inscriptions (~ 18 km in SSW direction) ▪ Rukmini Temple(~16 km in SSWdirection) ▪ Dharashnvel Temple (Magderu) (~12.5 km in SSE direction) ▪ Guhaditya Temple (~11 km in SSW direction) ▪ Junagadhi (Jain) Temple (~ 9 km in SSW direction) ▪ Kankeshwar Mahadev Temple (~8.5 km in S direction) The impact of project activities on the nearby sites (10 km radius study area) has been assessed through Mathematical Modeling. Resultant concentration of air quality parameters is well within the within the prescribed standards.
v.	The project proponent should submit a plan for setting up of a monitoring system in collaboration with the State Forest Department for monitoring the air and sea water quality from the point of view of conserving marine biodiversity.	TCL will support and resource for monitoring system that would be setup by the state forest department for monitoring parameters of air and sea water quality related to conserving marine biodiversity. Rs. 25 lacsarebeing proposed towards this project which will be taken up as per guidelines of state forest department.

Sl No.	Additional Detail Sought	Reply
vi.	The project proponent shall revise action plan related to the issues raised during the public hearing.	Revised action plan related to the issues raised during the public hearing has been prepared and the same has been submitted.

Observations and recommendations of the Committee:

24.0 After detailed deliberations, the Committee noted that the marine sanctuary was declared in 1982 and finally notified in 1987. The effluent discharge from the integrated chemical complex has been disposed through channels to the sea i.e., marine sanctuary since 1967. The passage of channel involves notified forest land. The project proponent obtained the recommendations of Standing Committee of National Board for Wildlife (SCNBWL) for construction of pipelines to discharge effluent beyond the sanctuary into the sea. The ROW of pipelines proposed through the forest land is pending for clearance under FCA, 1980 and the matter is under sub-judice in the Hon'ble High Court of Gujarat. Therefore, Committee decided to consider the proposal only after the aforesaid Forest Clearance is received. The project proponent has submitted the reply to the ADS.

Recommendations of the Committee:

25.0 The committee observed that the reply to information sought was not satisfactory and advisedthe PP to submit stage-1 of the forest clearance for the forest land involved.

1.22 Expansion of Existing Sponge Iron plant by addition of 1x15 MVA Submerged Arc Furnace for production of 35,640 TPA (max.) Ferro Alloys and 20 MW Captive Power Plant for M/s Atibir Industries Co. Ltd. at District Giridh, Jharkhand – [Proposal No. IA/JH/IND/81689/2018; F.No.] – Terms of Reference.

1.0 M/s Atibir Industries Co Limitedmade an application vide online proposal no. IA/JH/IND/81689/2018 dated 6th October 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006.The proposal of expansion is submitted and appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s Atibir Industries Co. Ltd. proposes the expansion of existing 400 TPD Sponge Iron Plant to set up 1x15 MVA Submerged Arc Furnace for production of either SiMn: 24750 TPA or FeMn: 35640 TPA or FeSi: 13860 TPA or in combination of any with 20 MW Captive Power Plant.

3.0 The existing Sponge Iron Plant was established in 2005, before the publication of EIA Notification, 2006. The Total cost of the project was 35.56 crores, which was less than 100 crores and therefore doesn't require EC as per the EIA notification, 1994. The company has obtained CTE for existing unit from JSPCB vide Letter No. N-453 dated 26.07.2005. Existing

plant has obtained Consent to Operate from the Jharkhand State Pollution Control Board vide letter no. JSPCB/HO/RNC/CTO-1038396/2017/177 dated 01/03/2017 and valid up to 31/12/2018.

4.0 The proposed units will be located at Manjhiladih Village, P.O. - Gadi Srirampur, Giridih district, Jharkhand state.

5.0 Existing plant is established in 6.07 hectares of land. Proposed expansion will required additional 5.12 hectares of land which is already acquired by the proponent. Thus the total land required for plant operations will be 11.19 hectares. No forestland involved. Of the total area, 3.69 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. Rs. 105 Crores. Employment generation from proposed project will be 400 direct employments and approx. 600 indirect employments.

8.0 The targeted production capacity of the Ferro Alloys is either SiMn: 24750 TPA or FeMn: 35640 TPA or FeSi: 13860 TPA or in combination of any along with 20 MW Captive Power Plant. The ore for the plant would be procured from local and other state markets depending upon the quality. The ore transportation will be done through SH (Giridih to Dhanbad) at a distance of 0.8 Km and NH-2 at a distance of 50 Km from the project site in East direction. The proposed capacity for different products for new site area as below:

Name of unit	**No. of units**	**Capacity of Each Unit**	**Production Capacity**
Existing			
Sponge Iron (DRI)	4	100 Tons	400 TPD~120000 TPA
Proposed Expansion			
CPP (WHRB + AFBC)	WHRB - 4 x 2MW AFBC - 1 x 12MW	8 MW 12 MW	Power ~ 20 MW
SAF (Ferro Alloys)	1	15 MVA	SiMn 24750 TPA or FeMn 35640 TPA or FeSi 13860 TPA or in any combination

9.0 Power sourced initially from DVC for construction/erection and preliminary work. Presently 1.35 MVA load sanctioned. Later on power will be sourced through the CPP as it will be commissioned simultaneously with the other units. After the installation of expansion units the power generation of 20 MW from the captive power plant will be suffice to fulfill the power requirement of the plant. For emergency power requirement 1x500 KVA DG Set has been installed. Additionally, 3x500 KVA DG set shall be installed under the proposed expansion.

10.0 Proposed raw material and fuel requirement for project are:

S.No.	**Item**	**Requirement**	**Source and Transportation**

		TPA	
EXISTING			
Sponge Iron Unit 4 x 100 TPD – 120000 TPA			
1.	Iron Ore	1,92,000	From mines in Jharkhand and Odisha – by Rail rake and then by road.
2.	Non Coking Coal	1,56,000	From various mines of CCL – by Rail rake and/or road.
3.	Dolomite/ Limestone	3,600	From U.P. by road
PROPOSED			
Silico Manganese – 75 TPD (24750 TPA)			
1.	Mn Ore/ FeMn Slag	54450	Joda-Barbil area of Orissa & from MOIL in the Nagpur
2.	Coke	12375	Open Market of Dhanbad belt of Jharkhand
3.	Quartz	14850	Local Market
4.	Dolomite	6187	Local Market
5.	EC paste	866	Local Market
Ferro Manganese -108 TPD (35640 TPA)			
1.	Mn Ore	64152	Joda-Barbil area of Orissa & from MOIL in the Nagpur
2.	Coke	21834	Open Market of Dhanbad belt of Jharkhand
3.	Dolomite	10692	Local Market
4.	EC paste	891	Local Market
Ferro Silicon – 42 TPD (13860 TPA)			
1	Quartz	24948	Local Market
2	Coke	15177	Open Market of Dhanbad belt of Jharkhand
3	Mill Scale / iron ore	5544	Local Market
4.	EC paste	693	Local Market
Captive Power Plant – 20 MW (AFBC Boiler – 12 MW)			
1	Coal	67,500	

11.0 Water requirement in existing facility is 310 KLD which is presently being sourced from ground water. Water required for the proposed expansion project will be 560 KLD and it will be sourced from DVC through surface pipeline to be laid after due permission of the department and No waste water will be generated as the company will follow zero waste water discharge policy. Sufficient and suitable toilet facilities of proper standard and hygiene have been provided. These facilities are connected with Septic Tank with Soak Pit.

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 Environment Consultant – M/s Vardan Environet.S.L. No. 154 in QCI list of accredited consultants dated 05.09.2018.Certificate No. NABET/EIA/1619/RA 0037

Recommendations of the Committee: -

14.0 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed **at Annexure I read with additional ToRs at Annexure-2:**

i. The PP shall plan for rainwater harvesting equal to the amount of drawl from the ground.

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

iii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.

iv. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018

1.23 Proposed Expansion of M.S. Billets from: 61200 TPA to 2, 01,200 TPA and Proposed TMT Bars of 2,00,000 TPAby **M/s Solo Metals Pvt. Ltd.**at Village VasuriKhurd, Tehsil Wada, District Thane rural district, Maharashtra [Proposal No. IA/MH/IND/81923/2018; F.No.IA-J-11011/327/2018-IA-II(I)] – **Terms of Reference.**

1.0 M/s Solo Metals Pvt. Ltd. made an application vide online proposal no. IA/MH/IND/81923/2018dated 9th October 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006.The proposal is appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. Solo Metals Private Limited proposes expansion of existing manufacturing unit for M.S Billets and proposed new unit for TMT Bars. It is the proposed expansion of M.S. Billets from 61200 TPA to 201200 TPA and proposed a new unit of TMT Bars of 2,00,000 TPA based on Hot Billet Rolling Process.

3.0 The existing project was accorded environmental clearance vide lr.no. ENV-2009/39/CR.19TC.2 dated 9th September 2010. Consent to Operate was accorded by MaharashtraPollution Control Board vide lr. no. BO/JD(APC)/EIC No.KN-17/R/CC/1277 validity of CtO is up to 31.12.2021.

4.0 The proposed unit will be located at Village: VasuriKhurd,Taluka: Wada, District: .Thane rural, State: Maharashtra.

5.0 The land in possession is 6.07 Ha and is in industrial use.Of the total area 6.07 ha (33%) land will be used for green belt development.

6.0 The proposed boundary of Eco-Sensitive Zone of Tansa Wild Life Sanctuary is located at a distance of 1.5 KM from the site. The existing boundary of Tansa Wild Life Sanctuary is located at a distance of 9.5 KM from the site.

7.0 Total project cost is approx. 150 Crore rupees. Proposed employment generation from proposed project will be 300 direct and indirect employments.

8.0 The targeted production capacity of the M.S Billets is 2,01,200 TPA and TMT Bars will be 2,00,000 TPA.

9.0 The proposed and existing capacity for Induction Furnace and Rolling Mill are as below:

S.N.	Name of Unit	No. of units after expansion	Existing	Proposed	Total after expansion	Production Capacity
1	Induction Furnace	3	1 x 25 TPH	2 x 25 TPH	3 x 25 TPH	2,01,200 TPA
2	Rolling Mill	-	--	2,00,00 0 TPA	2,00,000 TPA	2,00,000 TPA

10.0 The electricity load of 16 MW will be procured from State Electricity Board.

11.0 Proposed raw material for project are Sponge Iron, M.S. Scrap and Billets. The requirement would be fulfilled by vendors as well as Open Market and imports.

12.0 Water Consumption for the proposed project will be 140 KLD and waste water generation will be 30 KLD.About 24 m^3/day domestic waste water will be treated in Packaged Type STP and industrial waste water generated will be treated in settling tank and reused in process.

13.0 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: -

14.0 The committee observed that the proposed boundary of Eco-Sensitive Zone of Tansa Wild Life Sanctuary is located at a distance of 1.5 KM from the proposed project site.

Recommendations of the Committee: -

15.0 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed **at Annexure I read with additional ToRs at Annexure-2:**

i. The PP shall plan for rainwater harvesting equal to the amount of drawl from the ground.

ii. The PP shall prepare the wildlife conservation plan and obtain the approval from the CWLW. The PP shall obtain the permission for transporation of raw material/product through the roads passing through the WL corridor.

iii. The PP shall obtain the permission from the NBWL as the ESZ in draft stage only.

iv. The PP shall adopt 100% hot charging and no re-heating furnace shall be envisaged

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

vi. 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.

vii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018

1.24 Proposed Expansion of M.S. Billets from 200 TPD (66000 TPA) to 800 TPD (264 000 TPA) and TMT Bars from 200 TPD (66000 TPA) to 800 TPD (264 000 TPA) by **M/s. Surya Ferrous Alloys Private Limited** at Village – Abhitghar, Tahsil – Wada, District– Palghar, Maharashtra[Proposal No. IA/MH/IND/81944/2018; F.No.IA-J-11011/324/2018-IA-II(I)] – **Terms of Reference.**

1.0 **M/s. Surya Ferrous Alloys Private Limited** made an application vide online proposal no. IA/MH/IND/81944/2018 dated 9th October 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006.The proposal is appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. Surya Ferrous Alloys Private Limited proposes expansion of existing manufacturing unit for M.S. Billets from 200 TPD to 800 TPD and TMT Bars from 200 TPD to 800 TPD. It is proposed to set up the plant for M.S. Billets and TMT Bars based on Hot Billet Rolling Process.

3.0 Consent to Operate was accorded by Maharashtra pollution Control Board vide lr. no. BO/JD(APC)/EIC No. KN-17/R/CC-1284 dated 26th April 2018. Validity of CtO is up to 28/02/2023.

4.0 The proposed unit will be located At Gut No. 86, 87, 88, 89, 90, 91, 92(PT), 92/4 , 95, 57 & 93, Village – Abhitghar, Tahsil – Wada, District– Palghar, State – Maharashtra.

5.0 The land in possession is 5.2 Ha & is in Industrial use. Of the total area 5.2 ha (33%) land will be used for green belt development.

6.0 The proposed boundary of Eco-sensitive Zone of Tansa Wild Life Sanctuary is located at a distance of 0.2 km from the site. The existing boundary of Tansa Wild Life Sanctuary is located at a distance of 3.5km from the site.

7.0 Total project cost is Rs. 250 Crores. Proposed employment generation from proposed project will be 350 direct and indirect employment.

8.0 Surya Ferrous Alloys Private Limited has proposed the expansion of M.S. Billets from 200 TPD to 800 TPD and TMT Bars from 200 TPD to 800 TPD. The proposed and existing capacity of Induction Furnace and Rolling Mill are as below:

S.No	Name of Unit	No. of Units after expansion	Existing	Proposed	Total after expansion	Production Capacity
1	Induction Furnace	6	1 x 9 TPH 1 x 12 TPH	2 x 12 TPH 2 x 20 TPH	1 x 9 TPH 3 x 12 TPH 2 x 20 TPH	264000 TPA
2	Rolling Mill	-	66000 TPA	198000 TPA	264000 TPA	264000 TPA

9.0 The electricity load of 18 to 20 MW will be procured from State Electricity Board.

10.0 Proposed raw material for project are sponge iron, M.S. Scrap and M.S. Billets. The requirement would be fulfilled by Local vendors and imports.

11.0 Water Consumption for the proposed project will be 185 KLD and waste water generation will be 40 KLD. About 24 KLDdomestic waste water will be treated in Packaged Type STP and industrial waste water generated will be treated in settling tank and reused.

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

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

Observations of the Committee: -

14.0 The committee observed that the proposed boundary of Eco-Sensitive Zone of Tansa Wild Life Sanctuary is located at a distance of 1.5 KM from the proposed project site.

Recommendations of the Committee: -

15.0 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed **at Annexure I read with additional ToRs at Annexure-2:**

i. The PP shall plan for rainwater harvesting equal to the amount of drawl from the ground.

ii. The PP shall prepare the wildlife conservation plan and obtain the approval from the CWLW. The PP shall obtain the permission for transporation of raw material/product through the roads passing through the WL corridor.

iii. The PP shall obtain the permission from the NBWL as the ESZ in draft stage only.

iv. The PP shall adopt 100% hot charging and no re-heating furnace shall be envisaged

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

vi. 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.

vii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018

1.25 Proposed M.S. Billets: 40,000TPM (4,80,000 TPA) TMT Bars : 40,000 TPM (4,80,000 TPA) Total After Expansion M.S. Billets : 60,000 TPM (7,20,000 TPA) TMT Bars : 60,000 TPM (7,20,000 TPA) of **M/s Guardian Casting Private Limited** at Village – Abhitghar, Tahsil – Wada, District– Thane, Maharashtra[Proposal No. IA/MH/IND/82033/2018; F.No.IA-J-11011/323/2018-IA-II(I)] – **Terms of Reference.**

1.0 M/s Guardian Casting Private Limited made an application vide online proposal no. IA/MH/IND/82033/2018 dated 10th October 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006.The proposal is appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. Guardian Casting Private Limitedhasproposed expansion of existing manufacturing unit for M.S. Billets and TMT Bars.It is proposedfor expansion of M.S. Billets from 20,000 TPM (2,40,000 TPA) to 60,000TPM(7,20,000 TPA) and TMT Bars from 20,000 TPM (2,40,000 TPA) to 60,000 TPM(7,20,000 TPA)based on Hot Billet Rolling Process.

3.0 The existing project was accorded environmental clearance vide lr.no. SEAC2010/CR.715/TC-2dated 20th May 2011. Consent to Operate was accorded by Maharashtra Pollution Control Board vide lr. no. Format 1.0/BO/JD(APC)/EIC No. KN-6822-15/O-CC-4273 validity of CtO is up to 31.07.2020.

4.0 The proposed unit will be located at Gut No. 57(pt), 108(pt),115,116,117,120,135(pt)and 92/1 Village: Abhitghar , Taluka: Wada District: Thane, State: Maharashtra.

5.0 The land in possession is 6.47 Ha and is in industrial use. Of the total area 6.47 ha (33%) land will be used for green belt development.

6.0 The proposed boundary of Eco-Sensitive Zone of Tansa Wild Life Sanctuary is located at a distance of 0.2 KM from the site. The existing boundary of Tansa Wild Life Sanctuary is located at a distance of 3.0 KM from the site.

7.0 Total project cost is approx. 130 Crore rupees. Proposed employment generation from proposed project will be 370direct and indirect employment.

