

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

**SUMMARY RECORD OF THE THIRH (31<sup>ST</sup>) MEETING OF EXPERT APPRAISAL COMMITTEE HELD DURING 7<sup>TH</sup> TO 9<sup>TH</sup> MAY 2018 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.**

The Thirtieth meeting of the Expert Appraisal Committee (EAC) for Industry-I Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held during 7<sup>th</sup> to 9<sup>th</sup> May 2018 in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

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

**31.2. Confirmation of the minutes of the 30<sup>th</sup> Meeting**

The minutes of 30<sup>th</sup> meeting held during 9<sup>th</sup> to 10<sup>th</sup> April, 2018 as circulated were confirmed with following corrections:

**29.18** Expansion of cement plant at village Telighana, Tehsil Rajgangpur, Dist. Sundergarh, Odisha by **M/s Shiva Cement Ltd.** [Proposal No. IA/OR/IND/6582/2011; MoEF&CC File No. J-11011/84/2008-IA II(I)] – **Extension of Validity of EC& Corrigendum**

For	Read
The Cement Plant of M/s Shiva Cement Ltd. located in Village Telighana, Tehsil Rajgangpur District Sundergarh, State Odisha was accorded environmental clearance for the expansion of clinker capacity from 0.115 MTPA to 0.71 MTPA and Cement production capacity from 0.132 MTPA to 0.918 vide EC letter dated 23rd July 2011.	The Cement Plant of M/s Shiva Cement Ltd. located in Village Telighana, Tehsil Rajgangpur District Sundergarh, State Odisha was accorded environmental clearance for the expansion of clinker capacity from 0.115 MTPA to 0.825 MTPA and Cement production capacity from 0.132 MTPA to 1.05 MTPA vide letter even no. dated 23 <sup>rd</sup> May 2011.

**30.18 Proposed enhancement of production capacity of Alumina Refinery (1.5 MTPA to 3.0 MTPA) along with Cogeneration Power Plant (90 MW to 150 MW) by M/s Utkal Alumina International Limited at village Doraguda, Tehsil Kashipur, District Rayagada, Odisha [Online proposal No. IA/OR/IND/64028/2017; MoEFCC File No. J-11011 / 753 / 2007 - IA. II(I)] – Further consideration for Environmental Clearance based on ADS.**

The committee deliberated on the representation made by M/s Utkal Alumina International Limited regarding correction in the recommended environmental conditions which are not relevant to Aluminium Refinery. The committee opined that the some of the conditions belong to Aluminium Smelter and not relevant to Alumini Refinery. Therefore, the committee recommended following conditions in lieu of earlier recommended conditions:

1. The red mud already generated from the existing plant shall be stored in the red mud pond lined with impervious clay prior to use to prevent leakage, designed as per the CPCB guidelines with proper leachate collection system. Ground water shall be monitored regularly all around the red mud disposal area and report submitted to the Regional Office

of the Ministry. Proper care shall be taken to ensure no run off or seepage from the red mud disposal site to natural drainage. Plan shall be prepared and implemented for utilising the already generated red mud in a time bound manner.

2. Water spraying on the red mud pond shall be arranged to prevent fine dust from being blown off the stack. Longer- term treatment of the red mud shall include reclamation of the mud ponds, neutralization, covering with topsoil, and planting with vegetation.
3. Decanted water from red mud pond is collected in the Process Water Lake during the monsoon and the same water recycled back to the process through pumping arrangements.
4. 100 % of the fly ash generated shall be utilised.
5. The company shall construct separate RCC drains for carrying storm water inside the plant.
6. The water drawl shall not exceed 20,000 m<sup>3</sup>/day (existing and the expansion project put together).
7. An amount of Rs Rs. 135.8 Crores (2.5% of Project cost of Rs. 5432.00 Crore) proposed towards Corporate Environmental Responsibility shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.
8. Green belt shall be developed in 353 Ha equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
9. The Capital cost Rs. 255.00 Crore and annual recurring cost Rs. 5.55 Crores towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.
10. Kitchen waste shall be composted or converted to biogas for further use.
11. The project proponent shall (Air Quality Monitoring):
  - a. install 24x7 continuous emission monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 742 (E) dated 30<sup>th</sup> August 1990 and thereafter amended vide G.S.R 46 (E) dated 3<sup>rd</sup> February 2006 (Aluminium); S.O. 3305 (E) dated 7th December 2015(Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
  - b. monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
  - c. Install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the plant area at least at four locations (one within and

three outside the plant area at an angle of 120° each), covering upwind and downwind directions;

- d. submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring for calibrations of CEMS and manual monitoring of air quality /fugitive emission to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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

- a. install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 742 (E) dated 30<sup>th</sup> August 1990 and further amended vide G.S.R 46 (E) dated 3<sup>rd</sup> February 2006 (Aluminium); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- b. monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories; and
- c. submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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

- a. provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- b. provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;
- c. provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
- d. ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation;
- e. provide covered sheds for raw materials like bauxite, coal, etc;
- f. recycle alumina dust collected in ESPs installed in calciner.

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

- a. adhere to 'zero liquid discharge';
- b. provide Sewage Treatment Plant for domestic wastewater; and
- c. provide garland drains and collection pits for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

15. The project proponent shall (Water Conservation):
  - a. practice rainwater harvesting to maximum possible extent; and
  - b. reduce water consumption in bauxite beneficiation and alumina refinery by concentrating the solids in the tailings;
16. The project proponent shall (Energy Conservation):
  - a. provide waste heat recovery system (pre-heating of combustion air) at the flue gases.
  - b. provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly; and
  - c. Provide the project proponent for LED lights in their offices and residential areas.
17. Used refractories shall be recycled as far as possible.
18. Oily scum and metallic sludge recovered from ETP shall be mixed, dried, and briquetted and reused.
19. The project proponent shall prepare GHG emissions inventory and shall submit the programme for reduction of the same including carbon sequestration including plantation.
20. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
21. 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.
22. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
23. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses.
24. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
25. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium Industry shall be implemented.
26. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.
27. 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.

28. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
29. 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).
30. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
31. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.
32. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
33. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
34. The project proponent shall (Post-EC Monitoring):
  - a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
  - b. put on the clearance letter on the web site of the company for access to the public.
  - c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.
  - d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
  - e. monitor the criteria pollutants level namely; PM10, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
  - f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
  - g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;
  - h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

**DATE: 7<sup>TH</sup> May, 2018**

- 31.3.** Expansion of existing Ferro alloys Plant by additional installation of 4x9 MVA capacity Submerged Arc Furnace for production of either or combination of High Carbon Ferro-Chrome (66,000 TPA); Ferro- Manganese (80,000 TPA) and SilicoManganese (60,000 TPA) at village Pankapal, Tehsil Sukinda, Dist. Jajpur, Odisha by **M/s Misrilal Mines Pvt Ltd** [Proposal No. **IA/OR/IND/63384/2016**; MoEFCC File No. J-11011/307/2011-IA-II(I)]- **Environmental Clearance based on ToRs.**

1.0 **M/s Misrilal Mines Pvt Ltd** has made online application vide proposal no. **IA/OR/IND/63384/2016** dated **16<sup>th</sup> February 2018** along with the copies of EIA/EMP seeking Environmental Clearance under the provisions of the EIA Notification, 2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of EIA Notification, 2006 and the proposal is appraised at Central level.

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

2.0 The expansion of existing Ferro Alloy Plant for production of either or combination of High Carbon Ferro Chrome, Ferro Manganese and Silico Manganese with installation of additional 4 X 9 MVA Submerged Arc Furnace of M/s Misrilal Mines Pvt. Ltd. Ferro Alloys Division is located at village Pankapal, Tehsil Sukinda District Jajpur, State Odisha was initially received in the ministry on 17<sup>th</sup> June 2011 for obtaining Terms of Reference. For the said project ToR was initially issued by the Ministry vide Letter No. J-11011/307/2011-IA-II (I) dated 12<sup>th</sup> August, 2011 for preparation of EIA/EMP Report. As per the ToR, baseline data collected during summer season (March, April & May) 2012. Application was submitted at State Pollution Control Board, Odisha for conduct of Public Hearing on 14.08.2012. A letter was issued by OSPCB to the District Magistrate & Collector, Jajpur on 01.09.2012 for finalization of date and venue for conduct of Public Hearing i.e. within 13 months of ToR issued. But the date and venue of Public Hearing could not be finalized by the District Magistrate & Collector, Jajpur District, Odisha within the stipulated 24 months period of ToR issued. In the mean time proponent applied to MoEFCC for extensions of validity of the ToR was extended by the MoEFCC for another a period of 1 year i.e. up to 10<sup>th</sup> August 2014. Public Hearing was conducted on dated 02/07/2014. The Public Hearing Proceedings was issued by OSPCB on dated 14/08/2014 vide Memo No. 13219/IND-II-PH-612 that is 4 days beyond 36 month of ToR issued.

3.0 In the Mean time there was no development regarding the Suspension of Mining License which was the main source for raw material procurement vide the order issued by the DDM Jajpur Road. And till February 2015 the proponent was not clear whether the suspension order will be revoked or not. The said expansion proposal is based on the availability of Ore from the captive mines.

4.0 During February 2015 PP learnt that there are possibilities of opening of own Chromite mines, PP had submitted the application of obtaining EC for the said FAP through Online on dated 18<sup>th</sup> February 2015 and the proposal was considered in the 35<sup>th</sup> reconstituted EAC Meeting held 26<sup>th</sup> March 2015. After detailed deliberations, the committee sought additional details for further consideration of the proposal.

5.0 Accordingly, PP submitted reply to ADS on 20<sup>th</sup> June 2015 and the proposal was further considered in the 45<sup>th</sup> reconstituted EAC Meeting held on 11<sup>th</sup> August 2015 and the Committee recommended the project for EC. However, Ministry asked for fresh ToRs due to expiry of the ToR at the time of application for EC.

6.0 Again the PP submitted application for issue of Fresh ToR on 30<sup>th</sup> May 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 meeting held during June 27-28, 2016 and prescribed ToRS to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment, Forests and Climate Change had prescribed TORs to the project on 25<sup>th</sup> October 2016. Vide letter no. J-11011/307/2011-IA.II(I).

7.0 The project proponent submitted an application for environmental clearance to the Ministry online on 22 March 2017 vide Online application no. IA/OR/IND/63384/2016 without conduct of fresh public hearing. The proposal was deliberated in the 17<sup>th</sup> meeting of Expert Appraisal Committee held during 6<sup>th</sup> – 7<sup>th</sup> April, 2017 and after detailed deliberation, the committee asked to submit the application after conducting fresh Public Hearing as per the ToRs prescribed.

8.0 The proponent has approached the Hon'ble High Court of Orissa vide WP(C) No. 13640 of 2017. The ministry has filed the reply on the matter. However, the court has issued the order dated 4.01.2018 directing the Ministry to conclude the issue of environmental clearance though the fresh ToR by taking a decision taking into consideration the report of public hearing already there and other recommendations already thereby Expert Appraisal Committee.

9.0 Thus EC application was re-submitted by PP vide online application no. IA/OR/IND/63384/2016 on 16/02/2018 along with Judgement Order of Hon'ble High Court of Odisha.