8.0 The targeted production capacity of the M.S. Billets is 7,20,000TPA and TMT Bars is 7,20,000 TPA. The proposed and existing capacity for Induction Furnace and Rolling Mill are as below:

S.N.	Name of Unit	No. of units after expansion	Existing	Proposed	Total after expansion	Production Capacity
1	Induction Furnace	4	1x 30 TPH 1 x 15 TPH	1 x 30 TPH 1 x 40 TPH	1 x 15 TPH 2 x 30 TPH 1 x 40 TPH	7,20,000 TPA
2	Rolling Mill	-	2,40,000 TPA	4,80,000 TPA	7,20,000 TPA	7,20,000 TPA

9.0 The electricity load of 65 MW will be procured from State Electricity Board.

10.0 Proposed raw material for project are Sponge Iron, M.S. Scrap and Billets. The requirement would be fulfilled by vendors as well as Open Market and imports.

11.0 Water Consumption for the proposed project will be 450 KLD and waste water generation will be 60 KLD.About 24 m^3/day domestic waste water will be treated in Packaged Type STP and industrial waste water generated will be treated in settling tank and reused.

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: Pollution and Ecology Control Services, Nagpur. Number in QCI List: 119

Observations of the Committee: -

14.0 The committee observed that the proposed boundary of Eco-Sensitive Zone of Tansa Wild Life Sanctuary is located at a distance of 1.5 Km from the proposed project site.

Recommendations of the Committee: -

15.0 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed **at Annexure I read with additional ToRs at Annexure-2:**

i. The PP shall plan for rainwater harvesting equal to the amount of drawl from the ground.

ii. The PP shall prepare the wildlife conservation plan and obtain the approval from the CWLW. The PP shall obtain the permission for transporation of raw material/product through the roads passing through the WL cooridor.

iii. The PP shall obtain the permission from the NBWL as the ESZ in draft stage only.

iv. The PP shall adopt 100% hot charging and no re-heating furnace shall be envisaged

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

vi. 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.

vii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018

1.26 Proposed Manganese Oxide: 2500 TPM (30,000 TPA) Manganese Dioxide: 500 TPM (6000 TPA) Total After Expansion Manganese Oxide: 3,000 TPM (36,000 TPA) Manganese Dioxide : 700 TPM (8400 TPA) of M/s. Bhartia Non-Conventional Products at Plot No. C-20 and C-22, MIDC Chandrapur, Tahsil Chandrapur, District Chandrapur, Maharashtra [Proposal No. IA/MH/IND/82043/2018; F.No.IA-J-11011/321/2018-IA-II(I)] – Terms of Reference.

1.0 M/s. Bhartia Non-Conventional Products made an application vide online proposal no. IA/MH/IND/82043/2018 dated 10th October 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.

2.0 The project proponent vide letter dated 22/11/2018 requested the Ministry to withdrew their Proposal No. IA/MH/IND/82043/2018 dated 10/10/2018. After detailed deliberations, the Committee recommended to return the proposal in the present form.

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

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

2.0 The project proponent vide e-mail dated 24th November, 2018 informed that the authorized person is not available and requested to deffer the project for next EAC meeting.

Recommendations of the Committee: -

3.0 The committee deferred the proposal and recommended to consider in the next EAC meeting.

1.29 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) by M/s. UltraTech Cement Ltd. (Unit: Kotputli Cement Works)at Village: Mohanpura, Tehsil: Kotputli,

District: Jaipur (Rajasthan) [Proposal No. IA/RJ/IND/74775/2018; F.No.IA-J-11011/971/2007-IA-II(I)] – Amendment in Terms of Reference.

1.0 M/s. UltraTech Cement Ltd. (Unit: Kotputli Cement Works)has made an application vide online proposal no. IA/RJ/IND/74775/2018 dated 8th September, 2018 seeking amendment in the Terms of Reference vide letter no.IA-J-11011/971/2007-IA-II(I) dated 19th June 2018 for the above mentioned project.

Details submitted by the 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) for which application was uploaded on MoEFCC, New Delhi web portal on 26th April 2018.At the time of submission of application, UTCL has applied in RSPCB for obtaining CTE for the installation of WHRS (16 MW) in the existing Line – I. The project was considered before EAC (Industry - I) in its 32nd Meeting on 13th June, 2018 for ToR approval; meanwhile the CTE for WHRS (16 MW) with the existing Line - I was issued by RSPCB on 16th May, 2018 vide letter no. F(Tech)/Jaipur(Kotputli)/4(1)/2008-2009/971-973.

3.0 Subsequently, ToR was issued by MoEFCC, New Delhi vide letter no. J-11011/971/2007-IA.II (I) dated 19th June, 2018 in which WHRS Capacity was mentioned as 16 MW.

4.0 Now, the company proposes to amend the capacity of WHRS from 16 to 32 MW instead of 16 MW.As it is an expansion in the capacity of Waste Heat Recovery System (16 MW to 32 MW) there will be no incremental impacts and hence no prediction and management plan is required. Thus, the subject matter for expansion project is as follows:

"Expansion of Integrated Cement Plant - Clinker (4.0 to 8.0 MTPA), Cement (4.0 to 8.0 MTPA) and WHRS (16 MW to 32 MW) by M/s. UltraTech Cement Ltd. (Unit: Kotputli Cement Works) at Village: Mohanpura, Tehsil: Kotputli, District: Jaipur (Rajasthan)"

Recommendations of the Committee: -

5.0 After detailed deliberations, the committee recommended for amendment in ToRs as requested by the PP

1.30 Expansion of Cement Plant - Clinker (2,62,500 TPA to 16,87,500 TPA) & Cement (4,71,900 TPA to24,24,150 TPA) by M/s. J.K. Cement Works, Gotan(Unit of J.K. Cement Ltd.)at Village Gotan; Tehsil: Merta; District: Nagaur (Rajasthan) [Proposal No. IA/RJ/IND/69405/2017; F.No.IA-J-11011/63/2008-IA-II(I)] – Amendment in Terms of Reference

1.0 M/s. J.K. Cement Works made anapplication vide online proposal no.**IA/RJ/IND/69405/2017**dated24th September 2018 seeking amendment in Terms of Reference

granted vide letter no.IA-J-11011/63/2008-IA-II(I) dated 29th November, 2017 for the above mentioned project.

Details submitted by the project proponent:

2.0 M/s. J.K. Cement Works, Gotan has proposed an Expansion of Grey Cement Plant - Clinker (2,62,500 TPA to 16,87,500 TPA) & Cement (4,71,900 TPA to 24,24,150 TPA) at Village Gotan; Tehsil: Merta; District: Nagaur (Rajasthan).

3.0 Project was considered before EAC (Industry - I) in its 24th Meeting on 14th Nov., 2017 and subsequently, ToR was issued by MoEFCC, New Delhi letter no. J-11011/63/2008-IA-II(I) dated 29th November 2017.

4.0 Foreseeing the market demand, availability of surrounding raw material, utilization of limestone high-grade as well as sub-grade and present scenario along with technical feasibility, want to produce Grey as well as White cement in the same facility.Therefore, J.K. Cement Works, Gotan is now proposing for amendment in ToR as given below:

S. No.	Particulars	Products	Existing Capacity	Additional Capacity	Total capacity after Expansion
1.	Grey Cement* (TPA)	Clinker	2,62,500	6,15,450	8,77,950
		Cement	4,71,900	8,61,630	13,33,530
2.	White Cement* (TPA)	Clinker	Nil	4,95,000	4,95,000
		Cement	Nil	5,54,400	5,54,400

**Proposed New Line - II will produce either Grey Clinker or White Clinker at a time and proportionate Grey Cement and White Cement*

5.0 Thus, the subject matter for expansion project after ToR amendment in ToR will be as follows:

"Expansion of Grey Cement Plant (Clinker 2,62,500 TPA to 8,77,950 TPA & Cement 4,71,900 TPA to 13,33,350 TPA) along with production of White Cement (Clinker 4,95,000 TPA & Cement 5,54,400 TPA) by installation of New Line - II at Village Gotan; Tehsil: Merta; District: Nagaur (Rajasthan)."

Recommendations of the Committee: -

6.0 After detailed deliberations, the committee recommended for amendment in ToRs as requested by the PP

28th November, 2018 (Narmada)

1.31 Proposed expansion cum modification of 0.85 MTPA Integrated Steel Plant with 184 MW CPP by **M/s Super Smelters Limited** at Jamuria Industrial Estate in Village Ikra, PO – Mondalpur, Distt Paschim Bardhaman, West Bengal –[Online Proposal No.

IA/WB/IND/30645/2008; MoEFCC F.No. J-11011/86/2008-IA II (I)] **– Environmental Clearance.**

1.0 The proponent has made online application vide proposal no. **IA/WB/IND/30645/2008** dated 9thNovember 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The Projectof M/s Super Smelters Ltd located in Village-Mondalpur Tehsil Kanksa, District Bardwan (West), State-West Bengal was initially received in the Ministry on09.12.2017 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 29.12.2017 - 31.12.2017 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 17.11.2016 vide Lr. No. J-11011/86/2008-IA-II(I)]

3.0 The project of M/s. Super Smelters Ltd located in Mondalpur Village,Kanksa, Tehsil, Bardhaman (West)District, West Bengal State is for Expansion and Modification of Proposed expansion cum modification of 0.85 MTPA Integrated Steel Plant with184 MW CPP. The existing project was accorded environmental clearance vide lr.no J-11011/86/2008-IA.II(I)dated01.08.2008.The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide Lr.No.102-/278/EPE/911, dated 14.06.18 There is no non-compliances reported by Regional officer. The proposed capacity for different products for new site area as below:

Name of unit	**No. of unit**	**Capacity of each unit**	**Production Capacity**
Sinter Plant	2	60m2, 15m2	690000 TPA Sinter
Coal Washery	1	0.9 MTPA	405000 TPA Clean Coal 342000 TPA Middlings
Rolling Mill	1	0.316 MTPA MS 0.396 MTPA AS 0.142 MTPA SS	0.396 TPA 0.316 TPA 0.142 TPA
CPP(WHRB)	1	51 MW DRI	51 MW
Iron Ore Beneficiation	1	2 MTPA	1250000TPA Fe Concn
Pellet Plant	1	1.2 MTPA	1200000 TPA Pallets
MBF	1	380m3, 65m3	458000 TPA HM/Pig
Lime Plant	1	120 TPD	10000 TPA CaO
Oxygen Plant	1	120 TPD	3600m3/hr
DRI Kilns	2, 3, 2	100 TPD, 300 TPD, 500 TPD	672000 TPA Sponge Iron

IF	2, 4	25 TPD, 20 TPD	416000 TPA Liquid steel
SAF	4,1,1	9 MVA FeCr,9 MVA FeMn, 9MVA SiMn	58000 TPA, 19000 TPA, 13800 TPA
EAF +LF+CCM	1,1,1	1x50T, 1x50T, 1x50T	250000 Stainless Steel
AOD	1	1x45T	
CPP (FBC)	1	133 MW	133 MW
Coke Oven	1	0.5 MTPA	500000 TPA

4.0 The total land required for the project is 116.72ha, out of which 0.ha an agricultural land is, 0ha is grazing land and 0ha is others (No Government Land). No /forestland involved. The entire land has been acquiredfor the project. No River passes through the project area (p/c). It has been reported that no water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is flat and reported to lies between to $23^0$40' 31.59'' Nto $23^0$4142.19'' N Latitude and $87^0$05' 35.51''E to$87^0$06'02.38'' E Longitude in Survey of India topo sheet No. F45D2 at an elevation of 117mAMSL. The ground water table reported to ranges between1.82m–2.3m below the land surface during the post-monsoon season and 2.23m – 4.23m 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 3000 ha. m. Further, the stage of groundwater development is reported to be16% and 41% in core and buffer zone respectively and thereby these are designated as safe.

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 Page 9 of 38 corridors for Schedule-I fauna. The authenticated list of flora and fauna provided through the Base Line. Reporting presence of no Schedule-I fauna in the study area given in section 3.2.13 of Chapter 3 in the EIA/EMP report.

7.0 The products are Alloy steel, Mild Steel & Stainless steel. Alloy steel &Mild steel production through Sinter-MBF-LF-CCM-RM route. Stainless Steel production through Beneficiation-Pellet-DRI-IF-LF-CCM-RM. Solid waste generated are BF slag & Sludge, Fly ash & Bottom ash, IF, EAF and Ferro Alloy slag.

8.0 The targeted production capacity of the projectis0.85million TPA. The ore for the plant would be procured from Barbil, Sukinda, Sundargarh Odisha, South Africa(linkages-MoU between K.L Resources Pvt.Ltd, OMC, TATA Anand Exports.) The ore transportation will be done through Rail & Road.

9.0 The fresh water requirement of the project is estimated as 12351m^3/day,the required water will be drawn from River bed of Ajay river throughSubmersible pump and provided by Asansol Durgapur Development Authority. The permission for drawl of surface water is obtained from Asansol Durgapur Development Authority vide Lr. No.CEO 02.12.08. Dated 05.01.2010 and permission to draw subsurface water from riverbed vide lr66267, 066266, 066269dt24.04.12.

10.0 The power requirement of the project is estimated as 184.11MW, out of which 18.4 MW will be obtained from the DPL& DMC

11.0 Baseline Environmental Studies were conducted during Winter season i.e. From01.12.2016*to*28.02.2017, Ambient air quality monitoring has been carried out at 8 locations during 01.12.2016 *to* 28.02.2017, and the data submitted indicated: PM10 (80.4.0 µg/m3 to 58.4.0 µg/m^3), $PM_{2.5}$, SO_2 (30.0 to 20.9µg/m^3) and NOx (20.8µg/m^3 to 12.8 µg/m^3). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 1.37 µg/m^3 with respect to the PM_{10}, 1.6 µg/m^3 with respect to the SO_2 74.6. µg/m^3 with respect to the NOx.

12.0 Ground water quality has been monitored in 8locations in the study area and analysed. pH:7.12to6.53, Total Hardness260 to 128 mg/l, Chlorides: 88.92 to 61.2 mg/l, Fluoride:0.42to 0.28 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 8.1 to 6.8; DO: 8.4to4.6 mg/l and BOD: 3.0 to 2.0mg/l. COD from4.5to3.0mg/l.

13.0 Noise levels are in the range of 46.6to41.6dB(A) for daytime and 39.1to30.2dB(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. It has been envisaged that no families to be rehabilitated, which will be provided compensation and preference in the employment.

15.0 It has been reported that a total of 2109906tons/m^3 of waste will be generated due to the project, out of which 660340 tons will be used in Power Plant & Co-processing,591696 in own berick manufacturing unit, and 951450will be dumped in the earmarked dump yard. It has been envisaged that an area of 38.025ha 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 West Bengal. State Pollution Control Board / Pollution Control Committee obtained vide Lr. No COO109121.dated28.03.07.2017and consent is valid up to 28.02.2019

17.0 The Public hearing of the project was held on 30.06.2017atmeeting Hall, Borough-1of Jamuria Municipality. under the chairmanship of Kaushik Mukherjee, Dy Magistrate &Dy Collector (designation) for the proposed expansion project of 0.85 MTPA Integrated Steel Plant with 184 MW CPP by M/s Super Smelters Ltd at Jamuria Industrial Estate. The issues raised during publichearing are Pollution abatement measures, Employment opportunities to localsinfrastructural development like roads &schools, Nirmal Bangla Abhiyan, health camps in swasthya mission through CSR activities and concern on whether sinking of ground water table. An amount of 1275Lakhs (1% of 100 Cr + 0.75% of 500 Cr +0.5 of 1000 Cr +0.25% of 1200.59 Cr) has been earmarked for CER, based on public hearing issues.

SL NO	Issues	ACTION PLAN
1	Steps to be taken to control air pollution	APC system, water sprinkling has been installed. Closed conveyor system, Green belt

SL NO	Issues	ACTION PLAN
2	Plantation to be done	Approx 13000 trees around the boundary wall and 9000 trees around the material handling area
3	Industrial growth to be promoted but without increase in air or water pollution	For control of Air pollution APC installed. For water pollution, waste water treatment plant has been installed. No waste water is discharged outside of the plant premises.
4	Development of local schools and roads	Already carried out local concrete road, bus stops, sitting facilities of schools,
5	Provide jobs for local youth to be done	Industrial training program provided and local youth will be preferred.
6	Swasthya Mission and Nirmal Bangla Abhijan to be made	SSL has donated Ambulance and taken on swasthya mission including drinking water, sanitation etc.
7	Not to be used bore well	They have made rain water harvesting for used the water in lean season
8	Health check-up camps	SSl also conducted so many health programme like eye checking camp, blood donation camp etc.

18.0 The activities and fund provision for CER is as follows:

S. No	Item	IstYr (in lacs)	2nd Yr (in lacs)	Total (in lacs)
1	Opening of a training center for local people's skill development program	140	78	218
2	Development of water shed and renovation of water bodies	30	30	60
3	Construction of village community center and its renovation	60	60	120
4	Strengthening of approach roads and electrification with solar light	85	85	170
5	Adaptation of primary schools	42	34	76
6	Development of craftsmanship	10	05	15
7	Most of the people depend on agriculture, hence development of agriculture	35	30	65
9	Construction of Bus Stops	25	25	50
10	Purchase of 2 nos. of Ambulance for covering 5 peripheral villages	15	15	30
11	Swatch Bharat Mission	219	140	359
12	Overhead tank erection, commissioning with deep bore well	56	56	112
	TOTAL	1,275		

19.0 The capital cost of the project is Rs2800.59Crores and the capital cost for environmental protection measures is proposed as Rs14784 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs500Lakhs.The detailed CER plan has been provided in the EMP in its section 7.14.1 in Chapter 7 of EIA/EMP report. The employment generation from the proposed project / expansion is2000.

EMP Capital Cost For Existing Plant (Pollution Control Equipments)		
1	APC systems	62.09
2	Concrete Road Making within the Plant area	18.5
3	Rainwater Harvesting	1.8
4	WTP Facility	2.1
Total (in crores)		84.49
Proposed Pollution Control Equipment Cost		
1	Pollution Control Equipment under APC	147.84

20.0 Greenbelt will be developed in 24.27 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 1500 trees per hectare. Total no. of 59300saplings will be planted and nurtured in 24.27 hectares in next five 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: Global Tech Enviro Experts Pvt. Ltd., Bhubaneshwar.

Observations of the Committee: -

23.0 The committee observed that the public hearing was chaired by Shri Kaushik Mukherjee, Dy Magistrate & Dy Collector, who is below the rank of ADM. The committee noted that the Addl Chief Secretary, West Bengal has requested the ministry to consider the public hearing chaired by the Dy. Collector as the district has formed newly and shortage of ADM level officers. The competent authrotiy has approved for consideration of the pubic consultation conviened under chairmanship of Dy. Collector. The committee also observed that the impact prediction for the NOx was not presented and advised the project proponent to submit the impact prediction of the NOx. Accordingly, the PP submitted the impact prediction of the NOx during the course of the meeting.

Recommendations of the Committee: -

24.0 After details deliberations, the committee recommended for environmental clearance for the proposed expansion cum modification of 0.85 MTPA Integrated Steel Plant with 184 MW CPP under the provisions of EIA Notification, 2006 subject to following specific and general conditions:

A. **Specific conditions**:

i. Project proponent shall not withdraw any additional ground water beyond the stipulated permission.

ii. Project proponent shall ensure 100% waste utilization.

iii. No tailing pond will be allowed within the premises.

iv. The PP shall explore the possibility of waste heat recovery from the hot stove flue gas.

v. Top recovery turbine shall be provided for additional power recovery.

vi. Dry gas cooling system shall be provided for BF gas.

vii. Dust fines collected from APC devices and industrial vaccum cleaner shall be briquetted and reused.

viii. Projects committed under CER shall be completed in two years.

ix. Balance green belt of 23.49 acres shall be completed in two years.

B. **General Conditions**;

I. Statutory compliance:

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

ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

XI. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 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.

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

iii. The project proponent shall install system to carryout 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.

iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring alongwith results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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

vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for betteroperation of baghouses.

vii. Provide pollution control system in the sponge iron plant as per the CREP Guidelines of CPCB.

viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

ix. 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.

x. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation;

xi. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

XII. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification

through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

iv. Adhere to 'Zero Liquid Discharge'.

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

vii. The project proponent shall practice rainwater harvesting to maximum possible extent.

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

XIII. Noise monitoring and prevention

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report

ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

XIV. Energy Conservation measures

i. The project proponent shall provide waste heat recovery system on the DRI Kilns.

ii. The dolochar generated shall be used for power generation.

iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.

iv. Provide LED lights in their offices and residential areas.

XV. Waste management

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

ii. 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.

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

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

XVI. Green Belt

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

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

XVII. Public hearing and Human health issues

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

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

iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

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

XVIII. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms /

conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

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

iii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

iv. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

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

XIX. Miscellaneous

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

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

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

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

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

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

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

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

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

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

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

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

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

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

xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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

1.32 Enhancement of DRI, SMS, Billets/ Slab/ Bloom Caster 1 & 2 production and Rolling Mill 1 & 2 by at existing Integrated steel plant of 0.70 MTPA located at village Kamanda

in Sundergarh district of Odisha by **M/s. Rungta Mines Limited**[Online proposal No. IA/OR/IND/81404/2018 and IA/OR/IND/81428/2018; MoEFCC File No. J-11011/434/2009-IA.II(I)] – **Environmental Clearance for expansion under para 7(ii) of the EIA Notification, 2006 and amendment in Environmental Clearance for change in steel making route, change in configuration of power plant and LRF.**

1.0 The proponent has made online application vide proposal no. IA/OR/IND/81404/2018 and IA/OR/IND/81428/2018 dated 4/10/2018 seeking environmental clearance for expansion under para 7(ii) of the EIA Notification, 2006 and amendment in environmental clearance for change in steel making route, change in configuration of power plant and LRF for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 M/s Rungta Mines Limited is operating 0.27 MTPA DRI, 0.20 MTPA Steel and 40 MW Power Plant at Kamanda, Sundergarh, Odisha. Environmental Clearance for above mentioned existing plant was granted by MOEF vide Letter no. J-11011/304/2007-IA.II (I) dated 12.12.2008. Thereafter, the Company had applied for expansion of Steel Plant from 0.2 to 0.6 MTPA and from 0.6 to 0.7 MTPA and received EC from MOEF&CC vide letter no. J-11011/434/2009-IA.II (I) dated 02.02.2015 and 06.11.2017 respectively.

3.0 The project proponent submitted an online application in the prescribed format i.e. Form-2 along with other reports to the Ministry on 04.10.2018 &**05.10.2018** vide Online Application No. IA/OR/IND/81404/2018 and IA/OR/IND/81428/2018 respectively.

4.0 The Eastern Regional Office of MoEF&CC has visited the plant and issued a compliance status report vide letter no. 101-522/EPE/2121 dated 10.08.2017.

5.0 The project proponent submitted that, with the improvement of operational practice, it is able to achieve the 350 days' campaign of DRI Kiln instead of 330 days sanctioned in earlier EC. In the past operational experience, the single heat of I.F. could take 2 hours 10 minutes. By using superior quality of raw material, improved the operational efficiency and availability of uninterrupted power in the future, the heat can be taken in short time from the one mentioned above. The heat timing can be reduced from 2 hours 10 minutes to 1 hour 48 minutes. The total saving in each heat will be 22 minutes. So, it is possible to take more 2.3 heats of Induction Furnaces per day which amounts to 20% increase in production.

6.0 For this, three crucibles simultaneously will be used, putting one crucible as a stand by with minor modifications in present facilities; we will require one crucible, one transformer, one panel and Bus Bar. Therefore, an enhancement in DRI, SMS, Billets and Rolling Mill production is being sought.

A. <u>Environmental clearance for enhancement in DRI, SMS, Billets and rolling Mill production is being sought as follows (Application No. IA/OR/IND/81404/2018 dt. 04.10.2018)</u>:

Facilities	Units	Production capacity as per EC dt. 07.08.2018	Total after Enhancement	Enhancement Quantity	
Sponge Iron (6X100 TPD)	TPA	257,400	273,000	15,600	6.06%
Sponge Iron (1X300 TPD)	TPA	128,700	136,500	7,800	6.06%
Sponge Iron (3X350 TPD)	TPA	415800	441,000	25,200	6.06%
Sponge Iron (2x500 TPD)	TPA	396000	420,000	24,000	6.06%
Total		1,197,900	1,270,500	72,600	6.06%
Steel Melting Shop (I) (IF 4X15 T)	TPA	231,000	277,200	46,200	20.00%
Steel Melting Shop (II) (IF 9X15 T)	TPA	519,750	623,700	103,950	20.00%
Total		750,750	900,900	150,150	20.00%
Billets / slab/bloom caster (I)	TPA	226,380	271,656	45,276	20.00%
Billets / slab/bloom caster (II)	TPA	226,380	271,656	45,276	20.00%
Billets / slab/bloom caster (III)	TPA	282,975	339,570	56,595	20.00%
Total		735,735	882,882	147,147	20.00%
Rolling mill (I) (TMT/flat/Round/wire rod/ structural mill/others)	TPA	217,325	260,790	43,465	20.00%
Rolling mill (II) (TMT/flat/Round/wire rod/ structural mill/others)	TPA	217,325	260,790	43,465	20.00%
Rolling Mill III (TMT/flat/Round/wire rod/ structural mill/others)	TPA	271,656	325,987	54,331	20.00%
Total		706,306	847,567	141,261	20.00%

B : **Amendment in Configuration of LRF & Power Plant is as follows (Application No. IA/OR/IND/81428/2018 dt. 05.10.2018)**:

(i) Amendment in Configuration of LRF

Phase	As per sanctioned EC dated 06.11.2018	To be installed after change in configuration	remarks
	LRF	LRF	
SMS-I	2X15 T	2X20T	Revised configuration
SMS-II	5X15 T	3X35T	Revised configuration

(ii) Amendment in Configuration Power Plant

M/s Rungta Mines Ltd., intend to change configuration of TG sets using AFBC/CFBC in Phase-II from 4X95 TPH=56 MW to 1X195TPH=45.5MW & Phase-II from 2X20MW=40MW to 1X45.5MW=45.5MW as shown in Table below:

As per EC dt. 06.11.2017		As per Proposed amendment Plant Facilities Configuration		Remarks
Facilities	**Total Power Generation (in MW)**	**Facilities**	**Total Power Generation (in MW)**	
AFBC/CFBC 1No. X 115 TPH	20	AFBC/CFBC 1No. X 115 TPH	20	No change
AFBC/CFBC 4X95 TPH	91	AFBC/CFBC 1No. X 195 TPH= 45.5 MW	91	Replacing AFBC/ CFBC 2No. X 95 into 1X195 TPH with matching TG Set
		AFBC/CFBC 1No. X 195 TPH= 45.5 MW		Replacing AFBC/ CFBC 2No. X 95 into 1X195 TPH with matching TG Set
Total	**111**		**111**	**No change**

7.0 The total water consumption as per sanctioned EC is 2385 cum/hr and additionally 63.81 cum/hr water will be required for implementation of entire expansion proposal. The water required for the plant shall be sourced from Karo River. Entire waste water from the SMS complex shall be treated and reused for afforestation, green belt watering, sprinkling and dust suppression. There shall be no liquid waste discharge from the plant premises except during monsoon when the sprinkling and watering demand will be almost negligible.

8.0 The plant will generate 198 MW energy in form of electricity from its captive power plant and will utilize 177 MW power generated in its Steel plant.

9.0 Following additional steps for minimization of impact will also be taken:

- Installation of advanced bag filter controllers to improve the efficiency of all bag filter
- Solar lighting for all streets and parking area
- 5% increase in green belt plantation within project boundary i.e. from the current 33% of project area.

10.0 Name of the Consultant: M/s Min Mec Consultancy Pvt. Ltd., New Delhi with permission from High Court of Delhi vide in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016.

Observations and recommendations of the Committee: -

11. After detailed deliberations, the committee recommended for environmental clearance for enhancement in DRI, SMS, Billets and rolling Mill production under para 7(ii) of the EIA Notification, 2006 and amendment in environmental clearance for change in steel making route, change in configuration of power plant and LRF subject to following additional conditions:

(i) The unit shall install tertiary treatment so as to utilize the treated effluent to achieve zero liquid discharge.

(ii) All particulate emissions from the stack shall be restricted to 30 mg/Nm^3.

1.33 **Enhancement of DRI from 620400 TPA to 658000 TPA, SMS 1 & 2 production from 2,31,000 TPA to 2,77,200 TPA (each), Billets / Slab/Bloom Caster 1 & 2 production from 2,26,380 TPA to 2,71,656 TPA (each) at Integrated Steel Plant of 0.7 MTPA located at village Chaliyama, District Saraikela, Kharsawan, Jharkhand by M/s. Rungta Mines Limited[Online proposal No. IA/JH/IND/81425/2018 and IA/JH/IND/81423/2018; MoEFCC File No. J-11011/305/2012-IA.II(I)] – Environmental Clearance for expansion under para 7(ii) of the EIA Notification, 2006 and amendment in Environmental Clearance for change in steel making route, change in configuration of power plant and LRF.**

1.0 The proponent has made online application vide proposal no. IA/JH/IND/81425/2018 and IA/JH/IND/81423/2018dated 5/10/2018 seeking environmental clearance for expansion under para 7(ii) of the EIA Notification, 2006 and amendment in environmental clearance for change in steel making route, change in configuration of power plant and LRF for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

2.0 M/s Rungta Mines Limited is operating 0.45 MTPA DRI, 0.40 MTPA Steel and 57 MW Power Plant at Chaliyama, Saraikela Kharsawan, Jharkhand. Environmental Clearance for above mentioned existing plant is granted by MOEF vide Letter no. J-11011/838/2007-IA.II (I) dated 04.11.2008. Thereafter, the Company had applied for expansion of Steel Plant from 0.2 to 0.5 MTPA and from 0.5 to 0.7 MTPA received EC from MoEF&CC vide letter no. J-11011/305/2012-IA.II (I) dated 01.04.2016 and 07.08.2018 respectively. The details are given below in Table 1:

Sl. No.	Plant/ facility	Units	Total Capacity As per EC dated 07.08.2018
1	DRI Plant	MTPA	0.62
2	Mini Blast Furnace	MTPA	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	0.693

Sl. No.	Plant/ facility	Units	Total Capacity As per EC dated 07.08.2018
4	Billets/ Slab/ Bloom caster	MTPA	0.679
5	Continuous Casting Machine		3X4 strand
6	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ others)		
a	Mill-1	MTPA	0.22
b	Mill-2	MTPA	0.22
c	Mill-3	MTPA	0.22
7	Captive Power Plant	MW	158
a	WHR based CPP	MW	53
b	AFBC/CFBC based CPP	MW	105
8	Pelletisation Plant	MTPA	2.64
9	Coal Washery	MTPA	1.26
10	Oxygen Plant (1x30 T)	m^3/annum	7,350,000
11	Lime Plant (1X90 T)	m^3/annum	31,500
12	Vacuum Degassing	Tonnes	30
13	Ferro Alloy Plant (9MVA+ 18 MVA)		
a	Ferro Manganese OR	MTPA	0.054
b	Silico Manganese OR	MTPA	0.0432
c	Ferro Chrome OR	MTPA	0.0432
d	Ferro Silicon	MTPA	0.0192
14	Briquette Plant		
	For Ferro Chrome OR	MTPA	0.088
	For Ferro Manganese	MTPA	0.112
15	Sinter Plant (2X24 sq.m)	MTPA	0.532
16	Coke Oven Plant (4 batteries X 70,000 TPA)	MTPA	0.28
17	Producer Gas Plant	NM3/hr	51,000

3.0 Project proponent informed that presently following facilities are under operation given in following table:

S.L	**Facilities**	**Configuration**	**Production**
1	Sponge Iron plant	8x100 TPD	6,20,400 TPA
		2x350 TPD	
2	Steel Melting Shop comprising IF along with CCM	8 X 15 T	4,62,000 TPA
3	Rolling Mill 1		2,17,325 TPA
4	Captive Power Plant		

	WHRB	32MW	32 MW
	AFBC	25 MW	25 MW
	TG	2x20 MW +1x20 MW	

4.0 The Eastern Central Zone Office of MoEF&CC has visited the plant and issued a compliance status report vide letter no. 103-498/ROR-2016 dated 22.05.2018

5.0 **Enhancement in Plant Capacity:** Environmental clearance for enhancement in DRI, SMS, Billets and Rolling Mill production is being sought as follows (Application No. IA/JH/IND/81423/2018 dt. 05.10.2018):The project proponent has submitted that with the improvement of operational practice, it is able to achieve the 350 days campaign of DRI Kiln instead of 330 days sanctioned in earlier EC. In the past operational experience, the single heat of I.F. could take 2 hours 10 minutes. By using superior quality of raw material, improved operational efficiency and availability of uninterrupted power in the future, we can take the heat in short time from one mentioned above. The heat timing can be reduced from 2 hours 10 minutes to 1 hour 48 minutes. The total saving in each heat will be 22 minutes. So, it is possible to take more 2.3 heats of Induction Furnaces per day which amounts to 20% increase in production.

6.0 Therefore, an enhancement in DRI, SMS, Billets and Rolling Mill production is being sought.

Facilities	units	Production capacity as per EC dt. 07.08.2018	Proposed Amendment in production	Enhancement
DRI(7x100 TPD)	TPA	300,300	318,500	18,200 (6.06%)
DRI (1x100 TPD)	TPA	42,900	45,500	2600 (6.060%)
DRI(2x350 TPD)	TPA	277,200	294,000	16,800 (6.06%)
Steel Melting Shop(I) (IF 4X15 T)	TPA	2,31,000	2,77,200	46,200 (20%)
Steel Melting Shop(II) (IF 4X15 T	TPA	2,31,000	2,77,200	46,200 (20%)
Billets / slab/bloom caster (I)	TPA	2,26,380	2,71,656	45,276 (20%)
Billets / slab/bloom caster (II)	TPA	2,26,380	2,71,656	43,465 (20%)
Rolling mill (I) (TMT/flat/Round/wire rod/ structural mill/others)	TPA	2,17,325	2,60,790	43,465 (20%)
Rolling mill (II) (TMT/flat/Round/wire rod/ structural mill/others)	TPA	2,17,325	2,60,790	43,465 (20%)

6.0 Change in Plant Configuration:

a. **The amendment in Environmental clearance for change in steel making route from EAF to IF is as follows (Application No. IA/JH/IND/81425/2018 dt. 05.10.2018)**:

Project proponent submitted as per EC, that the sanction is for Steel Melting Shop (SMS) is for IF (15T x 8 nos.), LRF (20T x 1 nos., 30 T X 2 nos.) and EAF (30 T X 1 no.). It was intended to establish the SMS in three stages of 2,31,000 TPA as follows:

(i) SMS-I : IF (15T x 4 nos.), LRF (20T x 1 no.)

(ii) SMS-II : IF (15T x 4 nos.), LRF (30T x 1 no.)

(iii) SMS-III : EAF (30T x 1 nos.), LRF (30T x 1 no.)

Now the proposal is to change the SMS-3 EAF-LRF route to IF-LRF route as described below

Changes in material balance and raw material due to change in steel making route from EAF-LRF to IF-LRF is given in Table 3.