10.0 The project of M/s Misrilall Mines Pvt. Limited, Ferro Alloys Division located in village Pankapal, Tehsil Sukinda, District Jajpur, Odisha is for setting up additional 4 X 9 MVA capacity Sub Merged Arc Furnace for enhancement of production of either or combination of 66,000 TPA of High Carbon Ferro Chrome in addition to existing 15,000 TPA of HCFC, Ferro Manganese 80,000 TPA & Silico Manganese 60,000 TPA. The existing 1 X 4.5 MVA SAF was constructed under EIA Notification 1994 where it was mandatory to obtain the Environmental Clearance if the cost of the project exceeds 100.00 Crores of Rupees. As the project cost of the existing unit was under Rs.100.00 Crores and thus, obtaining Environmental Clearance was not applicable. Thus, the certified copy of the report of the status of compliance of the conditions stipulated in the Environmental Clearance by the Regional Office of the Ministry of Environment, Forests and Climate Change is not applicable. The proposed capacities for different products are as below:

<b>Name of Unit</b>	<b>No of Units</b>	<b>Capacity of each Unit</b>	<b>Production Capacity</b>
High Carbon Ferro Chrome	5	1 X 4.5 MVA And 4 X 9 MVA	81,000 TPA
Ferro Manganese			80,000 TPA
Sillico Manganese			60,000 TPA

11.0 The total land required for the project is 19.975 ha, and it is an Industrial land. There is no agricultural land, grazing land and Government Land. No forest land involved. The entire land has been acquired for the project. No river or stream passes through the project area. The Brahmani River flowing at a distance of 3.5 Km in the south direction of the project site

boundary. It has been reported that no water body exist around the project thus, modification / diversion of natural drainage pattern at any stage does not arise.

12.0 The topography of the area is flat and reported to lies between 20° 55' 19.51" N Latitude and 85° 00' 39.54" E Longitude in Survey of India topo sheet no. 73 L/1. at an average elevation of 40 m above MSL. The pre-monsoon depth of water level in the study area varies from 4.46 mbgl to a maximum of 9.47 mbgl with the average of around 6.59 mbgl. The post-monsoon depth of water level in the study area varies from 1.41 mbgl to a maximum of 3.63 mbgl with the average of around 2.55 mbgl. Around the project area the depth to water level is in the tune of 2 - 3 meters below ground level. The seasonal fluctuation of depth to water level ranges from 2.87 m to a maximum of 6.94 m with an average of around 4.04 m. The majority of the area shows a rise of 2 – 4 m in general. The net annual groundwater availability is calculated to be 65.36 mcm while gross annual draft in the buffer zone is 5.57 mcm. The stage of development is 9.31% and the area is categorized as safe.

13.0 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 in the study area is incorporated in EIA.

14.0 **The process of projects:** For production of Ferro Alloys, different stages involved are; Charging, Smelting, Tapping and Pouring. In High carbon Ferro Chrome, the charge is a mixture of oxides - chromium oxide ( $\text{Cr}_2\text{O}_3$ ), iron oxide ( $\text{Fe}_2\text{O}_3$ ) with carbon as reductant and silica as flux in a furnace wherein these undergo a thermal decomposition reaction. Metal Recovery is also a part of the process in case of High Carbon Ferrochrome. Certain portion of slag is conveyed to Metal Recovery Plant (MRP) wherein it is crushed as to extract good quality Ferrochrome from the slag waste. This process involves in three steps such as Crushing and screening of slag containing metal, Separation of metal from slag and Re-crushing of middling to realize additional metal. The percentage of Chromium in High Carbon Ferrochrome is between 57 to 63% and Carbon content is between 6 to 8 %. It is a base metal for production of Stainless Steel. Ferro Manganese will be made by heating a mixture of the oxides  $\text{MnO}_2$  and  $\text{Fe}_2\text{O}_3$  and coal & coke with high carbon content in electric arc furnace. The oxides will go through carbothermal reduction in the furnaces. Ferro manganese is used in producing steel for being an excellent deoxidizer and desulfurizer. The Percentage of Manganese in Ferro Manganese is between 65-75%. It is classified into two grades on the basis of its carbon content such as Low Carbon Ferro Manganese, where Carbon is about 0.5% and High Carbon Ferro Manganese with 6%-8% of carbon. Ferro Manganese, a bulk ferroalloy, which is a key ingredient for steel making. Around 90% of world manganese ore production is used by the iron and steel manufacturing industries and foundaries. Silico Manganese (SiMn) is a ferroalloy with high contents of manganese and silicon. It is made by heating a mixture of the oxides - manganese oxide ( $\text{MnO}_2$ ), silicon dioxide ( $\text{SiO}_2$ ) and iron oxide  $\text{Fe}_2\text{O}_3$  with carbon in a furnace wherein these undergo a carbothermic reduction of oxidic raw material. Silico-Manganese is used as a deoxidizer and an alloying element in steel. The standard grade Silico manganese contains 14 to 16% of silicon, 65 to 68% of manganese and 2% of carbon. The low carbon grade SiMn has carbon levels from 0.05 to 0.10 %.

15.0 Raw material for production of HC Ferro Chrome, Ferro Manganese and Sillico Manganese are Chrome Ore, Manganese Ore, Reducing Agents, Fluxes and Carbon Electrode Paste etc. The targeted production capacity of the project is either or combination of High Carbon Ferro Chrome 66,000 TPA in addition to existing 15,000 TPA, Ferro Manganese 80,000 TPA & Silico Manganese 60,000 TPA. The ore (Chrome Ore) for the plant would be sourced



from own captive Chromite Mines located in Sukinda and from external purchases for emergency in case lumpy ore from captive mine is not available. The ore transportation will be done through road Transportation with covered tarpaulin.

16.0 The water requirement of the project is estimated as 377 m<sup>3</sup>/day. Out of which 125 m<sup>3</sup>/day of ground water will be used. 4.0 m<sup>3</sup>/day of Regeneration & tank wash water will be used. Balance 248 m<sup>3</sup>/day of water will be taken from Rain Water Collection Pond. The permission for drawl of ground water is obtained from Central Ground Water Authority, Govt. of India, New Delhi vide letter no. 21-4/866/OR/IND/2016-533 dated 08/03/2017.

17.0 The power requirement of the project including existing unit is estimated as 35.38 MW and it will be sourced from the state grid.

18.0 Baseline Environmental Studies were conducted during Post monsoon season 2016 i.e from October 2016 to December 2016. Ambient air quality monitoring has been carried out at 8 locations during October 2016 to December 2016 and the data submitted indicated: PM<sub>10</sub> (52.17 to 79.85 µg/m<sup>3</sup>), PM<sub>2.5</sub> (21.42 to 49.67 µg/m<sup>3</sup>), SO<sub>2</sub> (4.21 to 17.43 µg/m<sup>3</sup>) and NO<sub>x</sub> (10.26 to 29.78 µg/m<sup>3</sup>). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 17.57433 µg/m<sup>3</sup>) with respect to the PM<sub>10</sub>.

19.0 Ground water quality has been monitored in 09 location in the study area and analyzed. pH: 6.0 to 7.5, Total hardness: 45.0 mg/L to 204.0 mg/L, Chloride: 10.61 mg/L to 56.20 mg/L and Fluoride not detected. Heavy metals are within the limits. Surface water samples were analyzed from 10 locations. pH: 6.5 to 7.7, BOD: 2.0 mg/L to 7.0 mg/L and COD : 8.40 mg/L to 24.9 mg/L.

20.0 Noise levels are in the range of 44.4 to 69.2 dBA for day time and 40.8 to 60.6 dBA for night time.

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

22.0 It has been reported that a total of 142,500 TPA of High Carbon Ferro Chrome Slag and Sillico Manganese Slag will be generated due to the project and all the quantities will be used in Road construction work and low area filling after TCLP test. It has been envisaged that an area of 6.475. 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 and 8.644 ha. of land will be remained as open land.

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

24.0 As per the judgment order of Hon'ble High Court of Odisha, conduct of Public Hearing w.r.to the fresh ToR is not required for the said proposal as Public Hearing is already conducted for the said expansion proposal in 2014. An amount of Rs.375.00 lakhs (5 % of Project cost) has been earmarked for Enterprise Social Commitment based on Public hearing issues.

25.0 The capital cost of the project is Rs.75.00 Crores and the capital cost for environmental protection measures is proposed as Rs.850.00 lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 85.15 lakhs. The employment generation from the proposed project/expansion is 480 numbers. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Sl. No	Description	Capital Cost (Rs. in Lacs)	Recurring Cost per annum (Rs. in Lacs)
1	Air Pollution Control	500.00	50.00
2	Water Pollution Control	120.00	12.00
3	Noise Pollution Control	Nil	0.15
4	Environment Monitoring and Management	175.00	17.5
6	Occupational Health	5.00	0.5
7	Green Belt	30.00	3.00
8	Others (House Keeping & Remedial Activities)	20.00	2.00
<b>Total</b>		<b>850.00</b>	<b>85.15</b>

26.0 Greenbelt developed in 6.475 Ha which is about 30% of the total acquired area. Local and native species are and will be selected. Plant density of 2500 trees per hectare will be maintained. Total no. of 16,187 saplings will be planted and nurtured in 6.475 Hectares in a regular manner.

27.0 It is reported that there is no court case or violation under EIA Notification to the project or related activity.

28.0 EIA Consultant organization: Environmental Research and Services (India) Private Limited, Bhubaneswar.

#### **Observations of the committee**

29.0 The committee observed that there are several ToR points prescribed have not been addressed adequately and the EIA/EMP has been treated as incomplete with respect to ToRs prescribed.

#### **Recommendations of the Committee:**

30.0 Therefore, the committee recommended for submission of revised EIA/EMP addressing all the prescribed ToRs and the EIA/EMP shall be as per the generic structure given in the EIA Notification, 2006 as amended from time to time. The revised EIA/EMP inter alia include:

- i. Certified compliance of conditions of Consent to Operate from the State Pollution Control Board;

- ii. The production capacity of each alloy proposed shall be calculated based on the power requirement for 1X4.5 MVA and 4X9 MVA;
- iii. Revised water balance addressing the make up water, ground water extraction, recharge proposed;
- iv. The capacity of the rain water harvesting pond shall be clearly derived;
- v. Plan for 100% utilization of the solid waste generation shall be given;
- vi. The EIA/EMP shall address the details of existing, proposed and total capacity after expansion;
- vii. Clarification on collection efficiency of Air Pollution Control Equipment;
- viii. Criteria for selection of sampling locations and the parameters selected for analysis of air, water and soil sample;
- ix. Detailed Disaster management plan based on hazard identification and risk Assessment(HIRA);
- x. The details of the team involved in the preparation of EIA giving details of their functional areas;
- xi. Time bound action plan for addressing the issues raised during the public hearing along with fund provision shall be incorporated in the EMP; and
- xii. The details of Corporate Environment Responsibility addressing the issues raised during the public consultation and issues emerged in the social impact assessment along with timebound action plans and budgetary requirements shall be incorporated in the revised EIA/EMP.

31.0 The committee recommended for retuning the proposal in the present form.

**31.4. Expansion of Sponge Iron Plant from 2x 100 TPD DRI Plant, 8,50,000 TPA Beneficiation Plant, 6,00,000 TP A Pellet Plant and 10MW Power Plant to 2x 100 TPD DRI (Process Modification) along with 1,20,000 TPA SMS, and 1,00,000 TPA Rolling Mill at Badtumkela, PS-Lahunipara, Dist- Sundergarh, Odisha by M/s Vikram Private Ltd. [Online proposal No. IA/OR/IND/34730/2015; J-11011/248/2015-IA-II(I)] – Environmental Clearance.**

1.0 **M/s Vikram Private Ltd.** made online application vide proposal no. IA/OR/IND/34730/2015 dated 30<sup>th</sup> March 2018 along with the copies of EIA/EMP seeking Environmental Clearance under the provisions of the EIA Notification, 2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of EIA Notification, 2006 and the proposal is appraised at Central level.

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

2.0 The expansion project of M/s Vikram Pvt Ltd located in Village-Badtumkela, Tehsil-Lahunipara, Dist-Sundergarh, State-Odisha was initially received in the Ministry on

25.01.2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 3rd meeting held on 28<sup>th</sup> to 29<sup>th</sup> January, 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 02.12.2016 vide Lr. No. J-11011/248/2015-IA.II(I).