7.0 Revised material balance for SMS from EAF to IF route

Manufacturing Route	Existing Plan as per sanctioned EC		Revised proposal	
	SMS (EAF-LRF)		SMS (IF-LRF)	
Assumptions	Unit	Quantity	Unit	Quantity
Furnace Quantity	Nos.	1	Nos.	4
Capacity of Furnace	Ton	30	Ton	15
No. of working days	Days/Annum	350	Days/Annum	350
No. of working hours	Hours /Day	24	Hours /Day	24.000
No. of Heats	Heats/Day	22	Heats/Day	11
Total Production	TPA	2,31,000		2,31,000
Raw Material Inputs	Quantity (TPA)	Specific Consumption (T/T)	Quantity (TPA)	Specific Consumption (T/T)
DRI	108706	0.471	217412	0.941
Pig Iron/ hot metal	150652	0.652	25109	0.109
Steel scrap	0	0.000	25109	0.109
Total	259358	1.123	267629	1.159
Outputs	Quantity (TPA)	Specific Generation/ Production (T/T)	Quantity (TPA)	Specific Generation/ Production (T/T)
Liquid metal to CCM	231000	1.000	231000	1.000
Slag	11343	0.049	14652	0.063
Loss	28358	0.123	36629	0.159
Total	259358	1.123	267629	1.159

8.0 The advantages of Induction Furnace (IF) over an Electric Arc Furnace (EAF) foreseen for the same production capacity of 2,31,000 TPA are given below:-

- EAF requires graphite electrodes for its operation which are not easily available and also their cost has increased from Rs. 1.8 to 8-9 lakh/t. The lack of easy availability and increase in cost affects the production and increases the operating expenditures (Opex).Thus, IF is being preferred now.

- The operation of an EAF imposes voltage fluctuation on the electrical net-work along with harmonic generation. It cannot run without the 132 KV Grid power availability. There are frequent power cuts at site which affect the production. The in-house power plant has already started generating 57 MW and it is planned to set-up the Plant for balance Power required gradually as per EC sanction, to become self-sufficient for power required in SMS, Rolling Mills & Pellet Plant. Four IFs each of 15 T, capacity are planned to replace by a single 30 T EAF, to ensure smooth uninterrupted operation of the plant with Captive Power. However, Grid support shall be maintained.

- From operation point of view, IF route is more advantageous than EAF route because if the single sanctioned EAF (of 30T) fails, entire SMS will be shut down & production will stall. However, in revised proposal, there are four nos. of IFs proposed. If any one gets shut down, the production will be hampered by only 25% & SMS can achieve 75% of target production.

- In EAF route of steel making, lime and oxygen are required for removing impurities, for which installation of a Lime & Oxygen Plant is necessary. However, in IF route, there is no need of Oxygen & Lime plant, which reduces the investment cost.

- Other operating advantages offered by IFs are as follows:

    - Higher yield of 2-3% from charge to liquid steel, which is used in CCM. In an EAF, the material is lost in evaporation under effect of arcs and high temperature of 3600ºC under them. Also there is direct loss in fume suction. In IF, temperature never rises above 1650ºC.

    - Less consumption of de-oxidizers and alloying elements by 2-3 kg/t of Liquid Steel. This is due to lesser oxygen content in the metal as compared to EAF where oxygen is used to assist melting.

    - IF is more efficient in transfer of electric energy into the charge materials through induction affect. Also, there is motion of liquid steel to homogenize the temperature in the bath and ensure better heat-transfer.

9.0 Amendment in configuration of LRF

Phase	**As per sanctioned EC dated 07.08.2018**	**To be installed after change in configuration**	
	LRF	**LRF**	**Remarks**

SMS I	1x20 T	2x20 T	Revised Configuration
SMS II	1x30 T	1x35 T	Revised Configuration
SMS III	1x30 T	**1x35 T**	Revised Configuration

The present sanctioned capacity of all above three SMS stages is 2,31,000 TPA.

10.0 Amendment in configuration of power plant: Project proponent to change the configuration of TG sets in phase-III from 5 nos. X20 MW to 1 no. X 20 MW + 2 nos. X 40MW as shown below:

Phase	As per sanctioned EC dated 07.08.2018			To be installed after change in configuration			
	No of TG sets Units	Generation Capacity (In MW)	Total Power (In MW)	No of TG sets Units	Generation Capacity (In MW)	Total Power (In MW)	Remarks
Phase-I	2 Nos.	20	40	2 Nos.	20	40	No Change
Phase-II	1 No.	20	20	1 No.	20	20	No Change
Phase-III	5 Nos.	20	100	1 No.	20	20	Proposed Revision
				2 Nos.	40	80	
Total Power Generation			160			160	

11.0 The total water consumption as per sanctioned EC is 1778 cum/hr and additionally 49.9 cum/hr water will be required for implementation of entire expansion proposal. The water required for the plant shall be sourced from Kharkai River. Entire waste water from the SMS complex shall be treated and reused for afforestation, green belt watering, sprinkling and dust suppression. There shall be no liquid waste discharge from the plant premises except during monsoon when the sprinkling and watering demand will be almost negligible.

12.0 The plant will generate 158 MW energy in form of electricity from its captive power plant and the requirement of Power will be 147.17 MW.

13.0 Following additional steps for minimization of impact will also be taken:

- Installation of advanced bag filter controllers to improve the efficiency of all bag filter
- Solar lighting for all streets and parking area
- 5% increase in green belt plantation within project boundary i.e. from the current 33% of project area.

14.0 Name of the Consultant: M/s Min Mec Consultancy Pvt. Ltd., New Delhi with permission from High Court of Delhi vide in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016.

Observations and recommendations of the Committee: -

15.0 After detailed deliberations, the committee recommended for environmental clearance for enhancement in DRI, SMS, Billets and rolling Mill production under para 7(ii) of the EIA Notification, 2006 and amendment in environmental clearance for change in steel making route, change in configuration of power plant and LRF subject to following additional conditions:

(i) The unit shall install tertiary treatment so as to utilize the treated effluent to achieve zero liquid discharge.

(ii) All particulate emissions from stacks shall be restricted to 30 mg/Nm^3.

1.34 Expansion in paper production capacity from 45 TPD to 100 TPD by M/s. Mohit Paper Mills Limited at 9th Km stone, Nagina Road, Village Abdullpur Munna, Tehsil and District Bijnor, Uttar Pradesh [Proposal No. IA/UP/IND/81970/2017 dated 9/10/2018; F.No. J-11011/130/2017-IA-II(I))] – Environmental Clearance.

1.0 The proponent has made online application vide proposal no. **IA/UP/IND/81970/2017 dated 9/10/2018** along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 5(i) Pulp and Paper Industry under Category "A" EIA Notification; 2006.The proposal of expansion is submitted and appraised at Central Level.

Details submitted by the Project Proponent:

2.0 The proposal of M/s Mohit Paper Mills Limited located at 9th K.M. Stone, Nagina road, Village Abdullpur Munna, Tehsil and District Bijnor, State Uttar Pradesh was initially received in the Ministry on 15thMarch,2017 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 6th - 7thApril,2017 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 18thApril, 2017 vide Lr. No. J-11011/130/2017-IA II (I).

3.0 The project of M/s. Mohit Paper Mills Limited located at 9th K.M. Stone, Nagina road in Village Abdullpur Munna, Tehsil and District Bijnor, State Uttar Pradesh is for proposed expansion in paper production capacity from 45 TPD to 100 TPD. Plant is running on the basis of NOC vide letter no. G23946/C-4/NOC-118/Moradabad/99 dated 30th November, 1999and CTO obtained from UPPCB. As the capital expenditure was less than 50 Crores, the project did not attract the provision of Prior Environmental Clearance as per EIA Notification.CTO compliance status is submitted regularly and certified by RO, Bijnor dated 23.1.2018. The proposed capacity for different products for new site area as below:

Units	Existing capacity	Proposed additional capacity	Total capacity after expansion
Writing and printing paper	45 TPD	55 TPD	100 TPD
Co-generation power plant	4.5 MW	Nil	4.5 MW

4.0 The total land required for the project is 11.45 ha, out of which 3.8 ha is green belt. No forestland involved. The entire land has been acquired for the project and expansion will be done within existing plant premises only. The River/ Water bodies (within 10 km radius) are Chhoiya Nala (250 m in West direction), Ban Nala (6.5 km in ENE), Banra Nala (6.8 km in ESE), Malin River (9.5 km in WNW).It has been reported that 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 lie between 29º23'45.95'' to 29º24'02.88''N Latitude and 78º13'07.17'' to 78º13'26.61'' E Longitude in Survey of India toposheet No. 53 K/3 & 53K/7 at an elevation of 247 m AMSL. The ground water table reported to ranges between 1.95 – 18.10 below the land surface during the post-monsoon season and 2.53-18.42below the land surface during the premonsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 109 m. Further, the stage of groundwater development is reported to be 63.39% (Mohammedpur Deomal) and 66.20% (Haldaur) in core and buffer zone respectively and thereby these are designated as safe areas.

6.0 No National Park/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. Eco-sensitive zone of Hastinapur Wildlife Sanctuary (As per Hastinapur wildlife Sanctuary Notification published on 2nd February, 2018) falls at a distance of about 8.5 km in West direction from the plant site. Based on primary survey & secondary data, two Schedules - I species were found within 10 km radius of the study area i.e. Indian Peafowl (Pavo cristatus) Indian Monitor Lizard (Varanus bengalensis). List of schedule-1 fauna in the study area is enclosed as Annexure 14 along with EIA/EMP Report. Wildlife Conservation Plan for the same has been prepared and enclosed as Annexure 10(a) along with EIA/EMP Report. Copy of receipt of submission of application to DFO and CC to CWW for authentication is enclosed as Annexure 10(b) along with EIA/EMP Report.

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

Sl.	Process stage	Pollutants
1	Raw material handling & processing (wheat straw, bagasse)	Waste water from washing
2	Continuous Digester	--
3	Un-bleaching Pulp washing, First stage	Black liquor
4	Bleaching (Chlorination, Extraction, Chlorine di-oxide) washing & cleaning	Waste water , bleaching fumes
5	Waste Paper Street	Waste water
6	Stock Preparation, blending of waste paper pulp and agro pulp, addition of soap stone powder, flocculent, AKD, DSR and whitening agents	--
7	Paper Making	Waste water
8	Chemical recovery plant	Gaseous emissions
9	Causticizer	Lime sludge

8.0 The targeted paper production capacity of the plant is 100 TPD. The raw material (bagasse or wheat straw, Imp. Soft Wood Pulp/Imported Waste Paper, soap stone powder) for the plant would be procured from nearby sugar mills/local suppliers, European countries/local suppliers. The raw material transportation will be done through Rail/Road/Indian Port.

9.0 Total input of the project is estimated as 12878 KLD, out of which 8873 KLD of water will be recycled and the remaining requirement of fresh water of 4005 KLD will be met from the ground water.The permission for drawl of groundwater is obtained from Central Groundwater Authority vide Lr. No. CGWA/NOC/lND/ORIG/2017/2703 dated 14thAugust 2017.

10.0 The total power requirement after proposed expansion is 4.5 MW which will be sourced from existing co-generation power plant, in case of emergency from State Electricity Board and D.G. sets.

11.0 Baseline Environmental Studies were conducted during Post Monsoon Season i.e. from 1.10.2017 to 31.12.2017. Ambient air quality monitoring has been carried out at 8 locations during October to December, 2017 and the data submitted indicated PM10 (65.5 to 89.5 $\mu g/m^3$), PM2.5 (26.2 to 47.4 $\mu g/m^3$), SO_2 (6.8 to 14.0$\mu g/m^3$)and NO_2(11.6 to 24.2 $\mu g/m^3$). The results of the modelling study indicated that the maximum increase of GLC for the expansion project is 0.45$\mu g/m^3$ with respect to the PM_{10}, 1.23 $\mu g/m^3$ with respect to the SO_2, 1.80 $\mu g/m^3$ with respect to the NOx.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.10 to 7.73, Total Hardness: 176.73 to 368.25 mg/l, Chlorides: 15.87 to 70.45 mg/l, Fluoride: 0.66 to 1.12. mg/l. Heavy metals are within the limits. Surface water samples were analysed from 3 locations. pH: 7.36 to 7.72; DO: 4.8 to 5.90 mg/l and BOD: 3.20 to 17.03mg/l; COD from14.64 to 86.8mg/l.

13.0 Noise levels are in the range of 52.8 to 58.3Leq dB(A) for daytime and 42.0 to 48.8Leq dB(A) for night time.

14.0 R & R is not applicable.

15.0 Amount of solid and hazardous waste generated due to the project:

Sl	Solid waste	Section	Existing	After expansion	Mitigation measures
1	ETP sludge	ETP	11.96 TPD	26.6 TPD	ETP sludge is used in Sun drying board manufacturing
2	Boiler ash	Boiler house	12 Ton/day	26.2 Ton/day	Fly ash is used as manure for soil amelioration as it is rich in nitrogen content
3	Lime sludge	Hypo preparation	0.03 TPD	Nil	Lime sludge is used in filling of low lying areas
		Causticizer	11.2 TPD	27 TPD	

16.0 It has been envisaged that an area of 3.8 ha is already developed as green belt around 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 Establish has been obtained vide letter no. G23946/C-4/NOC118/Moradabad/99 dated 30th November, 1999 and CTO for air and water obtained from UPPCB given below:

Sl	Particular	45 TPD writing and printing grades of paper	4.5 MW co-generation power plant
1	Consent to operate for emission of Air under section 21/22 of Air (Prevention and Control of Pollution) Act, 1981 from UPPCB	Vide UPPCB Letter No: F98766/C-7/114/Air pollution/Bijnor/2017 dated 24.03.2017 valid up to 31.12.2018	Vide UPPCB Letter No: F98767/C-7/405/Air pollution/Bijnor/2017 dated 24.03.2017 valid up to 31.12.2018
2	Consent to Operate for discharge of effluent under Section 25/26 of the Water (Prevention and Control of Pollution) Act, 1974 from UPPCB	Vide UPPCB Letter No: F99131/C-7/126/Water pollution/Bijnor/2017 dated 30.03.2017 valid up to 31.12.2018	Vide UPPCB Letter No: F98768/C-7/422/Water pollution/Bijnor/2017 dated 24.03.2017 valid up to 31.12.2018

18.0 The Public hearing of the project was held on 5th April, 2018 at plant site under the chairmanship of Mr. Avdhesh Kumar Mishra (Additional District Magistrate, Bijnor), Mr. G.C. Verma (Regional Officer, Bijnor) for proposed expansion in paper production capacity from 45 TPD to 100 TPD. The issues raised during public hearing are for employment opportunities, depletion of water resources and chemical recovery plant and effluent treatment. An amount of 6 Lakhs (1.0 % of Project cost of Brownfield Project as per O.M. dated 1st May, 2018 on CER) has been earmarked for Enterprise Social Commitment based on public hearing issues. Capital cost of Environmental Management Plan is 2 crores and 1.85 Crores/annum have been earmarked for recurring cost/annum to mitigate environmental pollution as per public hearing issues.

19.0 The capital cost of the project is Rs. 6 Crores and the capital cost for environmental protection measures is proposed as Rs 200 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 185 Lakhs / annum. The detailed CSR plan has been provided in the EMP in its page No. 177 to 178. The employment generation after the proposed expansion will be 300 persons.

20.0 Greenbelt is already developed in 3.8 Ha (5496 saplings) which is about 33% of the total acquired area. A 5-10 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEFCC, New Delhi guidelines. Local

and native species will be planted with a density of 1500 trees per hectare. Total no. of 500 saplings will be planted and nurtured in 3.8 hectares of already developed greenbelt within 1 year.

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. J.M. EnviroNet Pvt. Ltd. (JMEPL, SI. No.91).

Recommendations of the committee:

After details deliberations, the committee recommended for environmental clearance for the proposed expansion in paper production capacity from 45 TPD to 100 TPDunder the provisions of EIA Notification, 2006 subject to following specific and general conditions:

A. **Specific conditions**:

i. Project proponent shall abide by the provisions laid down in the gazette notification S.O. 3186 dated 7/10/2016 of Ministry of Water Resources, River Development & Ganga Rejuvenation.

B. **General Conditions**;

I. Statutory compliance:

i. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report.

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

iii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

iv. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7thDecember 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers

and the systems be calibrated according to equipment supplier's specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

iii. The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. 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. (case to case basis small plants: Manual; Large plants: Continuous)

iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring alongwith results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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

vi. The project proponent shall install high volume, low concentration NCG collection & destruction system to mitigate all malodorous emitting gases

vii. Emissions shall be controlled from chemical recovery section through primary and secondary venturi scrubbers.

viii. Pollution control system in the pulp and paper plant shall be provided as per the CREP Guidelines of CPCB.

ix. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

x. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

xi. In case of treatment process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.

xii. The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1 kg/tonne of paper production

xiii. Elemental Chlorine Free (ECF) technology shall be used and lime kiln shall be installed to manage lime sludge

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7thDecember 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

iv. The project proponent shall provide the ETP to meet the standards prescribed in vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7thDecember 2015 (Thermal Power Plants) as amended from time to time.

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

vii. Tyre washing facilities shall be provided at the entrance of the plant gate(s).

viii. Ensure that there is no black liquor spillage in the area of pulp mill, no use of elemental chlorine for bleaching in mill, installation of hypo preparation plant.

ix. Ensure that no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE in the Chemical recovery process directly to ETP

x. The project proponent shall practice rainwater harvesting to maximum possible extent.

xi. Water meters shall be provided at the inlet to all unit processes in the steel plants.

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

IV. Noise monitoring and prevention

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures

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

ii. Provide LED lights in their offices and residential areas.

VI. Waste management

i. Deinking sludge and fine sludge from ETP shall be disposed through TSDF.

ii. Black Liquor shall be separately processed for recovery of energy and chemical in a Chemical Recovery Process.

iii. Sufficient number of colour coded waste collection bins shall be constructed at shop floors in each shop to systematically segregate and store waste materials generated at the shop floors (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.

iv. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office. (in case of CPP)

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

VII. Green Belt

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

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

VIII. Public hearing and Human health issues

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

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

iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

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

v. The proponent shall follow International Standards of safety for ClO_2 generation and storage system, and ozone plant, and certification on regular basis may be submitted. Provision for adequate safety for personnel in case of any accidental leakage should be in place.

IX. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

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

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

iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

iv. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

v. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Pulp and Paper plants shall be implemented.

X. Miscellaneous

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

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

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

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

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

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

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

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

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

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

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

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

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

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

xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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

1.35 **Sindri Cement Works cement grinding capacity from 2.5 MTPA to 4.5 MTPA for manufacturing, storage and dispatch of cement located ta Sindri, Dhandab district of Jharkhand by M/s ACC Limited [Online Proposal No. IA/JH/IND/5925/2011; J-11011/623/2009-IA.II(I)] – Environmental Clearance.**

1.0 M/s ACC Limited under the name of Sindri Cement Works (SCW) made online application vide proposal no. IA/JH/IND/5925/2011 dated 5th October 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category "B" EIA Notification, 2006. The proposed expansion, though a B1 category proposal, located at 2.4 Kms from the interstate boundary of West Bengal, the proposal is appraised at Central level as Category-A.

Details submitted by the Project Proponent

2.0 The proposal of ACC LIMITED (ACC), for increasing the grinding capacity from the existing 2.5 to 4.5 Million Tonnes Per Annum (MTPA) Cement Grinding atSindri Village, Dhanbad Tehsil &District, Jharkhand State in the name of Sindri Cement Works (SCW) was initially received online on 27.02.2018 vide Proposal No. IA/JH/IND/73204/2018. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 29th meeting of EAC March, 2018 and prescribed Terms of Reference (ToR) to the project for undertaking

detailed EIA study for obtaining Environmental Clearance, for increasing the grinding capacity from 2.5 to 4.5 MTPA. The Ministry of Environment, Forest and Climate Change had prescribed ToR to the project with F.No J-11011/623/2009-IA.II (I) dated 28.03.2018.

3.0 The project of M/S. ACC LIMITED (ACC) is operating a Cement Grinding Unit located at Sindri Village, Dhanbad Tehsil &District, Jharkhand State. They propose to increase the Cement Grinding Unit capacity from 2.5 to 4.5 MTPA in the following two phases:

- Phase – I: 2.5 to 3.0 MTPA (existing lines (Line-I & Line – II) with optimization)
- Phase – II: 3.0 to 4.5 MTPA) (Installation of new Line i.e., Line –III with Vertical Roller Mill).
- Manufacturing, Storage and Dispatch of Cement will be as per relevant Standard of BIS.

4.0 The Cement grinding Unit is presently located in an area of 65.49 Ha and no additional land will be required for Phase – I. The new line of Phase – II will be located within the existing ACC's own landin the jurisdiction of Sindri Village, Dhanbad Tehsil & District, Jharkhand state.No River passes through the project area. No perennial water bodies are present which needs modification/diversion. The topography of the area is flat with Black Cotton Soil and lies between 23°39'29.49"N to 23°39'53.11"N latitude and 86°29'47.64"E to 86°29'58.67"E Longitude in Survey of India Topo sheet No. 73/I/10, at an elevation of 177 M above MSL. The ground water table reported to range between 10-15 m below the land surface during the post-monsoon season and 18-20 m below the land surface during the pre-monsoon season. No ground water will be used for the plant.

5.0 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in 10 km radius of the study area. During the ecological studies, No, Schedule – I specie is observed. Nearest Protected Forest is 8.6 km near Sagarka Village in the SSE direction. The nearest river is Damodar River flowing a distance of 2.1 km in SSW. Interstate boundary of Jharkhand – West Bengal is at 2.4 km in SSW.

6.0 Details of Raw material requirement along with estimated quantity (max), likely source, mode of transport is given in table below:

Raw material	**Existing requirement (Tones/Annum)**	**For Phase-I (Tones/Annum)**	**For Phase-II (Tones/Annum)**	**Source of Raw Materials**	**Mode of Transport**
Clinker	16, 75,000	3,04,000	7,00,000	ACC's Jamul, Chaibasa, Bargarh & Kymore cement plants of ACC.	By Rail /Road

Gypsum	1,40,000	26,000	80,000	Imported from Bhutan, Oman and Thailand.	By rail / road
Slag / Ground Granulated Blast Furnace slag	13,50,000	2,69,000	8,00,000	Tata Steel-Jharkhand, Tata Kalinganagar, Orissa, Jindal Steel -Orissa, IISCO Burnpur, & Bhushan steel.	By rail / Road
Fly Ash	715,000	1,70,000	65,000	Maithon, Bokaro and Santadi Power plants.	Road (bulker)
Coal	32,000	5,380	16,000	Eastern Coalfields & E auction	By truck / Rail

7.0 Technology and process description is as follows:

i. Portland Slag Cement (PSC) :

- The raw material for PSC i.e. Clinker, Gypsum and Slag are fed in pre-determined proportion to a Vertical Roller Mill.
- From the mill, the ground material is discharged to Elevator and carried to the Storage Silo.

ii. Pozzolona Portland cement (PPC)/ Composite cement and Ground Granulated blast Furnace Slag (GGBS) :

- Fly Ash pumped into the Fly Ash Silo.
- To produce the PPC/ Composite cement the required proportions of Fly Ash, Clinker, Slag and Gypsum are drawn from the Hoppers and fed to Vertical Roller Mill for Grinding.

iii. **GGBFS :**

- The Vertical Roller Mill is also designed to grind Raw Slag into GGBS which is stored in the Silo.
- From silos, cement is fed to Electronic Roto-Packing Machine for packing in bags.
- After packing the bags, the cement bags are transported by means of belt conveyor and loaded into Trucks for dispatch to the customer.

8.0 The coal requirement after expansion will be obtained from Eastern Coalfields & E-auction. The existing railway siding will be used for transportation of coal to the proposed Cement Grinding Unit. The raw material and finished product i.e. cement which will be transported by rail/road. For transport of other raw material, ACC will ensure that all the trucks employed are "Environmentally Complainant"

9.0 The present water requirement of the plant is 250 m^3/day. SCW has an agreement with FCI for supply of 1137.5 m^3/day of water (682.5 m^3/day water for plant use and 455 m^3/day water for domestic use). Additional water requirement of the plant for expansion is 35 m^3/day. Total water requirement after expansion after implementation of project will be 285 m^3/day which will be sourced from FCI under agreement.

10.0 The present power requirement is 19 MW and is sourced from Grid. Additionally, 10 MW will be required for the proposed expansion and the same will also be sourced from Grid.

11.0 Baseline Environmental Studies were conducted during Summer Season i.e. from March'18, April'18 and May' 2018, Ambient air quality monitoring has been carried out at 8 locations during March'18, April'18 and May' 2018 and the data submitted indicated : PM10 (43.2 to 67.4 µg/m^3), PM2.5 (21.2 to 39.9 µg/m^3), SO_2 (11.5 to 16.3 µg/m^3), NO_x (13.5 to 18.3 µg/m^3) and CO (was found to be less than 1 ppm at all the locations. The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 2.05 µg/m^3 with respect to the PM10, 3.89 µg/m^3 with respect to the SO_2 and 5.50 µg/m^3 with respect to the NO_x in Phase-I and 3.09 µg/m^3 with respect to the PM10, 7.31 µg/m^3 with respect to the SO_2 and 10.30 µg/m^3 with respect to the NO_x in Phase-II respectively.

12.0 Ground water quality has been monitored in eight locations in the study area and analysed. For Ground water samples indicate pH: 7.02 to 7.53, Chlorides: 61 to 183 mg/l, Fluoride: 0.67 to 0.82mg/l. Heavy metals are within the limits. Surface water sample was analyzed in two locations with pH: 7.4 to 7.5, Chlorides: 18 to 20 mg/l, Fluoride: 0.67 to 0.69 mg/l, Heavy metals are within the limits.

13.0 Noise monitoring was carried out at 8 different locations within 10 km radius of the study area. Noise levels are in the range of 51.1 to 46.1 dB A for daytime and 40.2 to 44.1 dB A for nighttime in 10 KM Study Area.

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

15.0 No solid waste will be generated from the process. The dust collected in the air pollution control equipment is recycled back to the process at present and the same will be put in practice for expansion unit. The details of solid waste consumption in the process before and after expansion is given below:

	Maximum Waste consumption (MTPA)					
	BEFORE EXPANSION			AFTER EXPANSION		
	PSC production	PPC production	Composite cement	PSC production	PPC production	Composite cement

Slag	1.35	0.00	0.65	2.43	0	1.17
Flyash	0.00	0.70	0.85	0	1.26	1.53
Total	1.35	0.70	1.5	2.43	1.26	2.7

- Solid waste generated from colony is disposed after segregating the waste into bio-degradable and non-degradable.
- Bio degradable waste - Composting using vermiculture / natural process and the compost is used as manure for greenery development
- Non-degradable waste - Recyclable material is sold to kabadis.
- STP sludge will be used as Manure in the Plantation work.

Hazardous Waste

S.N	Hazardous waste	Quantity generated per annum
1.	Spent oil & lubricants (in waste sludge form)	2000 L
2.	Used cotton cloth	350 Kg
3.	Acid batteries	16
4.	Discarded bottles/ containers used for storing the hazardous chemicals in laboratory	20 in numbers (from size of 200 liters)
5.	Discarded bag filters	480 in no.

- The spent oil and lubricants are collected and sent to store yard for temporary storage in proper containers and then finally disposed by selling it to authorized vendors.
- Cloth and discarded bag filters are also used as fuel in the burner of Hot air Generator.
- Acid batteries are also disposed by returning them to the vendors from whom they are being bought.
- Discarded bottles are first carefully washed with water to remove any traces of the hazardous chemicals and then sold to the scrapper.

16.0 Current Consent to Operate obtained from the Jharkhand State Pollution Control Board (JSPCB) issued the Water & Air consent to operate renewal for the existing production capacity i.e. Cement Production (PSC, PPC, OPC & GGBFS) and Composite Cement capacity 2.5 MTPA vide letter no. JSPCB/HO/RNC/CTO-2526806/2018/919 dated 25.05.2018, and consent is valid up to 31.12.2018.

17.0 The Public hearing of the project was held 25.08.2018 by Jharkhand State Pollution Control Board near ACC Country Club within the Plant site under Additional District Magistrate Sri. Mr. Rakesh Kumar Dubey, for Proposed expansion of Cement Grinding Unit capacity from 2.5 to 4.5 MTPA). The issues raised during public hearing along with action plan and budget

allotment are addressed in Final EIA report. Summary of the Public hearing issues along with action plan and budget are given below:

S.NO	ISSUES RAISED IN PUBLIC HEARING	RESPONSE OF THE PROJECT PROPONENT AFTER PUBLIC HEARING	TIME BOUND ACTION PLAN	BUDGETARY PROVISION
1	Effect of pollution on environment. In addition of that, he also requested for RO water plant installation and demanded for job opportunity to local youths	Management will install latest technology Pollution Control Equipments, which will ensure the emission limits less than the norms. In addition of that, time to time road swapping machine will be engaged for dust cleaning and also water tanker will be used to water spray/sprinkling on roads. Installation of RO Water Plant will be considered under CER and executed in coming days. Management will give the priority to local people for employment based on their qualifications, skills and requirement.	Company will install high efficiency of bag house and Bag filters will be installed along with other plant machinery, to achieve emission less than 30 mg/Nm3. However APCD will be designed for particulate matter emission of less than 25 mg/Nm3. The cement dust collected in the pollution control devices will be recycled back to the cement manufacturing process. At present 90% employees are from local areas. It was also clarified that proposed expansion is brown field project. The Contractors were directed to employ local people according to their qualification and requirements on priority basis. The Project will require about 1500 personnel during construction of Plant. Local people will be given preference for jobs, based on any future plant requirement and eligibility/skill of local youth. Installation of RO Water Plant will be executed at four distinct locations: 1. Simatatnd village 2. Kusheriya Village, 3. Chhatatand village & 4. Ward no. 55 of capacity 500 Lt. /hour. Total Rs 32 lakhs has been earmarked towards implementation for the same. Target date: March'2019.	Capital cost of implementing of EMP : Rs 25.65 Crores Recurring cost EMP: Rs.90 Lakhs per annum. Rs 32 lakhs
2	Appreciated the various development	Management has directed CSR representative for site inspection to take up the activities in	ACC is committed to fulfil the proposition made in response. Solar lights on roads will be	Solar Street lights : Total Rs 7.00 Lakhs

S.NO	ISSUES RAISED IN PUBLIC HEARING	RESPONSE OF THE PROJECT PROPONENT AFTER PUBLIC HEARING	TIME BOUND ACTION PLAN	BUDGETARY PROVISION
	activities in Panchayat by ACC Company. In addition of that, she demanded for Solar lights on roads planning & Irrigation pump	accordance with CSR Policy.	arranged by Dec.2018 end However, hand pumps jobs will be completed by March'2019. 1. 5 Street Solar Lights per village, will be installed by March 2019, based on CAP & Panchayat recommendations Total Rs 7.00 Lakhs has been earmarked towards implementation of this CER activity. Target date: March 2019 2. Rs. 14 Lakhs has been earmarked towards installation & repair of Hand pumps in following villages: • Seematand • Khusberya • Chatatand & • Sindri Basti Target date: March2019.	Hand pump Jobs: Rs. 14 Lakhs
3	Demanded sufficient medicine in company hospital, increase seats of apprenticeship training, employment in transport, Para Medical Courses, & Higher education.	Management will arrange sufficient medicine in company hospital. Management will try to increase seats in apprenticeship with the help of state Government. Also try to place/employ the local youth through our channel partners. As stated, company will give preference to local people in accordance to their qualification/skill and requirements.	ACC is committed to fulfil the proposition made in response. Sufficient stock of commonly required Medicines will be arranged by Oct'2019. In case necessary opportunity is not available in our operations at the location, company will facilitate employability training under its skill development initiative (i.e. ACC DISHA initiative) and enhance their skill for employability and placement elsewhere. ACC has allocated Rs. 37 Lakhs for running of DISHA Skill Development Centre at the location i.e. Sindri. An allocation of additional Rs. 10 Lakhs per annum would be made towards continuance of regular operations of DISHA Centre.	Rs. 6.5 Lakhs has been assigned for medical related proposals. An amount of Rs. 75 Lakhs budget has been earmarked for construction of New Skill development building "DISHA"
6	Requested to provide Irrigation facility.	Management informed that on recommendation of CAP (Community Advisory Panel) Committee, management will do its best effort for the implantation of various water shed measures and rain water harvesting at proposed palaces.	ACC has developed rain water harvesting pond nearby villages such as samyalapur, Chhatatand, Simatand, khusbaria. As management informed in response, on recommendation of CAP Committee, management will For the implantation of various water shed measures and rain	Total Rs 20 Lakhs per year (Year 2019 & 2020) has been earmarked towards implementation of this CER activity.