3.0 The project of M/s Vikram Pvt Ltd located in Badtumkela Village, Lahunipara Tehsil, Sundergarh District, Odisha State is for enhancement of production of existing plant from 0.06 MTPA sponge Iron to 0.11 million tonnes per annum (million TPA) TMT rods. The existing project was accorded environmental clearance vide Ir.no. J-11011/533/2010-IA.II(I) dated 26.12.2012. The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneshwar vide Lr. No. 101-333/EPE, dated 12.01.18. There is no non-compliances reported by Regional officer. The proposed capacity for different products for new site area as below:

<b>Name of unit</b>	<b>Product</b>	<b>Capacity of each Unit</b>	<b>Production Capacity</b>
Induction Furnace with LRF & CCM	Hot metal	3X12 T & 1X30 T	1,07,000 T
Rolling Mill	TMT Bars	20 TPH	1,00,000 T

4.0 The total land required for the project is 41.27 ha. No forestland involved. The entire land has been acquired for the project. No River passes through the project area (p./c). It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is flat and reported to lies between 21<sup>o</sup> 50' 17.66'' N Latitude and 84<sup>o</sup> 55' 38.61'' E. Longitude in Survey of India topo sheet No. F45M13 at an elevation of 155 m AMSL. The ground water table reported to ranges between 4.42m below the land surface during the post-monsoon season and 8.12m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 5470 ham. Further, the stage of groundwater development is reported to be 8.93% and 11.9% in core and buffer zone respectively and thereby these are designated as safe areas.

6.0 No National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna provided through the reporting presence of no schedule-I fauna in the study area.

7.0 M/s VPL has existing sponge Iron Plant with iron ore beneficiation plant, pelletization plant and power plant. The company will purchase pig iron; scrap and balance sponge iron and melt them along with scrap and iron recovered from plant in eddy current heat of medium frequency core less Induction Furnace. Slag being lighter will float over molten hot iron metal. Slag will be scooped out of hot metal. It will be cooled & crushed and residual iron which is about 15% of slag will be recovered using magnetic separator and recycled to IF for melting with fresh charge in Furnace crucible.

8.0 The targeted production capacity of the total project is 0.11 million TPA. The ore for the plant would be procured from Iron Ore Mines of Koida & Barbil. The ore transportation will be done through road & rail.

9.0 The water requirement of the project is estimated as 20,880 m<sup>3</sup> /day, out of which 275 m<sup>3</sup>/day of fresh water requirement will be obtained from the ground water. The permission for drawl of groundwater is obtained from Central Ground Water Authority vide Lr. No. 21-4(321)/SER/CGWA/2011-716 date 10.06.2011.

10.0 The power requirement of expansion project is estimated as 15 MW which will be obtained from the state power grid.

11.0 Baseline Environmental Studies were conducted during winter season i.e. from Dec 2015 to February 2016. Ambient air quality monitoring has been carried out at 8 locations during Dec 2015 to February 2016 and the data submitted indicated: PM<sub>10</sub> (37.8 µg/m<sup>3</sup> to 66.2 µg/m<sup>3</sup>), PM<sub>2.5</sub> (24.8 to 38.1 µg/m<sup>3</sup>), SO<sub>2</sub> (6.2 to 9.9 µg/m<sup>3</sup>) and NO<sub>x</sub> (7.5 to 12.9 µg/m<sup>3</sup>). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 1.09 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 6.11 to 7.1. Total Hardness: 50 to 152 mg/l, Chlorides: 8.24 to 40.24 mg/l, Fluoride: 0.08 to 0.42 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 6.72 to 8.12 ; DO: 3.2 to 6.2 mg/l and BOD: 6.8 to 8.0 mg/l.

13.0 Noise levels are in the range of 49.7 to 72.8 dB(A) for daytime and 40.1 to 68.4 dB(A) for nighttime.

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

15.0 It has been reported that a total of 17500 tons of waste will be generated due to the project, out of which 7000 tons will be recycled and used in the process and 12500 tons will be used for land filling the low lying. It has been envisaged that an area of 0.9 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

16.0 It has been reported that the Consent to Establish /Consent to Operate from the State Pollution Control Board obtained vide Lr. No 3553/IND-I-CON-5338 dated 27.03.18 and consent is valid up to 31.03.2023.

17.0 The Public hearing of the project was held on 13.12.2017 at 11.00 AM under the chairmanship of Mr. Bhaskar Chandra Turuk (Addl Magistrate) for production of 0.11 million TPA of steel plant, under expansion. The issues raised during public hearing are:

<b>Sl. No</b>	<b>Points/questions raised by Public</b>	<b>Commitment of Project Proponent</b>
1	The public have expressed their concern about the Air & Water pollution and demanded to take precautionary pollution control	All the Stacks will be fitted with Air Pollution Control devices, in the proposed expansion project. Six Monthly Environment compliance is being submitted on regular basis to the

	measures as per the norms of the regulatory body	regulatory authority, also abide to the provision of Air & Water Pollution Act.
2	Demand for employment on priority basis to local people in the company.	The company has already employed 105 persons out of total 120 persons (about 90%) from local area. The company is providing wages & Provident Fund as per rules for contractual employees. The company has not given employment as committed during the last public hearing as because the project has not been executed yet.
3	Most of the Public have demanded for peripheral development like green belt, roads, street light, free health care facility, education with corporate assistance. They have also demanded that this must be supervised through a committee.	<p>The company is providing regular health checkups to their employees, medical facility in emergency situations, a electricity generator has been provided to the local hospital.</p> <p>The company has already planted 16000 saplings since last 5 years and all have survived, the company has year marked to plant trees in 32 acres of land.</p> <p>In case of peripheral development the company has under taken a number of activities like children's park, paying of electricity bills in nearby villages. The company will further take up such work in peripheral villages, after consultation with public.</p>
4	Industrial hazard and safety	The proponent assured to follow the safety guidelines and norms prescribed by the government.
5	They have demanded Bonei area to be declared as an Industrial area and Government should construct ESI hospital for the benefit of local people.	-

18.0 An amount of 200 Lakhs (2.5 % of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

19.0 The capital cost of the project is Rs 62 Crores and the capital cost for environmental protection measures is proposed as Rs 320 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 32 Lakhs. The detailed CSR plan has been provided in the EMP in its page No. 167 to 168. The employment generation from the proposed project / expansion is 188.

19.0 Greenbelt will be developed in 0.9 Ha which is about 33% of the total acquired area.

A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 2250 saplings will be planted and nurtured in 0.9 hectares in 3 years.

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

21.0 After detailed deliberations the committee sought the following additional information:

1. The existing and proposed facilities and capacities along with their cumulatives shall be given in tabular form.
2. Certified compliance report of the existing EC conditions from the Regional office of the Ministry.
3. Detailed plan for 100% utilisation of solid waste. Commitment that no solid waste shall be dumped with the plant premises.
4. Disaster management shall be based on HIRA. There are several hazards other than fire in LDO and FO storage tanks.
5. Criteria for selection of sampling locations and the parameters selected for analysis of air, water and soil sample.
6. Revised water balance addressing the make up water, ground water extraction and recharge proposed. Commitment that no additional water shall be withdrawn beyond the permitted quantity of 2976 m<sup>3</sup>/day.
7. Commitment for maintaining work zone environment as per the requirement of Factory of Act.
8. Time schedule for the completion and commissioning of the facilities for which EC was granted on 2<sup>nd</sup> December 2012.
9. Details of corporate environment responsibility addressing the issues raised during the PH and issues emerged in SIA along with time bound action plan and budgetary requirement.

22.0 Therefore, the proposal is deferred for submission of reply to ADS by PP for further consideration of the proposal.

**31.5. Proposed Modernization and Expansion of 20 TPD paper mill to 40 TPD including bleaching of matching capacity by M/s Sri Siddhi Vinayak Paper Mills Pvt Ltd located at Village Sukhani Tehsil Rajganj District Jalpaiguri State West Bengal [Proposal No. IA/WB/IND/60323/2016; MoEF File No. J-11011/238/2016-IA-II(I)] – Environmental Clearance**

**1.0** M/s Sri Siddhi Vinayak Paper Mills Private limited has made online application vide proposal no. **IA/WB/IND/60323/2016** dated **19<sup>th</sup> March 2018** along with the copies of EIA/EMP seeking Environmental Clearance under the provisions of the EIA Notification,

2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 5(i) Pulp and Paper Industry under Category “A” of EIA Notification, 2006 and the proposal is appraised at Central level.

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

2.0 M/s Sri Siddhi Vinayak Paper Mills Private Limited proposed expansion & modernization of existing paper mill by introducing bleaching process and enhancement of paper production capacity from 20 TPD to 40 TPD from waste paper at Village Sukhani, Tehsil Rajganj, District Jalpaiguri, West Bengal. The ToR application for the same was applied in the Ministry on 10.11.2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (EAC), (Industry-I) during its 13<sup>th</sup> meeting held during 23<sup>rd</sup> to 24<sup>th</sup> November, 2016 and prescribed the ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. The ToR letter was issued by the MoEF & C on the 31<sup>st</sup> January, 2017 vide File No: J-11011/238/2016-IA.II(I).

3.0 Existing and Proposed Capacity of the Plant as follows:

Particulars	Existing Capacity	Proposed Expansion Capacity	Total Capacity after Expansion
Paper	20 TPD without Bleaching process.	20 TPD include Bleaching (for total capacity)	40 TPD with bleaching.

4.0 The project shall be installed within acquired existing land of 1.987 ha. No additional land is required. No forestland is involved. The Chauli river is at a distance of 0.39 Km in West.

5.0 The topography of the area is undulated flat and reported to lies between 26°30’57.94” N to 26°31’2.59” N Latitude and 88°33’56.95” E to 88°34’8.37” E Longitude in Survey of India Topo sheet No. 78B10, 78B11 and 78B6 at and elevation of 260m MSL.

6.0 No National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also doesn’t report to form Corridor for Schedule-I fauna.

7.0 The existing process involves manufacturing of writing and Printing paper (20 TPD) from 50-70 gsm from waste paper. Bleaching process will be introduced in the proposed expansion proposal for manufacturing of additional 20 TPD paper. The total production capacity after expansion will be 40 TPD. The basic raw material used is described below:

S.NO	Particulars	Raw material Requirement		Total( After Expansion )
		Existing	Proposed Expansion	
1	Waste Paper	20.5 TPD	20.5 TPD	41 TPD
2	Resin	0.4 KLD	0.4KLD	0.8 KLD
3	Bleaching agent	0	4KLD	4 KLD
4	Fuel(Rice Husk)	10 TPD	10TPD	20 TPD
5	Other chemicals	0.1 KLD	0.1KLD	0.2 KLD



8.0 The targeted production capacity of the project is for production of Paper - 40 TPD with bleaching.

9.0 The total water requirement of the project in circulation will be 3000 KLD. Fresh makeup water requirement is envisaged as 635 KLD (Existing- 450 KLD, Proposed – 185 KLD) which will be sourced from bore well and Permission for sinking of new Bore well for extraction of water is obtained vide letter no. P081302800000109601TSE & P081302800000109701TSE dated 01.06.2017 by District Level Ground Water Resources Development Authority, Jalpaiguri, West Bengal.

10.0 The existing power requirement is 1200 KW. Additional 400 KW will be required for the proposed expansion project. The source of power will be State Electricity Board along with DG set (53 KVA) in back up.

11.0 Baseline Environmental Studies were conducted during Post monsoon season i.e. from 1<sup>st</sup> December 2016 to 28<sup>th</sup> February, 2017. Ambient air quality monitoring has been carried out at 8 locations during October to December and the data submitted indicated: PM<sub>10</sub> (66.30 µg/m<sup>3</sup> to 97.60 µg/m<sup>3</sup>), PM<sub>2.5</sub> (30.30µg/m<sup>3</sup> to 58.00µg/m<sup>3</sup>), SO<sub>2</sub> (6.50 µg/m<sup>3</sup> to 19.40µg/m<sup>3</sup>) and NO<sub>x</sub> (18.40 µg/m<sup>3</sup> to 56.70 µg/m<sup>3</sup>). The results of the modeling study indicate that the maximum cumulative GLC concentration of PM<sub>10</sub> wiz 98.071 µg/m<sup>3</sup> was predicted inside the study area. As the distance from source increases, the incremental concentration of PM<sub>10</sub> drops drastically due to settling of PM<sub>10</sub> particles under gravity and 19.402 µg/m<sup>3</sup> with respect to the SO<sub>2</sub> and 57.635 µg/m<sup>3</sup> with respect to the NO<sub>x</sub> at Project Site.