S.NO	ISSUES RAISED IN PUBLIC HEARING	RESPONSE OF THE PROJECT PROPONENT AFTER PUBLIC HEARING	TIME BOUND ACTION PLAN	BUDGETARY PROVISION
			water harvesting in nearby habitations at (1) Seematand (2) Khusberya (3) Chatatand & (4) Shamlapur Total Rs 20 Lakhs per year has (year 2019 & 2020) been earmarked towards implementation of this CER activity. 1. 9 Pond Deepening activities in following habitations. (Village Seematand, Khusberya Chatatand & Shamlapur 2. Construction of concrete check dams at 839 Hac delineated watershed catchment area. 3. Repair of old open wells at 839 Hac delineated watershed catchment area. Provision of Lift Irrigation at 839 Hac delineated watershed catchment area. Immediate requirements will be completed by March'2019 and Further requirements based on CAP committee recommendations will be fulfilled as and when required.	
7	Requested for the construction of boundary wall in primary School, Samalapur.	Management will do its best effort in the construction of School Boundary wall. This is again need joint support of gram Panchayat and school management as School management has to provide land to construct the boundary wall.	ACC in consultation with CAP committee already proposed the construction of School boundary wall in Samalapur Primary School. For this, ACC Sindri has earmarked Rs. 9.00 Lakhs (Approx) Target date: By end of Dec'2018	Rs. 9.00 Lakhs

S.NO	ISSUES RAISED IN PUBLIC HEARING	RESPONSE OF THE PROJECT PROPONENT AFTER PUBLIC HEARING	TIME BOUND ACTION PLAN	BUDGETARY PROVISION
8	Requested to provide sewing Machine.	Management briefed about the on going sewing training in DISHA Centre for all and expressed its limitation to donate Sewing Machine to individual person.	It is not possible to distribute the machine personally to all the people in surrounding area; however, we invite all needy ladies/women to come at DISHA Centre to get the training where all the required infrastructure is available. We have also arranged trained teachers to give the training to individual. This is continuous process as per schedule 50 domestic sewing machines & 30 Industrial Sewing Machine will be installed in DISHA Centre through ongoing CSR activities for which an amount of Rs 43 lakhs earmarked . More over ACC Will Organise at least one workshop/ awareness camp for the beneficiaries of nearby habitations on various ongoing Scoial Security Government Schemes as part of CSR activities. This will be completed by Dec'2019	Rs. 43 lakhs
9	Requested to start sports academy	It was told by the Management that company has always encouraged rural spirit in rural area and Management will make best efforts to initiate National level Football Academy in coming days with the help of state government.	ACC Sindri has developed on-ground CSR initiatives under the sectoral verticals, In these above, one of sectoral verticals named was ACC DRONA-Promotion of local sports & culture ACC has earmarked Rs 9 lakhs under ACC DRONA Project to Support for promotion of local sports & cultural events Target : March'2019	Rs. 9.00 lakhs

S.NO	ISSUES RAISED IN PUBLIC HEARING	RESPONSE OF THE PROJECT PROPONENT AFTER PUBLIC HEARING	TIME BOUND ACTION PLAN	BUDGETARY PROVISION
10	Requested to provide Hand Pump.	Management welcomed her demand and agreed to do its best effort in the arrangement of Hand pump on the basis of CAP committee recommendations.	ACC a need based drinking water assessment study has been carried out in the surrounding villages and implemented the new hand pump facilities and hand pump repairing works was done to routine basis. Rs. 14 Lakhs has been earmarked towards installation & repair of Hand pumps at villages (1) Seematand (2) Khusberya (3) Chatatand & (4) Sindri Basti . Target date: March2019,	Rs. 14 Lakhs
11	Praised the company training program for the preparation of Handloom products and Requested to provide assistance for the marketing of Handloom products.	It was told that management will think on her opinions and definitely company will do its best effort.	An amount Rs. 12.5 Lakhs per annum (from 2019 to 2021) as been earmarked towards marketing, sales & advertisement of SHG made handloom products through ongoing CSR activity. CSR & ACC team will work with 75 Self Help Groups. The Company has developed 'Self Help Group' for women of various surrounding villages in which company is making arrangement for proving training on Stitching, knitting, sewing . Company will also provide help in making such self help groups in future and will encourage these groups to carry out various social developments work in which company will try its best effort to give assistance to them Its continuous process. DISHA Centre organize training programmes time to time to promote the Self development & empowerment of Women For marketing of such product, ACC CSR team will explore the possibility to support the team through local administrations, ACC sport club, ACC AHEAD, and through other common programmes by providing the stalls and advertising the same in various forums.	Rs. 12.5 Lakhs per annum (for 2019 to 2021)

S.NO	ISSUES RAISED IN PUBLIC HEARING	RESPONSE OF THE PROJECT PROPONENT AFTER PUBLIC HEARING	TIME BOUND ACTION PLAN	BUDGETARY PROVISION
12	Requested for the financial assistance from Management	Management has authorised CSR representative to take-up suitable decision	ACC management does not give any direct financial assistance to any individual. However, our CSR team will explain the various schemes and opportunities available in market and govt schemes, where she can join SHG or take admission in DISHA center for her skill development so that she can start earning.	Not applicable.
13	Requested to provide benefits of Government facilities.	Through DISHA Centre she can attend various alternate livelihood options training, accordingly she can work for her economic development. Company CSR will facilitate her to avail various benefits from Government schemes for BPL card, Ration card, Gas stove etc. For Environment Conservation she does not have any issues or suggestions.	ACC management has formed 'Community Advisory Panel' that identifies the problems of villagers & try to rectify these problems. The Panel meets at nearby villagers on monthly basis at specified time & date to discuss various issues related to development. As informed by the management in our reply, necessary Company CSR will facilitate her to avail various benefits from Government schemes for BPL card, Ration card, Gas stove etc. This is continuous process as per schedule	Not applicable

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

Capital cost of expansion project (Rs Crores)	As per MoEFCC's office Memorandum # F.No. 22-65/2017-IA.III dated 01.05.2018		CER Budget of ACC (Rs Crores)	Remarks
	Capital Investment/Additional Capital Investment (Rs)	Brownfield project - % of the additional capital investment		
100	< 100 crores	1.00	1.00	Phase –I : Rs 0.05 crores Phase –II : Rs 0.95 crores
155	>100 crores to <500 crores	0.75	1.16	Phase –II : Rs 1.16 crores
		Total	2.16	

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UMMARY OF BUDGET TOWARDS CORPORATE ENVIRONMENT RESPONSIBILITY (CER) ALONG WITH ACTIVITIES
(Reference: MoEFCC Office Memorandum dated 01.05.2018)

S. No	DESCRIPTION	Budget in Rs. Lakhs (for 2 years, 2019 & 2020)
1	ACC WASH Project - Provision for safe Drinking water	46.00
2	ACC DISHA Project - Sustainable Livelihood Training/Skill Development for Rural Youth.	75.00
3	ACC Vidyautkarsh Project - Support Quality Education in Government Schools/colleges.	36.10
4	Provision of Street lights (Electrical & Solar)	8.39
5	ACC DISHA Project - Support for Agricultural Sector, Provision of Soil Water conservation though Watershed Measures.	41.75
6	ACC DRONA Project - Support for promotion of local sports & cultural events	9.00
	Total	216.24

DETAIL BREAKUP OF BUDGET TOWARDS CER ALONG WITH ACTIVITIES

S.No	Description of Activity	1st Year (2019)	2nd Year (2020)	Basis For CER Allocation
I	PROVISION OF SAFE DRINKING WATER			
1	Provision for the installation of water Treatment Plant – 500 Ltr. / Hrs. in Four Distinct locations – Kushberia Vill, Chhatatnd Vill, Simatand Vill, & Ward -55. (Bore wells/overhead tank, building & equipment Cost) for water treatment plant (@ Rs. 8 lakhs/ water treatment plant. Every year two water plant will be installed & operated through SHG model.	16.00	16.00	Public Hearing Issue & Need based assessment Study
2	Installation of Hand Pump, Ever year Eight New Hand Pump will be installed based on CAP & Panchayat recommendations @ Rs. 47000/Hand Pump. In addition for the repair of existing/old Hand pumps provision of Rs. 3600 /Hand Pump for 90 Hand pump is earmarked per year for 9 villages Chhatatand, Simatand, Samalapur, Khusberiya, Birsinghpur, Rangamati, Domgarh, Nimtanr, Sindri Basti.	7.00	7.00	Public Hearing Issue
	Total (Rs in Lakhs)	23.00	23.00	

S.No	Description of Activity	1st Year (2019)	2nd Year (2020)	Basis For CER Allocation
II	SUSTAINABLE LIVELIHOOD TRAINING/SKILL DEVELOPMENT			
1	Construction of Skill development centre "DISHA Centre" of 7500 Square feet area @ Rs. 1000/Sqft. along with necessary infrastructure for various vocational training programs for employment generation in association with National Skill Development Mission (Auto Mobile Repair, Welding, Electrical, Computer hardware, soft skills like computer programs, Industrial Sewing Operator, coaching classes for various competitive exams, Defence Services etc.)	20	55	Need based assessment Study
	Total (Rs in Lakhs)	20.00	55.00	
III	SUPPORT QUALITY EDUCATION IN GOVERNMENT SCHOOLS			
1	Construction of Boundary wall of Two Govt. School buildings @ Rs. 4.5 Lakhs per School. Namely Samalapur Primary School & Rangamatia Primary School.	4.5	4.5	Public Hearing Issue & Need based assessment Study
2	Establishment of schools/college science laboratories at nearby collage (SPM College, NSC High Scholl and another three Govt. Middle school.)	7.8	11.50	Public Hearing Issue
3	Establishment of model Aganbari Centers (12 Nos @ Rs 65,000 each) in ward 54 and 55 in consultation of Govt Child Development Project.	3.9	3.9	Public Hearing Issue
	Total (Rs in lakhs)	16.2	19.9	
IV	PROVISION FOR STREET LIGHT (SOLAR & ELECTRICAL)			
1	Providing LED street lighting with solar panels at suitable places in Chhatatand Gram Panchayat, 7 Hamlets Chhatatand, Samalapur, Khusberiya, kherban, Simatand, Doulubera ,05nos/Hamlets @Rs20000/-)	3.50	3.50	Public Hearing Issue
2	Providing LED street lighting in existing street Pole in consultation with CAP & Panchayata at suitable places in Chhatatand Gram Panchayat, 7 Hamlets Chhatatand, Samalapur, Khusberiya, kherban, Simatand, Doulubera ,75 Electrical Pole @Rs1850/	1.39		Public Hearing Issue
	Total (Rs in lakhs)	4.89	3.50	

S.No	Description of Activity	1st Year (2019)	2nd Year (2020)	Basis For CER Allocation
V	SUPPORT FOR AGRICULURAL SECTOR			
1	9 Pond Deepening activities in nine habitations - Chhatatand, Samalapur, Khusberiya, kherban, Simatand, Doulubera, Nimtand, Domgarh, Goulitand. @ Rs. 175000/Pond. (First year 5 Pond & 2nd year 4 Pond).	8.75	7.00	Public Hearing Issue & Need based assessment Study
2	Construction of concrete check dam adjacent to Samalapur Adivasi tola benefiting more than 85 farming families of Chhatanand Gram Pranchayat	-	8.50	Public Hearing Issue & Need based assessment Study
3	Repair of old open wells for back yard agriculture practice in nine habitations @ 5 old open well per habitations. All together 45 old open well be repaired @ Rs. 20000/open wells. (First year 25open wells & 2nd year 20 openwells).	5.00	4.00	Public Hearing Issue & Need based assessment Study
	Provision of Lift Irrigation with Self Help Group of Chhatatand Gram Panchayat. Per year 20 Self Help Group @ Rs. 17000 will be supported	4.25	4.25	Public Hearing Issue & Need based assessment Study
	Total (Rs in lakhs)	18.00	23.75	
VI	SUPPORT FOR PROMOTION OF LOCAL SPORTS & CULTURAL EVENTS			

1	ACC will co-partner with India Rush in setting up and running a successful youth development academy for under 13 Football Players. ACC to provide the Ground, Goalpost with net, Changing Room, Footballs, Corner flags, Player kit, Training equipment, Medical aid, Experienced Coaches etc.	4.00	5.00	Public Hearing Issue
	Total (Rs in lakhs)	4.00	5.00	

19.0 The cost of the proposed expansion is estimated to be about Rs. 255 Crores i.e. Phase-I is 5.0 Crores and for Phase-II is 250 Crores. ACC has spent about Rs 113 crores for implementing EMP measures with recurring cost of Rs 80 lakhs /annum till date in the existing plant.

20.0 Under Expansion an amount of Rs. 2565 Lakhs (Rs 25.65 crores) for implementation of environmental management plan and recurring cost of about Rs. 90 Lakhs (Rs 0.90 crores) per annum is earmarked. Budget for implementation of environmentalmanagement planfor expansion of cement production capacity from 2.5 to 4.5 MTPA is as foolws:

	Capital Cost (Rs. Lakhs)	Recurring Cost per annum (Rs. Lakhs)
Air Pollution equipment	2500	55
Additional Rainwater harvesting pits	25	1
Greenbelt - (additional GB in 6.0 acres)	20	4
Stack Emissions (CEMS)	20	1.5
Environmental Monitoring	-	23.5
Occupational Health	-	5.0
Total	2565	90.00

21.0 Present manpower working in the plant is 479. Since Phase-I will be minor expansion with optimization of process equipment, no additional manpower is required. Additional requirement of manpower for Phase – II is around 60 persons. Total manpower after implementation of Phase – II will be 539.

22.0 The greenbelt developed so far in the plant is about 24% of the plant area which is about 16.51 acres. Another 6 acres will be developed under greenbelt in the next three years.

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

Observations and Recommendations of the committee:

After details deliberations, the committee recommended for environmental clearance for the proposed expansion cement grinding capacity from 2.5 MTPA to 4.5 MTPA for manufacturing, storage and dispatch of cement under the provisions of EIA Notification, 2006 subject to following specific and general conditions:

A. **Specific conditions**:

1. Green belt shall be developed in an additional area of 6 acres by end of 2019 with native, broad leaved species.

2. Emission from APCD shall be reduced to less than 25mg/nm3.

3. Projects under CER shall be completed within two years.

B. **General Conditions**;

I. Statutory compliance

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

ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water from the competent authority concerned in case of drawl of surface water required for the project.

iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

iii. The project proponent shall install system to carryout 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.

iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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

vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better operation of baghouses.

vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.

viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

ix. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.

x. Provide wind shelter fence and chemical spraying on the raw material stock piles; and

xi. Have separate truck parking area and monitor vehicular emissions at regular interval.

xii. 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

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

III. Water quality monitoring and preservation

i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

iv. Adhere to 'Zero Liquid Discharge'.

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off

vii. The project proponent shall practice rainwater harvesting to maximum possible extent.

viii. Water meters shall be provided at the inlet to all unit processes in the cement plant.

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

IV. Noise monitoring and prevention

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

V. Energy Conservation measures

i. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.

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

iii. Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards.

VI. Waste management

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

VII. Green Belt

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

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

VIII. Public hearing and Human health issues

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

ii. The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile

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

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

IX. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

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

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

v. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

iv. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

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

X. Miscellaneous

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

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

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

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

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

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

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

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

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

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

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

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

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

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

xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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

1.36 Expansion of Total Production Capacity and augmentation of integrated melting and rolling facility located at Budhewal road, Tehsil & Dist.-Ludhiana, State-Punjab by M/s Aarti Impex [Online Proposal No. IA/PB/IND/62247/2017; MoEFCC File No. IA-J-11011/49/2017-IA-II(I) – Environmental Clearance.

1.0 The proponent has made online application vide proposal no. IA/PB/IND/62247/2017 dated 15th September 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The application of M/s Aarti Impex located in Village Budhewal, Tehsil Ludhiana East, District Ludhiana; State Punjab was initially received in the Ministry on 3rd February 2017 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 16th the meeting held on 6th-7th March 2017 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 27th March 2017 vide F.No. J-11011/49/2017-IA-II(I).

3.0 The project of M/s Aarti Impex located in Budhewal Village, Ludhiana East Tehsil, Ludhiana District, Punjab State is for Expansion of total production capacity and augmentation of integrating melting from 26,400 MTPA to 2,31,000 MTPA and from 21,000 MTPA to 2,24,400 MTPA of rolled products. The office Memorandum issued by Ministry of Environment and Forests, Government of India dated 24th December 2013, states that the non toxic secondary metallurgical processing industries involving operation of furnaces only, such as induction and electric arc furnaces, submerged arc furnaces and cupola with capacity <30,000 MTPA doesn't come under the purview of EIA. Hence, EC compliance was not required from Regional Office, MoEF&CC. The proposed capacity for the products is given below:

Name of unit	No. of units	Capacity of each unit	Production capacity
Induction Furnace (melting capacity)	2	50 MT/heat (Combined)	700 TPD
Rolled products	1	--	680 TPD

4.0 The total land required for the project is 3.931 ha. No forest land involved. The entire land has been acquired for the project. It has been reported that no water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is flat and reported to lies between $30^0$53'22.30''to $30^0$53'25.86" N Latitude and $75^0$59'22.10''to $75^0$59'38.55''E Longitude in Survey of India topo sheet No. 44N13, at an elevation of 254 m AMSL. The ground water table reported to ranges between 2.89 to 27.30 meter below the land surface during the post-monsoon season and 4.32 to 31.22 meter below the land surface during the pre-monsoon season.

6.0 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. No Schedule-I species is found in the 10 km radius of the project site.

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

8.0 The targeted production capacity of the MS rolled product is 680 TPA. MS scrap, MS Billets will be used as basic raw material to manufacture rods and wire rods. Raw materials will be purchased from market and transported to site through trucks.

9.0 The total fresh water requirement of the project is estimated as 150 m^3/day, which will be sourced from the Borewell. The application for permission for drawl of groundwater has been submitted vide application no. 21-4/3993/PB/IND/2017.

10.0 The power requirement of the project is estimated to be 27680 KW; the permission has been obtained from the Punjab State Power Corporation Limited.

11.0 Baseline Environmental Studies were conducted during Pre-Monsoon season i.e. from March to May, 2017. Ambient air quality monitoring has been carried out at 8 locations during 8th March to 5th June 2017 and the data submitted indicated: PM10 (45.01 µg/m3 to 77.39 µg/m^3), $PM_{2.5}$ (28.37 to 56.59 µg/m^3), SO2 (5.5 to 25.88 µg/m^3) and NOx (9 to 33.94 µg/m^3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 1.72 µg/m^3 with respect to the PM10.

12.0 Ground water quality has been monitored in 5 locations in the study area and analyzed. pH: 7.22 to 7.72, Total Hardness: 236 to 256 mg/l, Chlorides: 6.87 to 15.39 mg/l, Fluoride: 1.12 to 1.18 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 2 locations. pH: 7.85 to 8.04; DO: 4.7 to 5.5 mg/l and BOD: 1 mg/l. COD 4 mg/l.

13.0 Noise levels are in the range of 48.51 to 62.29 dB(A) for day time and 39.44 to 52.28 dB(A) for night time.

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

15.0 It has been reported that a total of 47 MTPD of Slag, 15 MTPD of Mill Scale and 2 MTPD of APCD waste will be generated due to the project, out of which mill scale waste will be sold to the market and slag and APCD waste will be send to TSDF site for proper disposal. It has been envisaged that an area of 1.29 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 Punjab Pollution Control Board obtained vide Certificate No. CTO/Renewal/LDH1/2018/7051511 dated 28/05/2018 and consent is valid up to 27/11/2018.

17.0 The Public hearing of the project was held on 29.12.2017 at village Budhewal under the chairmanship of Additional Deputy Commisioner (Gen.), Jagraon, District. Ludhiana for production of 680 MTPA of MS rolled products (round, square, hexagonal sections etc). The issues raised during public hearing are employment, pollution control and traffic. An amount of 45.13 Lakhs (1% 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 4513 Lakh 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 330 Lakhs. The detailed CSR plan has been provided in the EIA report in its page No. 150 in chapter 8. The employment generation from the proposed project / expansion is 250.