12.0 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 6.08 to 6.76, Total Hardness: 32.00 to 240.00 mg/l, Total Dissolved Solids: 62 to 318 mg/L. Heavy metals are within the limits. Surface water samples were analyzed from 2 locations. pH: 5.98 to 7.39; Total Hardness: 32.48 to 54.08 mg/L; Total Dissolved Solids: 55 to 91 mg/L.

13.0 Noise levels are in the range of 51.28 to 58.30 dB(A) for daytime and 42.60 to 49.50 dB (A) for nighttime.

14.0 No R&R is involved. As the expansion and modernization will be within the existing premises and no additional land requirement.

15.0 It has been reported that total waste water generated will be treated in the existing ETP of capacity 2700 KLD and Bag filter have been installed to control the gaseous emission generated from the fuel burning in the production process. It has been envisaged that an area of 0.655 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 for the existing unit obtained from the West Bengal Pollution Control Board obtained vide Memo No. C131/WPB/SRO/JAL/S-374-2012 and letter dated 5-10-2016 and valid upto 31-08-2021.

17.0 The Public hearing of the project was held on 08.12.2017 at Kanyashree Meeting Hall, BDO Office Tehsil: Rajganj, District: Jalpaiguri under the Smt Sumedha Pradhan, WBCS (Exe) and District Magistrate. The issues raised during public hearing along with time bound action plan with budgetary provision is as follows:

S. No.		Issued Raised	Action Plan
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	<b>Name of Public Participant</b>		<b>Commitment</b>	<b>Time</b>	<b>Budget</b>
1.	Sri. Santosh Chandra Roy Village: Baruapara.	<ul style="list-style-type: none"> <li>• He asked for overall development of the neighboring area and give priority to local residents for employment in the proposed expansion project.</li> <li>• He also requested the PP ensure pollution free process and provide medical facility.</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure Facility provide by the PP in which Installation of Street Lights in village Sukani, Kukurjan &amp; Shikarpur under ESC Program.</li> <li>• PP assured that they will give priority to local people regarding employment to their proposed expansion unit.</li> <li>• Suitable pollution control equipments will be provided as per pollution control plan under Environment Management Plan.</li> <li>• Health Care facility through Medical Monthly Health camps will be organize under ESC Programme</li> </ul>	<p>1 month</p> <p>Completed within 12 months during construction of project.</p> <p>3 months</p>	<p>Rs. 60,000</p> <p>Capital Cost of EMP: Rs. 35 Lakhs; Recurring Cost: 8.6 Lakhs/year.</p> <p>Rs. 2.5 Lakhs</p>

			in Village Sukani, Kukurjan & Shikarpur and distribution of beds in PHC of all three villages.		
2.	Smt. Pramila Roy of Baniapara and Smt. Bharati Roy of Bhaktipara	She asked for separate ladies toilet for women employees working in the plant.	PP assured for construction of ladies toilet with other necessary facilities for women employees.	4 months	Rs. 1.00 Lakh
3.	Sri Jyotish Roy of Fakirpara,	He requested the PP to proper manage the environmental issues such as water pollution or air pollution due to process activities.	Suitable air pollution control equipments will be provided as per air pollution control plan. ETP is installed for process water treatment. This will reduce the fresh water requirement as the treated water will be recycled in the process	Completed within 12 months during construction of project.	Capital Cost of EMP: Rs. 35 Lakhs; Recurring Cost: 8.6 Lakhs/year.

18.0 An amount of Rs. 6.10 lacs. (2.5% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues. The details of ESC proposed are as follows:

S. No.	Area of Concern	Name of the Village Represented in Public Hearing/ Public Consultation	Action Plan	Budget Allocated (in Lacs)	Time Frame (Implementation)
1.	Drinking Water	<ul style="list-style-type: none"> <li>Sukani</li> <li>Kukurjan village</li> </ul>	<ul style="list-style-type: none"> <li>Installation of Hand Pumps in Sukani and Kukurjan village</li> </ul> Cost of Installation of Hand Pump- 50,000x2=1 lac	1	6 months
2.	Health Care	<ul style="list-style-type: none"> <li>Sukani</li> <li>Kukurjan</li> </ul>	<ul style="list-style-type: none"> <li>Health Care facility through Medical</li> </ul>	2.5	3 months

		<ul style="list-style-type: none"> <li>• Shikarpur village</li> </ul>	Monthly Health camps by hiring (Doctor+Nurse+Assistant)= Per village cost/month 30,000 x3=90,000 Lacs+ miscellaneous amount-10,000 <ul style="list-style-type: none"> <li>• Distribution of Beds in PHC(Kukurjan, Shikarpur and Bahadur village)</li> </ul> Cost of Beds 16000x3x3=about 150000		
3.	Educational Development	<ol style="list-style-type: none"> <li>1. Sukani</li> <li>2. Fatapukur</li> <li>3. Kukurjan</li> <li>4. Jhoruvita village</li> </ol>	1. Repairing of classroom with required furniture <ul style="list-style-type: none"> <li>• Sukani Charia Para Primary School</li> <li>• Fatapukur Hindi Primary School</li> <li>• Kukurjan B.F.P.School</li> </ul>	2	1
4.	Infrastructure Facility	Sukani village	<ul style="list-style-type: none"> <li>• Installation of Street Lights in all villages-</li> </ul> Cost of Streetlight/19,000x3 Miscellaneous amount	0.60	1
<b>Total</b>				<b>6.10 lacs</b>	

19.0 The capital cost of the project is Rs. 1.5 Crores and the capital cost for environmental protection measures is proposed as Rs. 35 Lakhs. The annual recurring cost towards the environmental protection measures is Rs. 8.6 Lakhs. The employment generation from the proposed project / expansion is 60. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S. No.	Environmental Protection Measures	Capital Cost Rs. In lakhs	Recurring Cost Rs. In lakhs/year
1	Air Pollution Control Measures	11	1.5
2	Water Pollution Control Measures	16	4
3.	Noise Pollution Control Measures	0.5	0.1
4.	Greenbelt Development	3	1.5
5.	Rain Water Harvesting	0.5	0.3
6.	Fire Fighting and safety measures	4	1.2
<b>TOTAL</b>		<b>35</b>	<b>8.6</b>

20.0 Greenbelt will be developed in 0.655 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 1600 trees per hectare. Total no. of 1000 saplings will be planted and nurtured in 0.655 hectares in 5 years.

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

22.0 After detailed deliberations, the committee recommended for grant of Environmental Clearance with the following specific conditions and general conditions

1. 100% utilisation of fly ash, used activated carbon and ETP sludge.
2. Provision of storage tank for 15 days storage of wastewater.

**General Conditions:**

1. An amount of Rs. Rs. 6.10 Lakhs towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.
2. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
3. The Capital cost Rs. 35 Lakhs and annual recurring cost Rs. 8.6 Lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.
4. The project proponent shall (Air Quality Monitoring):
  - a. install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 546 (E) dated 30<sup>th</sup> August 2008 as amended from time to time and S.O. 3305 (E) dated 7<sup>th</sup>December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and the systems be calibrated according to equipment supplier's specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
  - b. monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
  - c. Install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the plant area at least at four locations, one within and three outside the plant area at an angle of 120° each, covering upwind and downwind directions;
  - d. provide sampling facility at process stacks as per CPCB guidelines for manual monitoring of emissions;
  - e. submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emission to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

5. The project proponent shall (Water Quality Monitoring):
  - a. install 24x7 continuous effluent monitoring with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 546 (E) dated 30<sup>th</sup> August 2008 as amended from time to time and S.O. 3305 (E) dated 7<sup>th</sup> December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
  - b. monitor regularly ground water quality at least twice a year (pre and post monsoon) using sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories; and
  - c. submit monthly summary report of monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
6. The project proponent shall (Air Pollution Control):
  - a. provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
  - b. install high volume, low concentration NCG collection & destruction system to mitigate all malodorous gases emitted;
  - c. control the emissions from chemical recovery section through primary and secondary venturi scrubbers
  - d. provide pollution control system in the pulp and paper sector as per the CREP Guidelines of CPCB;
  - e. provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
  - f. provide wind shelter fence and chemical spraying on the raw material stock piles; and
  - g. 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
7. The project proponent shall (Water Pollution Control):
  - a. provide the ETP to meet the standards prescribed in vide G.S.R. No. 546 (E) dated 30<sup>th</sup> August 2008 as amended from time to time and S.O. 3305 (E) dated 7<sup>th</sup> December 2015 (Thermal Power Plants) as amended from time to time;
  - b. provide Sewage Treatment Plant for domestic wastewater;

- c. provide garland drains and collection pits for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off;
  - d. provide tyre washing facilities at the entrance of the plant gates; and
  - e. 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.
  - f. 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.
8. The project proponent shall (Water conservation):
- a. practice rainwater harvesting to maximum possible extent;
  - b. provide water meters at the inlet to all unit processes in the pulp and paper plant; and
  - c. make efforts for reduction in specific water and power consumption and increase in the recycling of the treated effluent to minimize the discharge.
9. The PP shall (Energy Conservation):
- a. 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;
  - b. provide LED lights in their offices and residential areas; and
10. The project proponent shall carryout analysis of AOX both in soil and water samples collected from the irrigated area periodically (once in six months) and the report of same shall be submitted to Regional office of MoEF&CC.
11. The project proponent shall undertake every year, bio-accumulation study on the soils of surrounding agricultural fields with a view to ascertaining the build-up of toxic chemicals in these fields.
12. Deinking sludge and fine sludge from ETP shall be disposed through TSDF.
13. Black Liquor shall be separately processed for recovery of energy and chemical in a Chemical Recovery Process.
14. The proponent shall follow International Standards of safety for ClO<sub>2</sub> 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.
15. The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1 kg/tonne of paper production.
16. Elemental Chlorine Free (ECF) technology shall be used and lime kiln shall be installed to manage lime sludge

17. 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.
18. 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.
19. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
20. 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.
21. The PP shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
22. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the pulp and paper shall be implemented.
23. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.
24. 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.
25. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
26. 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).
27. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
28. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.
29. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
30. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
31. The project proponent shall (Post-EC monitoring):



- a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
- b. put on the clearance letter on the web site of the company for access to the public.
- c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.
- d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
- e. monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
- f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
- g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;
- h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work

**31.6. Forward Integration, Expansion and Product Diversification programme of existing mini Steel Plant by installation of Sponge Iron Kiln (1x350 TPD), Induction Furnace (1x7 T) & modernization / up gradation of existing furnaces i.e. 1x4T, 2x3.5T & 1x6T to augment capacity to 3x7 T + 1x6 T, Rolling Mill (1,00,000 TPA), Sinter Plant (35 TPD), WHR Boilers (1x35 TPH), Submerged Arc Furnaces (2x4.5 MVA) & Captive Power Plant (1x8 MW) located at Palitpur Road, Village & P.O Mirzapur, P.S. and District: Bardhaman, West Bengal by M/s Salagram Power and Steel Private Limited [Online Proposal No. IA/WB/IND/72080/2018; MoEF File No. IA-J-11011/73/2018-IA-II(I)] – Terms of Reference.**

1.0 The proponent has made online application vide proposal no. **IA/WB/IND/72080/2018** dated 1<sup>st</sup> April, 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) and 1(d) Thermal Power Plants under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level

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

2.0 **M/s Salagram Power and Steel Pvt. Ltd.** has decided to expand the capacity of the existing steel Plant by installing additional Sponge Iron Kiln (1x350 TPD), WHR Boiler (1x35 TPH Steam), modernization / up gradation of existing Induction Furnaces, one additional Induction Furnace (1x7 T), one Rolling Mill (1,00,000 TPD) for forward integration, one Sinter Plant (35 TPD), two Submerged Arc Furnaces (2x4.5 MVA) producing Ferro Alloys for product diversification and a TG Set (8 MW) at Palitpur Road, Village & P.O. Mirzapur, PS + District: Bardhaman in West Bengal.

3.0 The existing project was implemented as per the prevailing EIA Notification, 1994 of MoEF&CC, New Delhi, Govt. of India when project cost was the criteria for obtaining EC for the project. The cost of the project below 50 crores (later on it was revised to Rs. 100 Crores) did not require Environmental Clearance. The costs of the respective projects were less than such specified costs. The details of EC-NOC-CTO obtained from West Bengal Pollution Control Board is presented below in tabular form:

Sl. No.	Existing Units	Consent Number	Date of Issue	Project Cost	Justification for not obtaining prior EC
1.	Sponge Iron Plant (1x50 TPD)	Consent to Establish: 544-2N-47/2000	31-05-2000	Rs. 2.1 Crores	All these projects were implemented as per the prevailing EIA Notification, 1994 of MoEF&CC, New Delhi, Govt. of India when project cost was the criteria for obtaining EC for the project. The cost of the project below 50 crores (later on it was revised to Rs. 100 Crores) did not require EC. The costs of the respective projects were less than such specified costs.
2.	Sponge Iron Plant (1x50 TPD)	Consent to Establish: 772/2N-009/2001	25-09-2001	Rs. 1.9086 Crores	
3.	Sponge Iron Plant (1x50 TPD)	Consent to Establish: 2868-2N-396/2002	26-05-2003	Rs. 3.95 Crores	
4.	1x4 T & 2x3.5 T Induction Furnaces (for 120 TPD Ingots production)	Consent to Establish: 928-481/WPB-NOC / 95-96	12-10-1995	Rs. 6.1307 Crores	
5.	Continuous Casting Machine	Consent to Establish: 108_kc_nc_s/02/418	21-07-2009	Rs. 5.12 Crores	
6.	5 MW CPP (Boilers 3x4.5 TPH + 1X15 TPH) & its Amendments	Consent to Establish: 2540-2N-389/2002	31-01-2003 Amendment : 27-03-2003 & 19-05-2003	Rs. 10.6873 Crores	

7.	All exiting Units	Valid Consent to Operate: 1212-7/WPBD-Cont (752)/99	29-06-2016 (valid upto 30-6-2019)	-	-
8.	Change of Company Name from M/s Shyam Sel & Power Ltd. to M/s Salagram Power and Steel Pvt. Ltd.	Consent to Establish: 279-7/WPBD-CONT (752) / 99 (Pt-II)	27-09-2016	-	-

Sl. No.	Existing Units	Environmental Clearance	Date of Issue	Project Cost	Remarks
1.	1x6 T Induction Furnace	Environmental Clearance: EN/2197/T-II-I/ 044 / 2008	19-08-2009	-	EC was obtained from SEIAA, West Bengal for 1x6 T IF + 1x4.5 T EAF. Out of these 1x6 T IF was installed after getting NOC from WBPCB and 1x4.5 T EAF shall not be installed.
		Consent to Establish: 25-2N-03 / 2009 (E)	11-01-2010	Rs. 2.0 Crores	

4.0 The proposed expansion project is located at Palitpur Road, Village & P.O Mirzapur, P.S. and District: Bardhaman, West Bengal.

5.0 The proposed expansion project will be installed within the existing Plant Boundary i.e. 10.44 hectares (25.8 acres), which is already developed as an industrial land. Additionally, some adjoining land (approximately 1.214 hectares i.e. 3 acres) would be acquired. Of the total area, 3.85 hectares (9.5 acres) (33%) of land is earmarked for green belt development.

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. Ramnabagan Wildlife Sanctuary is located around 4.0 km to the south-west direction w.r.t the project site.

7.0 Total project cost is approx. Rs. 108 Crore. Proposed employment generation from proposed project will be 334 direct employment.

8.0 The targeted production capacity of the proposed expansion project is 1,00,000 TPA TMT Bars, Rods, Flats; 10,500 TPA Sinter (to be used as part of Charge Mix of SAF); 12,960 TPA Silico - Manganese / Ferro – Chrome along with 8 MW capacity Captive Power Plant.

9.0 The overall project scenario is presented below:

Sl. No.	Existing Units	Present Production Capacity	Proposed Units under Expansion	Total Production Capacity after Expansion
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1.	3x50 TPD Sponge Iron Kilns	48,000 TPA * Sponge Iron	1x350 TPD Sponge Iron Kiln	500 TPD or 1,50,000 TPA
2.	1x4 T, 2x3.5 T and 1x6 T Induction Furnaces	56,000 TPA Liquid Steel	1x7 T Induction Furnace and modernization / up gradation of existing Furnaces to augment capacity (to 3x7 T + 1x6 T)	1,10,000 TPA
3.	6/11 m, 2 Strand Continuous Casting Machine	54,000 TPA * MS Billets for sale - 100x100 mm, 125x125 mm & 160x160 mm	Nil	1,05,000 TPA (existing CCM is having In-built Capacity)
4.	Nil	Nil	1 No. Hot Rolling Mill	1,00,000 TPA
5.	Nil	Nil	1x 35 TPD Sinter Plant	10,500 TPA (to be used as part of Charge Mix of SAF)
6.	Nil	Nil	2x4.5 MVA Submerged Arc Furnaces (SAF)	12,960 TPA
7.	3XWHR Boilers	3x4.5 TPH	1XWHR Boiler (1x35 TPH)	48.5 TPH
8.	1x AFBC Boiler	1x24 TPH	Nil	24 TPH
9.	1x 8 MW TG Set for Captive Power Plant	8 MW	1x8 MW TG Set	16 MW

\*Present Production Capacity is as per WBPCB's Memos.

10.0 The estimated total power demand of the proposed expansion project is around 17.15 MW. The power requirement will be met from existing 8 MW along with the proposed 8 MW captive power plant and from nearby grid of WBSEB.

11.0 The major raw materials to be handled will consist of Iron Ore Lump / Pellet, Non Coking Coal, Dolomite, Pig Iron, Ferro Alloys etc. The annual requirement of major raw materials, which will be required is presented below:

SL. NO.	RAW MATERIALS	ANNUAL REQUIREMENT IN TPA	SOURCE
<b>DRI PLANT (3X50 TPD + 1x350 TPD)</b>			
1.	IRON ORE LUMP / PELLET	2,25,000	MARKET

2.	COAL	1,50,000	MARKET / SOUTH AFRICA
3.	DOLOMITE	4,500	MARKET
<b>INDUCTION FURNACE (4X7 T + 1x6 T)</b>			
1.	SPONGE IRON	1,00,000	IN HOUSE GENERATION
2.	STEEL SCRAP	6,000	IN HOUSE GENERATION
3.	PIG IRON	20,000	MARKET
4.	FERRO ALLOYS	1,500	MARKET

**SUBMERGED ARC FURNACE (2x4.5 mva)**

**(Raw Material requirement shown here is for Si-Mn Production)**

1	QUARTZite	4,000	MARKET
2	MANGANESE ORE	6,400	MARKET
3	COKE	6,500	MARKET
4	PIG IRON	1,300	MARKET
5	Mn. Slag	18,000	MARKET
6	DOLOMITE	3,500	MARKET
7	Sinter	3,500	In house production FROM RAW MATERIAL FINES

**AFBC Boiler (1x24 TPH)**

1	DOLOCHAR	45,000	IN PLANT GENERATION
2	COAL/HUSK	20,000	IN PLANT GENERATION, MARKET

12.0 Ground water will be used for meeting the daily make up water requirement of the plant. As per initial estimate, additional make up water to the tune of 160 cu.m /day will be needed for the proposed expansion including 10 cu.m /day for in-plant domestic use. Total make-up water requirement for the Plant after Expansion will be 365 cu.m /day. Domestic wastewater from toilet blocks will be treated in a Sewage Treatment plant.

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

1. Public Hearing to be conducted by the concerned State Pollution Control Board.
2. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
3. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018.
4. Certificate compliance of Consent to Operate from the State Pollution Control Board shall be submitted along with EIA/EMP

5. Explore the possibility of replacing 3x50 TPD by 1x200 TPD to improve energy conservation and efficiency.
6. To explore the possibility of plantation around the plant premises.
7. Noise monitoring shall be carried out with the sensitive receptors at 2 km from the plant boundary.
8. Criteria for selection of sampling locations and the parameters selected for analysis of air, water and soil sample.
9. A detailed action plan for 100 % utilisation of solid waste shall be submitted along with the EIA/EMP.

**31.7. Proposed merger and operational integration of the two facilities M/s Amba Shakti Ispat Ltd with M/s Amba Metals located at notified industrial area phase-2 Kala Amb, Tehsil Nahan and Dist. Sirmour Himachal Pradesh [Online proposal No. IA/HP/IND/73359/2018; IA-J-11011/108/2018-IA-II(I)] – Terms of Reference**

1.0 The proponent has made online application vide proposal no. **IA/HP/IND/73359/2018** dated 7<sup>th</sup> March, 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level

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

2.0 M/s Amba Shakti Ispat Ltd proposes to install an expansion of existing manufacturing unit for Expansion of Total Production Capacity and augmentation of integrating melting and rolling facility by merging two units. At present there are 2 existing plants/Units namely; 1. M/s Amba Metals and 2. M/s Amba Shakti Ispat Ltd under the same owner. These two units are in the process of being merged into one unit namely M/s Amba Shakti Ispat Ltd. It is proposed to set up the plant for melting and rolling by using induction furnaces.

S. No.	Particulars	Amba Shakti Ispat Ltd.	Amba Metals	Gross after merger	Proposed addition	Total
1.	Product	MS Rolled sections	Billets/Ingots	MS Rolled sections	Billets/Ingots and MS Rolled sections*	
2.	Induction Furnace	-	6 MT/Heat (2- nos)	-	15 MT/Heat (3 nos)	<b>45 MT/heat</b> (Multiple IFs)
3.	Installed production capacity	45000 MTPA	36000 MTPA	<ul style="list-style-type: none"> <li>• Billets/Ingots- 36000 MT/A</li> <li>• MS Rolled</li> </ul>		<ul style="list-style-type: none"> <li>• Molten Metal – <b>190000 MTA</b> (540 MTD)</li> <li>&amp;</li> </ul>

				sections - 45000 MT/A		• Rolled Product – <b>182400</b> MT/A (521 MTD)
4.	Fixed capital investment	8.50 Cr	10.00 Cr	-	-	<b>24.50 Crore</b>
5.	Fuel consumption coal	1200 MT/A (REHEATING FURNACE)	-	1200 MT/A (REHEATING FURNACE)	-	<b>2500</b> MT/Annum
6.	Electrical power requirement	3.50 MVA	10.00 MVA	-	-	<b>17 MVA</b>
7.	Raw material requirement	Billets/Ingots –(11000+36,000) 47000 MT/Annum	MS scrap/Sponge Iron-39130 MT/A	MS scrap /Sponge Iron-39130 MTA +11000MT/A	-	MS scrap /Sponge Iron- <b>206000</b> MT/Annum
8.	Land area	30000 sq.m.	13360 sq.m.	43,360 sq.m.		<b>43,360 sq.m.</b>
9.	Manpower requirement	60	50	110		<b>150</b>
10.	No of operational days	300	300	300	-	<b>350</b>
11.	Gross water requirement	7 KLD	6 KLD	13KLD	-	<b>65 KLD</b>
12.	Solid waste generation	• Mill Scale- 1.2 Tonnes • End cuttings / trimmings - 10 Tonnes	Slag – 3.6 TPD	• Slag – 3.6 TPD • Mill Scale- 1.2 TPD • End cuttings / trimmings - 2 TPD	-	• Slag – 30 TPD • Mill Scale-10TPD • End cuttings / trimmings-10 TPD
13.	Hazardous waste	• FluE GAS dust-54 MT/Annum • Spent oil (5.1) 60 Ltr/Annum	Lubricant oil 42 ltr/Annum	-	-	Fly ash 1050 Kg/year

14.	Waste Water	-	-	-	-	<b>20 KLD</b>
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3.0 Earlier there is no requirement of Environmental Clearance for the existing project due to the both plant is running since 2004 before the EIA notification dated 14th September 2006 with existing capacity around 36,000 MTA (Amba Metal) & 45,000 MTA (Amba Shakti Ispat Ltd.) and also project cost is less than the 100 Crs. Therefore, did not attract the provision of EIA notification, 1994. Consent to Operate for Amba Shakti Ispat Ltd. was accorded by Himachal State pollution Control Board vide Ir. no. HPSPCB/PCB-ID 14150 validity of CTO is up to 31<sup>st</sup> March 2019 & for Amba Metal it is applied for renewal.