19.0 Greenbelt will be developed in 1.29 Ha which is about 33 % of the total acquired area. A 40m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 3225 saplings will be planted and nurtured in 1.29 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 EIA Consultant: Shivalik Solid Waste Management Limited. Certificate No. NABET/EIA/1619/RA 0040

Observations of the Committee: -

22.0 The project proponent has submitted the letter from the Punjab State Pollution Control Board vide letter no. RO/LDH-I/3926, dated 30th October, 2018 certifying that the proposed

project is out side the critically polluted area. The committee observed issues related to employment to local people; use of fres water for green belt; need for collection of strome water; planting of local species; no clarity in use of re-heating furnce, etc. The PP has submitted undertaing on these issues during the cource of the meeting.

Recommendations of the Committee: -

23.0 After details deliberations, the committee recommended for environmental clearance for the proposed expansion in total production capacity and augmentation of integrated melting and rolling facility under the provisions of EIA Notification, 2006 subject to following specific and general conditions:

A. Specific conditions:

i. The PP shall provide employment to 150 local people as per the commitments of PH.
ii. No waste water shall be discharged out side the premises
iii. The strome water from the surround premises shall be collected and utilized as a part of rain water.
iv. No Re-heatining furnace shall be used.

B. General Conditions;

I. Statutory compliance:

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

ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 as amended from time to timeand connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

iii. The project proponent shall install system carryout manual 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.

iv. The project proponent shall submit monthly summary report of continuous stack emission alongwith results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.

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

vii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

viii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

ix. The project proponent shall use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.

x. The project proponent shall provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc.

xi. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

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

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 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.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

iv. Adhere to 'Zero Liquid Discharge'.

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.

vii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off

viii. The project proponent shall practice rainwater harvesting to maximum possible extent.

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

IV. Noise monitoring and prevention

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures

i. The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.

ii. Practice hot charging of slabs and billets/blooms as far as possible.

iii. Ensure installation of regenerative type burners on all reheating furnaces.

iv. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.

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

VI. Waste management

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

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

iii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

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

VII. Green Belt

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

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

VIII. Public hearing and Human health issues

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

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

iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

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

IX. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

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

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

iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

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

X. Miscellaneous

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

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

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

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

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

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

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

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

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

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

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

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

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

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

xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other

orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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

1.37 Expansion of Ductile Iron pipes (from 3,50,000 TPA to 5,00,000 TPA); Pig Iron (from 3,50,000 TPA to 5,00,000 TPA); LAM Coke (from 2,80,000 TPA to 3,80,000 TPA); Captive power generation (from 16 MW (BF & Coke oven) to 31 MW); and to produce DI fittings of capacity 19,500 TPA by M/s. Sri Kalahasti Pipes Limited at Rachagunneri village, Sri Kalahasti Mandal, Chitoor District, Andhra Pradesh– [Proposal No. IA/AP/IND/82400/2018; F.No.J-11011/158/2011-IA-II(I)] – Terms of Reference.

1.0 M/s. Sri Kalahasti Pipes Limited made an application vide online proposal no. IA/AP/IND/82400/2018 dated 13th October 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.Therefore, the proposal is appraised at Central Level.

Details submitted by the project proponent:

2.0 **M/S. Srikalahasthi Pipes Limited is** proposed to enhance the capacity of Ductile Iron pipes from 3,50,000 TPA to 5,00,000 TPA, Pig Iron from 3,50,000 TPA to 5,00,000 TPA, LAM Coke from 2,80,000 TPA to 3,80,000 TPA, Captive power generation from 16 MW (BF & Coke oven) to 31 MW & produce DI fittings of capacity 19,500 TPA. It is proposed to manufacture the above products based on the following technology:

- Producing DI Pipes through Blast furnace molten metal & centrifuge casting route.
- Producing Pig Iron through Blast Furnace route
- Producing Low ash metallurgical coke through non recovery coke oven.
- Captive power generation through Waste Heat Recovery from Coke oven & BF Gas from Blast furnace.
- DI fittings through Induction furnace & Lost foam process route

3.0 The existing plant was accorded Environment Clearances vide F.No. J – 11011 / 51 / 2002 – IA II (I) dated 28-11-2002, J-11011/914/2007-IA II (I) dated 25-07-2008 and J-1101/158/2011-IA-II(I) dated 11-01-2013. Consent to Operate was accorded by Andhra Pradesh Pollution Control Board vide order No. APPCB/KNL/TPT/391/HO/CFO&HWA/2017 dated 17-11-2017 & APPCB/KNL/TPT/391/HO/CFO&HWA/2018,dated 23-05-2018,validity upto 31-01-2023 & 30-04-2023 respectively.

4.0 The existing unit is located at Rachagunneri village, Sri Kalahasthi Mandal, Chitoor District, Andhra Pradesh. (Earlier EC has been accorded for 230.85 acres of land in Rachagunneri & Merlapaka villages) The above proposed expansion will be taken up in partly in the partly in the existing plant premises and partly in additional 11.32 acres of land which is adjoining to existing plant premises and this additional land falls under Rachagunneri village only

5.0 Existing plant is located in 230.85 acres (93.4 Ha.) of land. Additional land envisaged for the proposed expansion project is 11.32 acres (4.6 Ha.). Total land after proposed expansion will be 242.17 acres (98 Ha.) Out of the total area, 85 Ac. / (34.4 Ha.) (35%) land is allocated & developed greenbelt. No Forest/agriculture/Govt. land involved.

6.0 Pallam RF, Ramapuram RF & Yerpedu RF are within 10 Km. Radius of the plant site. Swarnamukhi river is flowing at a distance of 4.5 Kms from 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 plant. The area also does not report to form corridor for Schedule – I fauna.

7.0 Total project cost for proposed expansion is approx. Rs. 1,250 Crores. Proposed employment generation from proposed project will be 40 nos. direct employment and 200 nos. indirect employment.

8.0 The targeted production capacity of the total plant is 5, 00,000 TPA. The iron ore for the plant would be procured from Bellary, Hospet region and Imported coal from Australia/Indonesia. The ore transportation will be done through by Rail/trucks up to the site. The proposed capacity for different products are furnished below:

Sno	DESCRIPTION	UOM	EXISTING PERMISSIONS (CFO /EC)	Existing Production Capacity	PROPOSED EXPANSION	TOTAL
1.	Pig Iron	TPA	350000	350000	150000	500000
2.	Ductile Iron Pipes	TPA	350000	350000	150000	500000
3.	Slag cement	TPA	99000	99000	--	99000
4.	Coke Oven plant	TPA	280000	280000	100000	380000
5.	Captive power plant (through Coke oven & BF gas)	MW	16	16	15	31
6.	DI Fittings (Fittings, valves, Accessories, Manholes etc)	TPA		New Proposal	19500	19500
7.	Sponge Iron Plant(4*100TPD)	TPA	130000	Not Implemented	--	130000
8.	Steel products	TPA	125000	Not Implemented	--	125000

9.	Ferro Alloys (4 * 9 MVA)-FeSi / SiMn / FeMn(Out of 4*9 MVA , 2*9 MVA is in progress)	TPA	FeSi-25,000 or SiMn-60,000 or FeMn-75,000	FeSi 8,000 (Project under progress) SiMn 16,000 (Project under progress)	--	FeSi-25,000 TPA or SiMn-60,000 TPA or FeMn-75,000 TPA
10.	Captive power plant (WHRB-8MW+FBC-4MW)	MW	12	Not Implemented	--	12

9.0 The electricity load of 74.5 MW is required for operating the existing plant & expansion projects which will be sourced from existing power plants & proposed captive WHRB boilers, Blast Furnace Gas based Boiler, FBC based power plant & remaining will be sourced from APSPDCL grid.

10.0 Proposed raw material and fuel requirements after proposed expansion project would be Iron ore, Iron Ore fines, Mn ore, Dolomite, Coal/Coke,Scrap etc., Requirement would be fulfill by external purchase / in house.

S.No	Raw Material	Existing (TPA)	Expansion (TPA)	Source	Method of transportation
	Pig Iron				
1.	Sinter	411250	176250	In plant generation	Conveyor
2.	Iron Ore lumps	238000	102000	Hospet / Bellary, Karnataka	Railway rakes & Covered trucks
3.	Coke	238000	102000	In plant generation	Covered trucks
4.	Flux (Dolomite / lime stone / Mn ore lumps)	29750	12750	Open market	Covered trucks
5.	Coal fines	45500	19500	Imported/Indigenous	Railway rakes & Covered trucks
	Sinter Plant				
6.	Iron Ore Fines	458250	209625	Hospet / Bellary, Karnataka	Railway rakes & Covered trucks

S.No	Raw Material	Existing (TPA)	Expansion (TPA)	Source	Method of transportation
7.	Lime Stone fines	70500	32250	In plant generation/Open market	Covered trucks
8.	Dolomite fines	61100	27950	In plant generation/Open market	Covered trucks
9.	Coke Fines	47000	21500	In plant generation	Covered trucks
10.	Coal fines	39950	18275	Australia	Railway rakes & Covered trucks
11.	Quick lime	18800	8600	Open market	Covered trucks with packing
	DIP				
12.	Molten Metal	420000	180000	In plant generation	EOT Crane / Trolly
13.	Steel scrap	40278	17262	Open market	Covered trucks
14.	Ferro Silicon	4375	1875	Open market	Covered trucks
15.	Cement	36750	15750	In plant generation	Cement transfer poucher
16.	Sand-CML	43750	18750	Open market	Covered trucks
17.	Bitumen	1785	765	Open market	Covered trucks
18.	Magnesium	472.5	202.5	Open market	Covered trucks
19.	Silica Sand	8750	3750	Open market	Covered trucks
20.	Zinc	1487.5	637.5	Open market	Covered trucks
21.	Inopipe	1662.5	712.5	Open market	Covered trucks
	DI Fittings				
22.	Iron scrap (Pig iron, Steel scrap, Pipe scrap, re-melt etc)	--	25915.5	In plant generation	Covered trucks
23.	Expanded polystyrene	--	60.45	Open market	Covered trucks
24.	Refractory coating (Alumina + Silica etc)	--	239.85	Open market	Covered trucks
25.	Paint (Bitumen, zinc rich, liquid epoxy, polyurethane, ceramic etc)	--	122401.5	Open market	Covered trucks
26.	Ferro Alloys (Fe Si Mg, Pure Mg, Fe Si	--	719.55	Open market	Covered trucks

S.No	Raw Material	Existing (TPA)	Expansion (TPA)	Source	Method of transportation
	etc)				
27.	Foundry additives (clay, coal dust, bentonite etc)	--	3237	Open market	Covered trucks
28.	Resin Binder	--	959.4	Open market	Covered trucks
29.	Fusion bonded Epoxy power	--	239.85	Open market	Covered trucks
30.	Silica Sand	--	10198.5	Open market	Covered trucks
31.	Cement	--	251.94	In plant generation	Cement transfer poucher
	COP				
32.	Coking coal	436800	156000	Australia/ Indigenous	Railway rakes & Covered trucks
	SPONGE IRON				
33.	Iron Ore	208000	--	Hospet / Bellary	Rail / Road
34.	Coal (DRI)	169000	--	Imported / Domestic	Rail / Road
35.	Dolomite	6500	--	A.P/Karnataka	Rail / Road
	SMS SHOP				
36.	DRI	1,15,000	--	In plant generation	Inter carting
37.	Hot metal	1,12,000	--	In plant generation	Inter carting
38.	Ferro Alloys	2500	--	In plant generation	Inter carting
39.	Calcined lime	12,000	--	Local market	Road
	FERRO ALLOYS PLANT				
40.	Manganese Ore	172500	--	Karnataka, Orissa, Madhya Pradesh, Andhra Pradesh	Rail / Road
41.	Coke	56250	--	In plant generation	Inter carting
42.	Quartz	50000	--	Andhra Pradesh	Rail / Road
	POWER PLANT (FBC)				
43.	Coal (100%)	20800	--	Hospet / Bellary	Rail / Road
44.	Dolochar	39000	--	In plant generation	Inter carting

11.0 Water consumption after proposed expansion project will be 9986 KLD (Existing - 7043 KLD & Expansion - 2943 KLD) and waste water generation will be 2457 KLD (Existing - 1667 KLD & Expansion - 790 KLD). Process water required for the existing and expansion will be sourced from sewage of Tirupati Municipal Corporation. Water requirement for Domestic application will be sourced from existing bore wells.

12.0 The waste water generated from Blast furnace will be sent to ETP. After treatment, it will be reused for Slag granulation process, Raw material yard sprinkling and Road sprinkling. DIP effluent will be sent to ETP/BF Slag granulation for reuse. Captive Power Plant effluent will be neutralized in Neutralization pit, reused for Coke quenching and Raw material yard sprinkling and Road sprinkling. During slag granulation & coke quenching operation, the entire water gets finally evaporated.

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

14.0 **EIA Consultant**: M/s. Pioneer Enviro Laboratories & Consultants (P) Ltd., Hyderabad; 118 as per list 12th November, 2018.

Recommendations of the Committee: -

15.0 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed **at Annexure I read with additional ToRs at Annexure-2:**

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

ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.

iii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018

1.38 Integrated Steel Plant (6.0 MTPA) and captive power plant 1080 MW at village kerjang, district Angul in Odhisha of M/s JSPL [Online Proposal No. IA/OR/IND/4541/2006; MoEFCC File No. J-11011/365/2006-IA.II(I)] – Amendment in Environmental Clearance.

1.0 M/s.JSPL Ballari made an application vide online proposal no. IA/OR/IND/4541/2006 dated 13th October 2018 seeking amendment in the environmental clearance granted to Integrated Steel Plant (6.0 MTPA) and Captive Power Plant (1,080 MW) located at Kerjang, DistrictAngul, Orissa by M/s Jindal Steel & Power Ltd vide MoEFCC letter No J-11011/365/2006-IA.II(I) dated 22nd February, 2007 and its subsequent amendments dated 14.11.2008; and 26.6.2018.

Details submitted by the project proponent:

2.0 In the EC amendment dated 14.11.2008, the following additional specific condition was stipulated

"Bio-chemical treatment of phenolic wastewater shall be should be treated in BOD plant and used for quenching of hot coke to control emissions, dust suppression and greenbelt

development. Cyanide as CN shall be controlled within 0.2 mg/litre and Ammonical Nitrogen within 50 mg/litre as per the standards notified under the E(P) Act. Effluent analysis report shall be submitted to the Ministry's Regional office at Bhubaneswar, OSPCB & CPCB regularly."

3.0 Regarding above conditions, the following was submitted:

1. The Company has commissioned its Coal Gasification Plant (CGP) (2.25 lakh Nm^3/hr) in 2013.

2. The CGP Plant consists of Bio-ETP with capacity of 440 m^3 /hr (400 m^3/hr + 10% margin) for treatment of ammonical & phenolic wastewater from CGP.

3. This Bio-ETP utilizes 2 stage Anoxic and Aerobic treatment with recycle of nitrate which is similar to the process of BOD plant for treatment of ammonical and phenolic wastewater from coke oven.

4. Subsequently, a tertiary effluent treatment plant TETP) of 350 m^3/hr was also established to further treat and recycle the water in CGP through a pre-treatment, Ultra Filtration (UF) and Reverse Osmosis (RO) System.

5. However, after its commissioning CGP has been operated at partial load (maximum of 60%) due to de-allocation of coal blocks and related techno-economics. Maximum effluent generation has been about 200 m^3/hr, leading to only 50% capacity utilization of installed Bio-ETP of CGP.

6. The Company commissioned 1 MTPA Coke Oven Plant in 2016 and has been treating effluent (about 70 m^3/hr) from coke oven in the above mentioned Bio-ETP. The same was done based upon the feasibility study conducted by IIT, Bhubaneswar.

7. The company is planning to commission remaining 1 MTPA (coke oven) and proposes to treat total effluent generated (about 140 m^3/hr) from coke oven in the already installed Bio-ETP.

8. The details of the effluent quantity estimated from various sources of CGP and Coke Oven is given below:

Unit	**Quantity of effluent Generation envisaged in future (in m^3/hr)**	**Designed capacity of Bio-ETP in m^3/hr**
CGP	200*	440**
Coke Oven (already commissioned) – Batteries 1 & 2	70	
Coke Oven (to be commissioned) – Batteries 3 & 4	70	

Total	340	440

*CGP Plant will only be operated at maximum 60% load
** includes 400 m^3/hr + 10% safety margin.

9. Further, at Coke Oven it is proposed to construct the following pretreatment units consisting of (i) Oil and grease separation unit, (ii) Dissolved Air oil floatation(DAF) Unit, (iii) equalization tank and (iv) emergency effluent collection tank) before the effluent is transferred to the existing Bio-ETP.

10. The process details of the existing Bio-ETP are enclosed.

11. With the above arrangements of treating coke oven effluent in Bio-ETP of CGP, the quantity of effluent from both CGP as well as Coke oven will be maintained within the prescribed limits.

4.0 In view of the above submissions and the EC condition which does not mandate a separate BOD plant, it is requested that a clarification be issued that coke oven effluents can be treated in existing Bio-ETP, and there is no requirement to install a separate BOD plant for Coke Oven.

5.0 Minor shift in location of proposed ash dyke within the boundary of Steel Plant. During the designing of the proposed ash dyke, it has been observed by the consultant that it is desirable to marginally shift the proposed ash dyke due to the following:

1. The area has elevation difference of 20 m with north elevation of 205 m to south elevation of 185 m and due to the higher elevation difference a starter dyke of more height is required at south side which may render the dyke unstable.

2. The recent soil investigation showed rocky hard strata which cannot be excavated. So, this area cannot be leveled and bottom sloped pond may pose threat such as sliding of the dyke due to additional pressure after ash filling.

6.0 In view of the above, it is proposed to construct the dyke in the area adjacent to the existing approved location. The proposed area is stable basin shaped area with elevation varying from 202 m in the north and sought to 187 m at center of the area.