4.0 The proposed unit will be located at Plot no 6 & 6A industrial area phase-2 Kala Amb, Tehsil -Nahan, District-Sirmaur, State-Himachal Pradesh.

5.0 The land area acquired for the proposed plant is 43360 Sqm. out which Total Covered Area - 26873 Sqm. & Open Area – 16487 Sqm. No forestland involved. The entire land has been acquired/not acquired for the project of the total area 1.3 ha (30%) land shall 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. 24.5 Crore. Proposed employment generation from proposed project will be 150 direct employments and 350 indirect employments.

8.0 The targeted production capacity of the rolling mill is 190000 million TPA. The raw material is Scrape & Sponge Iron.

9.0 The electricity load of 17 MVA will be procured from Himachal Pradesh State Electricity Board (HPSEB) Company has also proposed to install 2 DG Set.

10.0 Proposed raw material and fuel requirement for project are scrape, sponge iron and coal for re-heating purpose. (If Required).

11.0 Water Consumption for the proposed project will be 65 KLD.

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 After detailed deliberations and the legal agreement of purchasing M/s Amba Metals by M/s Amba Shakti Ispat Ltd, the committee observed that M/s Amba Metals still remains as a separate entity and has not been represented in the committee. Hence, the committee recommended to return the proposal.

**31.8.** Proposed Integrated Mini Steel Plant With Captive Power Plant of Capacity 16 MW located at Chinnambedu Village, Ponneri Tehsil, Thiruvallur District, Tamil Nadu by **M/s SLO Steels Limited** [online proposal No. IA/TN/IND/73823/2018; MoEFCC File No. IA-J-11011/154/2018-IA-II(I)} – **Terms of Reference**

1.0 The proponent has made online application vide proposal no. IA/TN/IND/73823/2018 dated 30<sup>th</sup> March, 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); and 1(d) Thermal power Plants under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level

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

2.0 **M/s SLO Steels Limited** proposed an Integrated Mini Steel Plant and Captive Power Plant of Capacity 16 MW. The plant uses DRI technology, Induction furnace and Re-heating furnace for process activity. The major production facilities envisaged for the proposed integrated mini steel plant are as follows:

Sl. No.	Shop / Unit	Capacity
1	Sponge iron plant	2 x 100 Tons/day
2	Induction furnace	2 x 25 Tons, 9000 KW each
3	Billet caster	1x 3 strand
4	Slight, medium and heavy structural mill	180,000 TPA
5	Captive power plant	16 MW

3.0 The proposed unit is proposed at Chinnamedu & Kizhmeni Villages of Ponneri Taluk Tiruvallur District, Tamil Nadu.

4.0 The land area for the proposed plant is 12.66 ha (31.30 acres) which includes owned land of 11.77 ha (29.09 acres) & leasehold of 0.89 ha (2.21 acres). No forest and agricultural land has been involved in the proposed project site. Of the total area of 12.66 ha, 52.40% of land i.e., 6.63 ha (16.4 acres) will be used for greenbelt development.

5.0 No National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. are reported to be located in the core and buffer zone of the project.

6.0 Total project cost is approx. 27 Crore rupees. Proposed employment generation from proposed project will be about 315 persons through direct employment and 1000 indirect employment.

7.0 The targeted production capacity the integrated steel plant is Re-rolled products of 1,80,000 TPA. Iron ore for the plant would be procured either from Bellary or from Hospet. Ore transportation would be done in closed trucks through road. The proposed capacity for different products for new site area as below:

Sl. No	Products	Quantity
1	Sponge Iron	66,000 TPA
2	MS Billets	1,91,489 TPA
3	Re-rolled products such as TMT Rods, Angles, Flats, Channels, Rounds	1,80,000 TPA
4	Power	16 MW

8.0 The electricity load of 21.38 MW will be utilized from 16MW Captive Power Plant and the remaining power of 7.5MW will be procured from Tamil Nadu Generation and Distribution Corporation (TANGEDCO). The Company has also proposed to install 1x 1000 KVADG set for power back-up.

9.0 The fuel requirements for project are High Speed diesel of 200 TPA. The requirement would be fulfilled by acquiring the fuel from the Local Supplier. The raw material requirement is as follows:

Sr. No	Raw material	Quantity (TPA)	Source	Transportation mode
1	Sized iron for SI Plant	1,18,575	Bellary, Hospet	Road
2	Non coking coal for SI Plant	83,700	Indonesia	Shipping cum road
3	Limestone for SI Plant	2,790	Bagalkote	Road
4	Fuel oil for SI, IF, & RM	1,909	Local sources	Road
5	Ferro alloys for IF	2,970	Local sources	Road
6	Steel scrap/ Pig Iron for IF	1,36,900	Local sources	Road
7	No coking coal usage in RM	13,780	Indonesia	Shipping cum road
8	Non coking coal for CPP	67,960	Indonesia	Shipping cum road
9	Dolochar for CPP	20,925	SI Plant	-

\*SI: Sponge Iron; IF: Induction Furnace; RM: Rolling Mill; CPP: Captive Power Plant

10.0 Water Consumption for the proposed project will be 972 KLD and waste water generation will be 389.7 KLD. Domestic waste water (10.8 KLD) will be treated in the proposed STP of 20 KLD and industrial waste water (378.9 KLD) generated will be treated using Cooling and Guard Pond and reused again in the process.

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

12.0 EIA Consultant: M/s Vimta Labs Private limited, Hyderabad.

13.0 After detailed deliberations, the committee observed that detailed information relating to site suitability has not been furnished. The committee also informed that the EIA coordinator has not visited the site to ascertain the site suitability in environment point. Therefore, the committee suggested to submit afresh proposal with detailed justification of environmental compatibility of the site for the proposed Greenfield project after site visit by the project proponent alongwith the EIA consultant.

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

**31.9. Enhancement of production 1 MTPA to 4 MTPA in two phases Portland Pozzolana Cement grinding unit of M/s Eco Cement Limited at Kulhariya village, Durgawati Tahasil, Bhabua, Bihar [Online Proposal No. IA/BR/IND/73897/2018; J-11011/287/2010-IA.II(I)] – Terms of Reference.**

1.0 The proponent has made online application vide proposal no IA/BR/IND/73897/2018 dated 2<sup>nd</sup> April, 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) cement plants under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level

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

2.0 M/s Eco Cement Limited proposes for expansion of existing Grinding unit Production from 1 MTPA to 4 MTPA in two Phases. (Portland Pozzolana Cement grinding Unit). i.e incremental 3 MTPA. (1 MTPA in 1st phase) and 2 MTPA and 2<sup>nd</sup> phase) through installation of additional stand alone closed-circuit Ball mill and associated equipment at existing plant location at village Kulhariya.

3.0 The existing project was accorded environmental clearance vide letter No- F NO- J - 11011/287/2010-A II (i) Dated 31 Oct 2011. Consent to operate was accorded by Bihar State Pollution control Board vide letter No T – 7001 dated 27.12.2017 (valid up to 31.03.2022) and Consent to Establish vide letter No – T -7002 dated 21.12.2017 and validity is up to 31.03.2022.

4.0 The Proposed unit will be located at Plot No-1644 village Kulhariya, Durgawati Tahasil, Bhabua district, Bihar State.

5.0 The land area acquired for the proposed plant is 21.100 Ac. The land is non-forest land. Additional land 60.00 Ac will be acquired. (Truck parking 30.00 Ac+ Railway siding 30.00 Ac) . About 33% of total land will be developed as green belt. 7 Ac has been developed as green belt. Plantation will be done in parking area and also boundary of railway siding.

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.

7.0 Existing project cost is Rs. 100.00 Cr. Additional project cost will be Rs.312.02 Cr. for expansion (for Rs 117. 67 Cr (1<sup>st</sup> phase) and to 194.35 Cr (2<sup>nd</sup> Phase). Total cost = Rs.412.02 Cr. Present employment is 37 . Proposed direct employment generation from project will be 60.

8.0 The targeted production capacity will be 4 MTPA. The cement shall be packed in 50 kg bags by packing machine and dispatched after loading of bags in tracks to the consumers.

9.0 The electricity load of 12 MVA will be procured from Bihar state electricity Board.

10.0 Proposed raw materials is as follows :

Sl. No.	Particulars	Existing for 1 MTPA	Additional Due to Incremental Production		Total for 4 MTPA
			1 <sup>st</sup> phase (1 MTPA)	2 <sup>nd</sup> phase (2 MTPA)	
1.	Clinker (65%)	1950 TPD	1950 TPD	3900 TPD	7800 TPD
2.	Gypsum (05 %)	150 TPD	150 TPD	300 TPD	600 TPD
3.	Fly ash (30%)	900 TPD	900 TPD	3600 TPD	3600 TPD

11.0 132/33 KV power substation is located in karmnasa which is at 3 km from plant site. Estimated power = 12 MVA.

12.0 The water requirement is as follows:

Sl. No.	Purpose	Existing	Additional Requirement		Total
1.	Industrial	3.8	3.8	7.6	15.2
2.	Domestic	4.2	4.2	8.4	16.8

Total	8	8	16	32
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Source: Rain water harvesting pond having depth of 3 meter and area of 1500 m<sup>2</sup> has been kept for source of water for industrial use & bore well for domestic purposes. The permission for drawing of ground water has been submitted (App. No.- 21-4/254/BR/IND/2017) to Central Ground Water Authority.

13.0 The plant is based on dry process technology. No waste water will be discharged to outside. No industrial waste will be generated. Domestic waste water will be treated in soak pit Combination. Used oil & grease will be generated and will be sold to authorized reprocessors. Plant in based on zero discharge concept.

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

15.0 Name of Consultant – Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar. QCI/NABET – Si.No.154 as on 5th April 2018.

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:**

1. Public Hearing to be conducted by the concerned State Pollution Control Board.
2. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
3. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018.
4. Certificate compliance of earlier EC from the Regional officer of the MoEFCC shall be submitted along with EIA/EMP.
5. Explore the possibility of transportation of raw material and products from the railway siding by conveyor.
6. Bag filter shall be designed for emission rate 25 mg/Nm<sup>3</sup> and 150% capacity on SCGIH standards

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

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

**31.11.** Proposed capacity enhancement of Sponge Iron manufacturing and Induction Furnace with new Hot Rolling Mill located at Sanguem Municipal Council, Sanguem, Goa by **M/s Goa Sponge and Power Limited** [Online proposal No. IA/GA/IND/74625/2018; MoEFCC File No. IA-J-11011/152/2018-IA-II(I)] – **Terms of reference.**

1.0 **M/s Goa Sponge and Power Limited** made online application vide proposal no. IA/GA/IND/74625/2018 dated **17<sup>th</sup> April 2018** along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(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 of the project as per the submissions of project proponent:**

2.0 M/s. **Goa Sponge & Power Ltd.** proposes capacity enhancement of existing manufacturing unit for Sponge Iron, Steel Billets on its plot located on Sy.no. 58/59/60 of Santana Village, Taluka Sanguem, State Goa. The existing set up of the plant for Sponge Iron unit is based on Coal based DRI technology.

3.0 The existing project was **initiated prior to 16th September, 2006 the sponge iron manufacturing capped at 90,000 TPA and Induction Furnaces of total 90,000 TPA capacity were not under purview of EIA notification 2006 and hence does not require prior Environmental Clearance.** Consent to Operate was accorded by Goa State Pollution Control Board vide lr. no. **5/2240/02-PCB/CI-3946** validity of CtO is up to **30.05.2019.**

4.0 The proposed unit is located at Sy.no.58/59/60 Village: Santana, Taluka: Sanguem, District: South Goa State: Goa.

5.0 The land area under industrial zone is 5 Ha. No /forestland involved. The entire land has falls under industrial zone for the project. Of the total area 0.7ha 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 **30 Crore** rupees. Proposed employment generation from proposed project will be 50 nos direct employment and indirect employment.

8.0 The targeted production capacity of the sponge Iron is 1, 25,000 TPA, 425 TPD MS Billets, Captive power plant 12.5 MW and new Direct charging hot rolling mill 425 TPD. The ore for the plant would be procured imported from South Africa, 6 – 30mm size which is crushed and screened to get required size of 4 – 20mm. In case of non-availability of iron ore, pellets are procured from Karnataka region. The raw material transportation will be done through Road. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
<b>Existing</b>			
Sponge Manufacturing	Iron 90,000 TPA	35,000 TPA	1,25,000 TPA

Induction furnace and Billet caster	12 T X 2nos = 300 TPD (90,000 TPA)	15 T X 1 no. by replacing one of the 12 T Induction furnace = 125 TPD	425 TPD (12 T & 15 T Induction furnace)
Captive power plant	8MW: WHRB + 4MW: FBC = 12 MW	0.5 MW	12.5 MW
<b>Proposed expansion</b>			
Direct charging hot rolling mill	--	425 TPD	425 TPD

9.0 GSPL has Power generation capacity of 12.0 MW of which 10.0 MW is consumed in-house for steel making and Sponge iron unit and the balance power of 1 -2 MW is exported to Goa Electricity Grid. Company has also existing 2nos of DG Set of capacity 1250KVA for power back up.

10.0 Proposed raw material for project are as below:

<b>Finished product: Sponge Iron Manufacturing</b>			
Material	Existing quantity required	Quantity estimated after proposed expansion	Mode of transportation
Iron Ore	500 TPD	550 TPD	By road. It is proposed to import iron ore for future manufacturing through sea to Mormugao Port Trust and then by road to the site
Coal	250 TPD	300 TPD	By road. It is proposed to import iron ore for future manufacturing through sea to Mormugao Port Trust and then by road to the site
Dolomite	12.5 TPD	18 TPD	By road
<b>Finished product: Steel Billets Manufacturing</b>			
Sponge iron	As per the ratio of carbon required for manufacture of steel billets		Available within the plot premises. Pig iron is brought by trucks
Scrap			
Pig iron			
<b>Finished product: Hot rolling mill</b>			
Steel billets	Nil	As per the requirement of product	Available within the plot premises.

11.0 Water Consumption for the proposed project will be 1450 KLD. No waste water generation from the industrial process and Domestic waste water generation will be 32KLD

which will be treated/ disposed off through septic tank followed by soak pit within plant premises.

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

**Observations of the committee:**

13.0 The committee observed that the sponge iron manufacturing of 90,000 TPA and Induction Furnaces of total 90,000 TPA capacity were already existing in the premises but application was made as new project. It was also observed that the project has not been represented by senior person from the organisation and EIA coordinator.

14.0 Therefore, the committee recommended for returning the proposal in the present form and advised to make application under expansion category.

**31.12. Expansion of Existing Sponge Iron Plant from 4,60,000 TPA To 6,10,000 TPA By Adding 1x500 TPD DRI Kiln With WHRB (53.2 TPH) for Generation of 14 MW Power located at Industrial Growth Center, Village - Siltara, Tehsil Dharsiwa, District – Raipur by M/s Sarda Energy and Minerals Limited [Online Proposal No. IA/CG/IND/6463/2007; J-11011/790/2007-IA.II(I)] – Terms of Reference.**

The project proponent has made application for withdrawal of the proposal and the committee accepted for withdrawal of the proposal. Therefore, the application recommended to return to PP.

**8<sup>th</sup> May 2018**

**31.13. Proposed Expansion of existing Steel Plant by installing 1x350 TPD Sponge Iron Plant, (2x15 T + 2x20 T) Induction Furnaces, 1,20,000 TPA capacity Rolling Mill along with 27 MW capacity Captive Power Plant (12 MW WHRB + 15 MW AFBC utilising waste heat & dolomite from existing (2x100 TPD) & proposed Sponge Iron Plants of M/s Ma Amba Sponge Iron Limited located at Village Jemua, P.O. Mejia, District Bankura, West Bengal.[Online proposal No. IA/WB/IND/60818/2016; MoEFCC File No. J-11011/242/2016-IA-II(I)] – Environmental Clearance.**

1.0 **M/s Ma Amba Sponge Iron Limited** made online application vide proposal no. IA/WB/IND/60818/2016 dated 20<sup>th</sup> April 2018 along with the copies of EIA/EMP seeking Environmental Clearance under the provisions of the EIA Notification, 2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of EIA Notification, 2006 and the proposal is appraised at Central level.

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

2.0 The proposal of proposed expansion project of M/s Ma Amba Sponge Iron Ltd., located at Village Jemua, P.O. Mejia, Dist. – Bankura, West Bengal was initially received in the Ministry on 2<sup>nd</sup> December, 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 14<sup>th</sup> meeting held on 23<sup>rd</sup> December, 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 31<sup>st</sup> January, 2017 vide Ref. File No J-11011/242/2016-IA.II (I).

3.0 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 15<sup>th</sup> January 2018 vide Online Application No. IA/WB/IND/60818/2016. Subsequently, the proposal was considered in the 28<sup>th</sup> EAC (Industry-I) meeting held on 6<sup>th</sup> February, 2018. After detailed deliberations, the committee advised to revise the module of Induction Furnaces from (2x15 T + 2x20 T) to (3x20 T) to make the project more viable in terms of both economy and environment. After making an assessment, the Company decided to revise the configuration of the Induction Furnaces, the configuration of the balanced project remaining same. Accordingly, EIA report has been revised after incorporating the necessary changes in the respective chapters and re-submitted the online EC application on 20<sup>th</sup> April, 2018.

4.0 The copy of the NOC obtained from West Bengal Pollution Control Board for the existing 2x100 TPD DRI Kilns in the year 2003 with the project cost of Rs. 26.66 Crores. The existing 2x100 TPD DRI Kilns were implemented before EIA Notification, 2006. Since the cost of the project was below Rs. 100 Crores, did not attract the provisions of EIA Notification, 1994.

5.0 The project of M/s Ma Amba Sponge Iron Ltd., is located at Village Jemua, P.O. Mejia, Dist. Bankura, West Bengal is for installation of 1x350 TPD Sponge Iron Plant, (3x20 T) Induction Furnaces, 1,20,000 TPA capacity Rolling Mill along with 27 MW capacity Captive Power Plant (12 MW WHRB + 15 MW AFBC utilising waste heat & dolochar from existing (2x100 TPD) & proposed Sponge Iron Plants. The overall project scenario (Existing + Proposed) is presented below:

Name of the Units	Existing		Proposed		Total (Existing + Proposed)	
	Capacity	Production	Capacity	Production	Capacity	Production
Sponge Iron Plant	2x100 TPD Kilns	72,000 TPA	1x350 TPD Kiln	1,26,000 TPA Sponge Iron	2x100 TPD Kilns + 1x350 TPD Kiln	1,98,000 TPA Sponge Iron
Induction Furnaces with matching LRF	-	-	3x20 T	2,31,000 TPA Liq. Steel	3x20 T	2,31,000 TPA Liq. Steel
Continuous Casting Machine (6/11, 3 strand)	-	-	-	2,26,000 TPA Billets	-	2,26,000 TPA Billets
Rolling Mill	-	-	-	1,20,000 TPA TMT Bars	-	1,20,000 TPA TMT Bars
Captive Power Plant	-	-	27 MW	27 MW (1x4 MW WHRB utilising waste heat from exiting DRI plant + 1x8 MW WHRB utilising waste heat from proposed DRI plant + 15 MW AFBC boiler utilizing dolochar from both existing &	27 MW	27 MW



				proposed DRI plants)		
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6.0 The proposed expansion project will be installed within the existing plant premises occupying total 9.42 hectares (23.28 acres) land which is fully acquired. No forest land involved. Damodar River is 2.7 km in north-eastern direction w.r.t the Project Site.

7.0 The topography of the project area is flat. The geographical co-ordinates are Latitude - 23°33'23.50"N to 23°33'37.86"N & Longitude - 87°04'59.80"E to 87°05'13.00"E with above mean sea level (AMSL) of 90.0 m (295 ft). The average water level for the last five years is 5.95 mtrs BGL during summer and 2.15 mtrs BGL during post-monsoon. The infiltration rate is good, nearly 10 to 15 percent, the area is designated as safe area.

8.0 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna in the study area is provided in Chapter-3.0, Section-3.12.

9.0 The major raw material, which will be handled consists of Sponge Iron, Pig Iron, dolomite, Ferro Alloys, Imported coal etc. The annual requirement of major raw materials, which will be required additionally for the proposed project, is as follows:

Sl. No.	Raw materials	Annual requirement ( in TPA )	Source
<b>Sponge Iron Plant (1x350 TPD)</b>			
1.	Iron Ore	2,01,600	Orissa
2.	Imported Coal	1,63,800	South Africa
3.	Lime Stone	4,032	Market
<b>Induction Furnaces (2x15 T + 2x20 T)</b>			
1.	Sponge Iron	1,86,667	In House DRI Plant
2.	Scraps	30,333	In House Plant & Market
3.	Pig Iron	35,000	Market
4.	Ferro Alloys	1,808	Market
<b>Captive Power Plant - 15 MW based on AFBC Boiler</b>			
1.	Imported Coal	1,00,000	South Africa
2.	Dolochar	1,15,500	In House DRI Plant

10.0 Solid Wastes & their utilization for proposed expansion project is as follows:

Sl. No.	Type	Quantity in Tons/Year	Utilization
1.	Dolochar	73,500	To be used in AFBC Boiler.

2.	Slag & Dust from IFs	40,000	Slag to be used for Land filling / Road Construction purpose.
3.	End Cuts, Scale & Scrap from CCM	3840	To be used as raw materials in IFs.
4.	End cuts and missed rolls from Rolling Mill	5000	To be used as raw materials in IFs.
5.	Fly ash from Captive Power Plant	23500	To be used as a raw material for cement plants and brick manufacturing.
6.	Bottom ash from Captive Power Plant	5875	To be used for Land filling.

11.0 The targeted production capacity of the sponge iron, liquid steel, billets and TMT bars is 1,26,000, 2,31,000, 2,26,000 and 1,20,000 TPA respectively and a captive power plant of 27 MW. The Iron ore for the plant would be procured from Badampahar Iron Ore Mines, Orissa. The ore transportation will be done through Rail & Road.

12.0 The water requirement of the project is estimated as 525 m<sup>3</sup>/day. The raw water will be sourced from Borewells.

13.0 The power requirement of the project is estimated as 35 MW, which will be sourced from 27 MW capacity captive power plant and DVC supply system.

14.0 Ground water quality has been monitored at 8 locations in the study area and analyzed. pH: 6.8 to 7.5, Total Hardness: 207 to 298 mg/l, Chlorides: 74 to 115 mg/l, Fluoride: 0.38 to 0.56 mg/l. Surface water were analysed from 2 Damodar river water samples and 8 pond water samples. Damodar Water Samples - pH: 7.3 to 7.5; DO: 6.9 to 7.1 mg/l and BOD: 3 - 4 mg/l. 8 Pond Water Samples - pH: 7.0 to 7.8; DO: 5.8 to 6.4 mg/l and BOD: 4 - 8 mg/l.