Observations and recommendations of the Committee: -

The Committee after detailed discussions receomended for the shift of fly ash dumplocation to the proposed site and exemption from separate BOD plant with the following conditions:

a. All the old fly ash dumped stock shall be utilized within two years.

b. All the new fly ash generated fresh shall be utilized as per the provisions contained in the fly ash notification dated 14/9/1999 and its amendments issued from time of time and the orders of the Hon'ble NGT dated 21/03/2014.

c. With respect of amendment of EC condition pertaining to BOD plant, the coke oven plant shall be treated to the desired norms and entire treated effluent shall be utilized in the plant to achieve zero discharge.

1.39 Expansion of Cement Plant (600 TPD to 900 TPD) and expansion of Limestone Mining (144.25 ha) by M/s. Saifco Cements Private Limited, Located at Saman Khounmoh, Tehsil-Srinagar, District Srinagar, J&K [Proposal No. IA/JK/IND/29057/2009; F.No.IA-J-11011/986/2008-IA-II(I)] – Amendment in Environmental Clearance.

1.0 M/s. Saifco Cements Private Limited made an application vide online proposal no. IA/JK/IND/29057/2009 dated 9th October, 2018 seeking amendment in environmental clearance granted vide F.No.IA-J-11011/986/2008-IA-II(I) dated 24 June 2009 for the aforesaid project.

2.0 After detailed deliberations the committee observed that proposal relates to mining activity. Hence, the proposal may be placed before the mining committee.

1.40 Expansion of existing plant [Billets – 472 TPD; Structural TMT Bars – 1000 TPD] by installation of sponge iron (1000 TPD), Pellet plant (1500 TPD), MS Ingots/Billets (1000 TPD), structural TMT bar (1000 TPD)along with power generation (50 MW) of **M/s Om Sairam Steels & Alloys Pvt Ltd.– Amendment in Environmental Clearance for change in configuration of furnace.**

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

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

1.42 **Expansion in manufacturing of MS Ingots & M.S. Billets from 28,800 TPA to 88,800 TPA and TMT Bar, M.S. Channels, Angles Rods and other RE Rollable items 88,800 TPA located at Village Anupatty; Tehsil Palladam; Dist Tiruppur; State Tamil Naduby M/s Kannappan Alloy and Steel Company Pvt. Ltd. [Online Proposal No. IA/TN/IND/83223/2018; MoEFCC File No. IA-J-11011/371/2018-IA-II(I)] – Terms of Reference.**

1.0 M/s Kannappan Alloy and Steel Company Pvt. Ltd. made an application vide online proposal no. IA/TN/IND/83223/2018 dated 23rd October 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The

proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "B" EIA Notification; 2006.The proposal was submitted to the ministry for appraisal at Central Level as the SEIAA is not existing in the state of Tamil Nadu.

2.0 However, the project proponent vide their letter dated 16th November, 2018 requested for withdraw of application as the SEIAA has been constituted in Tamil Nadu vide S. O. 5651 (E), dated 5th November 2018.

3.0 Therefore, the committee has agreed for withdraw and recommended for retuning the application in the present form.

1.43 Setting up of 1.8 lakh tonnes per year non-recovery coke oven plant with10 MW cogen captive power plant and 2 lakh tonnes per year Ductile iron spun pipe(DISP) at Blast furnace unit, M/s KIOCL Limited, Panambur, Mangaluru, Karnataka [Online Proposal No. IA/KA/IND/83835/2018; MoEFCCFile No. IA-J-11011/372/2018-IA-II(I)] – Terms of Reference.

1.0 **M/s KIOCL Limited**made an application vide online proposal no. IA/KA/IND/83835/2018 dated 29th October 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006.The proposal of expansion is submitted and appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. KIOCL Limited proposes to install a new manufacturing unit for Ductile Iron Spun Pipe (DISP) and Coke. It is proposed to set up a 1.8 lakh tonnes per year non-recovery coke oven plant and 10 MW cogen power plant using flue gas of coke oven plant and 2 lakh tonnes per year capacity DISP plant.

3.0 The proposed project is coming within the battery limit of the Blast Furnace Complex, Plot no. 456 & 457, Baikampady Industrial Area, Village: Panambur, Taluka: Mangaluru, District: Dakshina Kannada, State: Karnataka which is a Notified Industrial Area of Karnataka Industrial Areas Development Board (KIADB), Govt. of Karnataka.

4.0 The land area identified for the proposed DISP plant and coke oven plant is 11 acre and 9.26 acre respectively, which is an industrial area and is located within the existing Blast Furnace Unit premises of KIOCL. No forest land is involved. The entire land is already under possession of KIOCL for the project. Of the total plot area of 166.16 acre, 33.5 acre (20%) is planned for green belt development.

5.0 No National Park / Wild Life Sanctuary /Bio Sphere Reserve /Tiger Reserve / Elephant Reserve etc., are reported to be located in the core and buffer zone of the project. The project area also does not report to form corridor for Schedule-I fauna.

6.0 Total project cost is approx. Rs. 846.9 Crore rupees (INR). Proposed direct employment generation from proposed project will be about 389 nos. direct employment.

7.0 The targeted production capacity of the DISP plant and non-recovery coke oven plant is 2 LTPA and 1.8 LTPA respectively. The pig iron produced from existing blast furnace of KIOCL will be used for making DISP whereas imported coal will be used for making coke.

Table 01. Raw Material requirement and its sources

Raw Materials	**Annual requirement (in tons.)**
DISP Plant	
Hot Metal	214,800
Pure Magnesium	680
Sand for core making	5,600
Zinc	800
Cement	15,000
Sand for Cement lining	28,000
Bitumen	840
Non-recovery coke oven	
Coal at 8% moisture	2,64,392

8.0 The existing facilities at Mangalore port will be used for transportation of raw materials to propose plant. The list of facilities for the proposed plant are given in Table:02

Table 02. List of facilities for the proposed pellet plant

SI. No.	**Unit name**	**No. of units**
DISP plant		
1	De-sulphurisation unit	2
2	Melting cum super heating furnaces	4
3	Pure Mg Converters	4
4	Centrifugal casting machines	8
5	Annealing furnace	1
6	Pipe finishing facilities	2
Non-recovery coke oven plant		
7	Coal handling plant including RMHS area	1
8	Coke Oven Batteries	1 row X 2 batteries X 26 oven
9	Stationary stamping unit with coal tower	2
10	Oven machines	
11	One complete coke quenching system	1
12	Chimney with flue gas tunnels for each battery	2
13	Coke bunker with coke disposal arrangement	-
14	Repair facilities at one end of the batteries	-
15	Cogen power plant	1(10 MW)

SI. No.	Unit name	No. of units
16	Load Centre Sub Station (LCSS)	3
17	Laboratory	
18	Compressed air station	
19	Water pump house	
20	Fuel storage facilities	

Recommendations of the committee:

After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed **at Annexure I read with additional ToRs at Annexure-2:**

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

ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.

iii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

iv. The proponent will assess the potential for rain water harvesting in the project premises and submit an action plan.

1.44 Expansion of Integrated Steel Plant located between Kunikera Tanda and Kunikera Village, Kopppal Dist, Karnataka State by **M/s ILC Iron &Steel Pvt.Ltd** [Online proposal No. IA/KA/IND/83836/2018; MoEFCC File No. J-11011/524/2008-IA-II(I)] – **Terms of Reference**.

1.0 M/s ILC Iron & Steel Private Limited madean application vide online proposal no. IA/KA/IND/83836/2018dated 1st November 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006.The proposal of expansion is submitted and appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s ILC Iron and Steel Pvt. limited proposed for expansion of existing manufacturing unit of Integrated Steel Plant (0.2 MTPA) that can produce final products through Rolling Mill (Bar, Rod, Structural and Allied products of iron), through sponge Iron and induction melting route along with Captive Power generation 12 MW by way of partial generation through total waste heat recovery. It is proposed to set up the pellet plant for securing required raw material for DRI kilns based on Grate Kiln technology (German) which is safe and proven along with expansion/increase in existing capacities of Sponge Iron, induction melting furnaces, Power generation, metallurgical refining process by AOD/EAF/ LRF and Rolling mill.

3.0 The existing project was accorded environmental clearance vide lr.no J-11011/524/2008-IA-II (I) Dated27.08.2010, Consent to Operate was accorded by Karnataka State Pollution Control Board vides lr. No AW-303385(PCB I D: 10803)Date: 16/08/2017 validity of CtO is up to 06.07.2022.

4.0 The proposed unit will be located at Sy No15, 16, 17, 29, 36, 37, 38, 51 Village: Kunikera Taluka: Koppal, District: Koppal, State:Karnataka.

5.0 The land area acquired for the proposed plant is 102.85 Acres. No Forestland involved. The entire land has been acquired for the project. Of the total area 34.97Acres (34%) land will be used for green belt development.

6.0 The National Park/WL etc are located at a distance of more than 100 KM from the site. 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 621 Crore rupees. Proposed employment generation from proposed project will be minimum 1850 (Direct employment 350 and 1500 indirect employment).

8.0 The targeted production capacity of the Rolling Mill is 0.6 million TPA, Pellet plant 1.2. million TPA, Sponge Iron unit 0.3 million TPA (950 TPD), Induction Melting Furnaces/Electric Arc furnace 0.6 million TPA (4 Nos of 25 T- 5 Nos 40T each of IMF/EAF),Ladle refining Furnaces for secondary refining-25T-1 and 40T-1, Billet Casters for Casting said liquid steel into billets-2 CCMs (Total 5 Strands), AOD for stainless steel-40T-1No.Captive power generation-30MWH. The ore for the plant would be procured from Government source (MSTC, NMDC and MML). The ore transportation will be done through by both Rail and road.The proposed capacity for different products for new site area after expansion shall be as below:

Product Name	Consented Quantity	Proposed Quantity TPD	Total TPD
Rolling Mill (Bar, Rod, Structural and Allied products of iron)	665.00 0.2 MTPA ISP	1330.00 0.4MTPA ISP	1995 0.6 MTPA ISP
Pellet plant	00.00	4000 (1.2 MTPA)	4000 (1.2 MTPA)
Tools for the above products production			
Name of the tool	Existing Capacity	Proposed Capacity	Total capacity
Sponge Iron unit	4Kilns of 150 TPD	1Kiln of 350 TPD	950 TPD
Induction Melting Furnaces and /or Electric Arc Furnaces for steel making of 25 Tons Capacity each	0.2 MTPA	0.4 MTPA	0.6 MTPA

Induction Melting Furnaces/Electric Arc Furnaces for steel making	25 Tons 4 Nos	40 Tons 5 Nos	25T-4 and 40T-5
Billet Casters for Casting liquid steel into billets	1 CCM (2 Strands)	1 CCM (3 Strands)	2 CCMs (5 Strands)
Ladle refining furnace (LRF) for secondary refining	25T-1No	40T-1No	25T&40T 1each
AOD	0.00	40T-1No	40T-1No

TPD-Tons Per Day, MTPA-Million Tons Per Annum

9.0 The electricity load of 30 MW will be used from Captive Power generation. Company has also proposed to install a DG Set of 1010KVA for emergency back up

10.0 Proposed raw material and fuel requirement for project are iron ore, Coal, Dolomite and Bentonite. Other than coal, the requirement would be fulfilled by local supply as well as in house backward production facilities of Sponge iron and pellet plant. Fuel consumption will be mainly electric power and small portion of coal for DRI/Sponge.

11.0 Water Consumption for the proposed project will be 300 KLD and waste water generation will be Nil. Domestic waste water 30KLD will be treated STP and industrial waste water generated will be treated and reused.

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 After detailed deliberations, the committee observed that the project proponent has made an application without finalizing the confifuration and freezing of enginnering aspects. The lay out is also not prepared for the proposed expansion. Therefore, the committee felt that the appraisal can not be made on draft proposal and advised the PP to make application after finalization of the enginnering aspects and layout of the plant.

Recommendations of the committee:

14.0 Therefore, the committee recommended for returing the proposal in present form.

1.45 Expansion of Ferro Alloys Plant from 8000 TPA to 44000 TPA (Product Mix of Ferro Silicon or Silico Manganese) located at Plot no: 16 & 18, Gollapuram Industrial Area, Hindupur Mandal, Ananthpur District Hindupur, A.P by **M/s Rhodium Ferro Alloys Private Limited** [Online Proposal No. IA/AP/IND/84607/2018; MoEFCC File No. J-11011/640/2009-IA-II(I)] – **Terms of reference.**

1.0 M/s Rhodium Ferro Alloys Private Limited made an application vide online proposal no. IA/AP/IND/84607/2018 dated 7th November 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA

study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006.The proposal of expansion is submitted and appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. Rhodium Ferro Alloys Private Limited proposed to go for expansion of Ferro alloys plant (increase of production capacity of Ferro Silicon from 8,000 TPA to 44,000 TPA (or) Silico Manganese 77,220 TPA). It is proposed to manufacture the above products through Submerged Arc Furnace route.

3.0 The existing plant was accorded Environment Clearances vide F.No.J-11011 /640 / 2009-IA II (I), Dated 30th December, 2010. Renewal of Consent to Operate was accorded by Andhra Pradesh Pollution Control Board vide dated 03-08-2017, validity upto 31-07-2022.

4.0 The existing plant is located in Plot No. 16 & 18, APIIC Industrial Park, Gollapuram Village, Hindupur Mandal, Ananthapur District, Andhra Pradesh.

5.0 Existing plant is having 8.093 Ha. (20 Acres) of land. Proposed expansion will be taken up in the Existing plant. Of the total area, 6.6 Ac. (33%) of land is developed with greenbelt. No Forest land is involved in the plant site.

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

7.0 Total cost for proposed expansion project is Rs. 25 Crores. Proposed employment generation from proposed expansion project will be 150 nos. direct employment and 100 nos. indirect employment.

8.0 The targeted production capacity of the total plant is 77,220 TPA. The Mn ore for the plant would be procured from MOIL, Nagpur/ Bellary & Quartz from Ananthapur District of Andhra Pradesh. The ore transportation will be done through by rail & road (through covered trucks). The proposed capacity for different products & capacities after proposed expansion project as below:

S.No.	Product	Plant Configuration & Production Capacity			
		Existing (1 x 9 MVA SEAF)	Proposed now in the existing 1 x 9 MVA SEAF	Proposed Expansion (2 x 15 MVA SEAF)	After Expansion (1 x 9 MVA & 2 x 15 MVA SEAF)
1	Ferro Silicon (FeSi)	8,000 TPA (In Operation)	----	36,000 TPA	44,000 TPA
		or			

2	Silico Manganese (SiMn)	---	17,820 TPA	59,400 TPA	77,220 TPA

9.0 The total power requirement for the expansion project will be 40.9 MW, this will be met from Andhra Pradesh Southern Power Distribution Company Limited. Company has also proposed to install DG Set for emergency Backup supply.

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

Raw Material	Quantity (TPA)	Sources	Mode of Transport
Ferro alloys unit			
Ferro Silicon (36,000 TPA)			
Quartz	48,257	Ananthapur	By Road (covered trucks)
LAM coke	5,600	Imported (Chennai port)	By Road (covered trucks)
MS Scrap	1,000	Ananthapur	By Road (covered trucks)
Electrode paste	2,400	Bellary	By Road (covered trucks)
Silico Manganese (77,220 TPA)			
Manganese Ore	86,410	MOIL, Nagpur/ Bellary	By Rail & Road (covered trucks)
Mn. Slag	48,942	Ananthapur	By Road (covered trucks)
Quartz	21,208	Ananthapur	By Road (covered trucks)
LAM coke	8,592	Imported (Chennai port)	By Road (covered trucks)

11.0 Water consumption for the proposed expansion project will be 91 KLD and will be supplied by APIIIC. Domestic wastewater will be treated Septic tank followed by sub-surface dispersion trench and there will be no wastewater will be discharged outside the plant premises. Closed-circuit cooling system will be provided to SEAF unit.

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

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

Recommendtions 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>**

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

ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.

iii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

iv. Fourth hole extraction shall be provided on all SAFs for control of fugitive emissions,

v. The PP shall plan for rain water harvesting equalent to the quantity proposed to drawl from the ground.

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).

The following general points shall be noted:

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

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 1st MEETING OF EAC (INDUSTRY-I) HELD ON 26th to 28th NOVEMBER, 2018

S. No	Name and Address	Position	Attendance			Signature
			26th	27th	28th	
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P	P	
Members						
2.	Dr. K Singh Representative of Central Pulp and Paper Research Institute	Member	A	P	A	
3.	Dr. Siddarth Singh, Representative of Indian Meteorological Department	Member	A	A	A	
4.	Dr. G. Bhaskar Raju	Member	P	P	P	
5.	Dr. Jagdish Kishwan, IFS (Retd.)	Member	P	P	P	
6.	Dr. G.V. Subramanyam	Member	P	A	A	
7.	Shri Ashok Upadhyaya	Member	P	P	P	
8.	Shri R.P. Sharma	Member	P	P	P	
9.	Shri Sanjay Deshmukh	Member	A	A	A	
10.	Prof. S.K. Singh	Member	P	P	P	
11.	Dr. R. Gopichandran	Member	P	P	P	
12.	Shri Jagannath Rao Avasarala	Member	P	P	P	
13	Shri J.S. Kamyotra	Member	P	P	P	
14.	Shri Sharath Kumar Pallerla, Scientist 'F' / Director, MoEF&CC	Member Secretary	P	P	P	
15.	Shri Sundar Ramanathan, Scientist 'D', MoEF&CC	Joint Director	P	P	P	
16.	Shri RajasekharRatti, Scientist 'C', MoEF&CC	Dy. Director	P	P	P	