15.0 Noise levels are in the range of 54.9 to 70.1 dB(A) for day time and 46.2 to 60.3 dB(A) for night time.

16.0 It has been reported that there are 3,36,981 people in the core zone of the project. No R&R is involved.

17.0 It has been reported that a total of 1,51,715 TPA tons/m<sup>3</sup> of waste will be generated due to the proposed project, out of which 73,500 TPA dolochar will be used in AFBC Boiler, 40,000 TPA slag & dust from SMS will be used for Land filling / Road Construction purpose, 8840 TPA end cuts/scale & scrap will be used as raw materials in SMS, 23500 TPA fly ash will be used as raw material for cement plants and brick manufacturing and 5875 TPA bottom ash will be used for Land filling. It has been envisaged that an area of 3.1 ha will be developed as green belt in the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

18.0 It has been reported that the Consent to Establish from West Bengal Pollution Control Board was obtained vide letter no. 3759-2N-239/2003 dated 31-12-2003. Consent to Operate from West Bengal Pollution Control Board was obtained vide letter no. 2630/dr-co-3/12/0339 dated 30-11-2017 and consent is valid up to 31-12-2018.

19.0 The Public hearing of the project was held on 12<sup>th</sup> September, 2017 at Meeting Hall of Mejia Panchayat Samity, Dist. Bankura in West Bengal. The Statement of main issues raised by the public and response of the project proponent with action plan is as follows:

Sl.	Issues raised during PH	Response by project proponent (After PH)	Action Plan proposed	Budgetary provision as on 12-01-2018
1.	<ul style="list-style-type: none"> <li>• To give priority to the local youth for employment in the proposed expansion project.</li> <li>• PP to ensure proper functioning of the pollution control device during process activities, take necessary safety measures for the workers and initiate extensive plantation activities in and around their unit premises.</li> </ul>	<p>The Company in past has given priority to the local people for employment opportunity based on their qualification for their existing plants / units.</p> <p>The company has already installed the necessary Pollution Control devices in its existing plant. The same shall be installed in its proposed expansion project.</p> <p>It is ensured that all pollution control devices function properly for all 24 hours. Necessary safety measures shall be taken by using Personal Protective Equipment throughout the time. Extensive green belt will be developed in and around the project area.</p>	<p>The existing practice will be adopted. The company Will give preference to the local people for the employment in its proposed project, based on their qualification.</p> <p>For the proposed plant, adequate control measures like installation of Electrostatic Precipitator (ESP), bag filters, dust suppression system etc. to keep the emission within the permissible limit. Like existing project PPE will be adopted in the expansion project.</p> <p>Action has already been taken by management for developing Green Belt by undertaking extensive plantation programme. Besides, the company has also planned for the development of parks and tree plantation in the nearby areas.</p>	<p>Rs. 20 lacs are earmarked against training to unemployed educated local youth for skill development.</p> <p>Rs. 5.5 Crores and Rs. 55 lacs are earmarked as capital and recurring costs respectively on air pollution control systems.</p> <p>Rs. 30 lacs have been allocated for Risk Mitigation &amp; Safety Plan.</p> <p>Rs. 45 lacs and Rs. 4.5 lacs are earmarked as capital and recurring costs respectively on Green belt development programme.</p> <p>Besides, Rs. 30 lacs are allocated for the development of park and tree plantation in the nearby areas as</p>

	<ul style="list-style-type: none"> <li>• Initiate skill development program for local self-help groups through their CSR activities.</li> </ul>	<p>CSR commitments shall be fulfilled by development of self-help groups among local women.</p>	<p>The company has identified certain areas, to be considered for imparting the CSR activities in this context of the local scenario of the area.</p>	<p>Enterprise Social Commitment.</p> <p>Rs. 20 lacs &amp; Rs. 15 lacs are earmarked against training to unemployed educated local youth for skill development and development of self-help groups among local women respectively.</p>
2.	<ul style="list-style-type: none"> <li>• To contribute towards local infrastructure development through the CSR activities.</li> <li>• Initiation of skill development and employment generation for the local self-help groups.</li> </ul>	<p>CSR commitments shall be fulfilled by taking up different programs like development of local roads and other infrastructural facilities, providing health care facilities, development of self-help groups among local women, development of drinking water facilities, helping the local schools, etc.</p>	<p>Proper emphasis will be laid on the development of infrastructure in the area.</p>	<p>The company has identified the following infrastructure facilities, to be provided along with the capital cost:</p> <ul style="list-style-type: none"> <li>• Construction of Toilets – Rs. 70 Lakhs</li> <li>• Tubewell in villages – Rs. 21 lacs</li> <li>• Road Construction – Rs. 238 lacs</li> <li>• Construction of charitable Dispensary – Rs. 13 lacs</li> <li>• Development of Community Hall – Rs. 48 lacs</li> </ul> <p>Besides, Rs. 20 lacs are earmarked for training to unemployed</p>

				educated local youth for skill development and Rs. 15 lacs for development of self-help groups among local women.
3.	PP to ensure overall socio-economic development of the area.	It is expected that with proper CSR expenditure the socio-economic status of the area shall be uplifted.	Apart from creating direct & indirect employment opportunity, the company has identified certain areas, to be considered for imparting the CSR activities in this context of the local scenario of the area, which will help in uplifting the socio-economic status of the area.	The company proposes to invest Rs. 590 Lacs on the ESC activities.
4.	To develop sanitation facility of the local villages through their CSR activities in consultation with the local administration.	The company has already considered in the proposed CSR activities to develop sanitation facility in the local villages & in the schools.	The company will Construct W/C/Toilet (2) each - 10 numbers in schools & villages in the context of the local scenario of the area.	Rs. 70 lacs are allocated for the construction of the same.

20.0 An amount of 590 Lakhs (2.5 % of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues. The details of ESC proposed are as follows:

Sl. No.	Enterprise Social Commitment Activities	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Total in Lakhs
1	Construction of W/C/Toilet (2) each - 10 numbers in schools & villages (@ Rs. 7.00 Lakhs per set of 2 Toilets)	10	10	10	10	10	10	10	70.0
2	Drinking Water Infrastructure (Tubewell in nearby villages –	4	4	3	3	3	2	2	21.0

	14 nos. @ Rs. 1.5 Lakhs)								
3	Construction of metal consolidation road (14 km) in villages ( @Rs. 17 Lakhs per km)	40	40	40	35	35	24	24	238.0
4	Development of Community Hall – Total 4 nos. (@ Rs. 12 Lakhs per Hall)	8	8	8	7	7	5	5	48.0
5	Local Village Pond upgradation - 5 ponds (@ Rs. 5 Lakhs per Pond)	5	5	4	3	3	3	2	25.0
6	Street Lighting (solar) provision at suitable public places – 70 nos. (@ Rs. 0.5 Lakhs per Solar Light)	5	5	5	5	5	5	5	35.0
7	Financial Support to the Local School for extension of building / class room	6	4	4	3	3	3	2	25.0
8	Construction of charitable Dispensary	3	2	2	2	2	1	1	13.0
9	Primary health for the surrounding villages	5	5	4	4	4	2	1	25.0
10	Financial Support to Local Temple	4	4	4	4	4	3	2	25.0
11	Training to unemployed educated local youth for skill development.	3	3	3	3	3	3	2	20.0
12	Development of self-help groups among local women	3	2	2	2	2	2	2	15.00
13	Developments of parks, plantation of trees in the nearby area.	6	5	5	4	4	3	3	30.0

TOTAL	102	97	94	85	85	66	61	590
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21.0 The capital cost of the project is Rs. 235 Crores and the capital cost for environmental protection measures is proposed as Rs. 1015 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 102 Lakhs. The employment generation from the proposed project is 450. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures are as follows:

Sl. No.	Description	Capital cost, Rs. Lakhs	Recurring cost per annum, Rs. Lakhs
1	Cost of Air Pollution Control Systems	550	55
2	Cost of Water conservation & Pollution Control	150	15
3	Cost of Solid Waste Management System	70	7
4	Green belt development	45	4.5
5	Noise Reduction Systems	80	8
6	Occupational Health Management	70	7
7	Risk Mitigation & Safety Plan	30	3
8	Environmental Management Department	20	2.5
<b>TOTAL</b>		<b>1015</b>	<b>102</b>

22.0 It has been envisaged that an area of 3.1 ha will be developed as green belt in the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

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

24.0 Environmental Consultant: Envirotech East Pvt. Ltd., Kolkata, NABET Accreditation as per 5th April, 2018: Sl. No. 52, Sector No. 8, Metallurgical Industries (Ferrous & Non ferrous) - both Primary & Secondary, Category-A. NABET Certificate No.: NABET/EIA/1011/010.

#### Observations of the committee:

25.0 The committee observed that the following information shall be furnished for the further consideration:

- i. Revised project scenario inter alia including revised water balance;
- ii. Revised time bound action plan along with budget provision for the issues raised during the public hearing;
- iii. Revised Corporate environmental responsibility;
- iv. Revised Air Quality Impact prediction; and
- v. Revised Corporate environmental policy of the company.

26.0 The project proponent has submitted the information which is as follows:

i. Revised project scenario inter alia including revised water balance;

ATTRIBUTES	PRE-REVISED PROJECT SCENARIO	REVISED PROJECT SCENARIO	REMARKS
Units	• 1x350 TPD Kiln (1,26,000 TPA Sponge Iron)	• 1x350 TPD Kiln (1,26,000 TPA Sponge Iron)	Same
	• 2x15 T + 2x20 T Induction Furnaces (2,31,000 TPA Liq. Steel)	• 3x20 T Induction Furnaces (2,31,000 TPA Liq. Steel)	Changed from (2x15 T + 2x20 T) to (3x20 T).
	• Continuous Casting Machine (6/11, 3 strand) (2,26,000 TPA Billets)	• Continuous Casting Machine (6/11, 3 strand) (2,26,000 TPA Billets)	Same
	• Rolling Mill (1,20,000 TPA TMT Bars)	• Rolling Mill (1,20,000 TPA TMT Bars)	Same
	• 27 MW Capacity Captive Power Plant *	• 27 MW Capacity Captive Power Plant *	Same
Fresh Water Requirement	495 m <sup>3</sup> /day	490 m <sup>3</sup> /day	Reduced
Power Demand	39 MW	35 MW	Reduced
Stack Emission of Air Pollutants	Data for 5 stacks	Data for 5 stacks	Pollution load of PM is reduced.
a. PM	5.40 gm/sec	2.88 gm/sec	
b. SO <sub>2</sub>	9.40 gm/sec	36.4 gm/sec	
c. NO <sub>x</sub>	7.00 gm/sec	7.00 gm/sec	
Max. GLCs of Air Pollutants			GLC of PM is reduced.
a. PM	3.11 µg/m <sup>3</sup>	1.67 µg/m <sup>3</sup>	
b. SO <sub>2</sub>	5.11 µg/m <sup>3</sup>	31.48 µg/m <sup>3</sup>	
c. NO <sub>x</sub>	4.95 µg/m <sup>3</sup>	4.95 µg/m <sup>3</sup>	
Project Cost	Rs. 235 Crores	Rs. 232 Crores	Reduced

TOTAL MAKE UP WATER REQUIREMENT – 525 CU.M/DAY

ii. Revised time bound action plan along with budget provision for the issues raised during the public hearing

Sl. No.	Issues raised during PH	Response by project proponent (After PH)	Action proposed	Plan	Budgetary provision as on 12-01-2018



<p>1.</p>	<p>➤ To give priority to the local youth for employment in the proposed expansion project.</p> <p>➤ PP to ensure proper functioning of the pollution control device during process activities, take necessary safety measures for the workers and initiate extensive plantation activities in and around their unit premises.</p>	<p>The Company in past has given priority to the local people for employment opportunity based on their qualification for their existing plants / units.</p> <p>The company has already installed the necessary Pollution Control devices in its existing plant. The same shall be installed in its proposed expansion project.</p> <p>It is ensured that all pollution control devices function properly for all 24 hours. Necessary safety measures shall be taken by using Personal Protective Equipment throughout the time. Extensive green belt will be developed in and around the project area.</p>	<p>The existing practice will be adopted. The company Will give preference to the local people for the employment in its proposed project, based on their qualification.</p> <p>For the proposed plant, adequate control measures like installation of Electrostatic Precipitator (ESP), bag filters, dust suppression system etc. to keep the emission within the permissible limit. Like existing project PPE will be adopted in the expansion project.</p> <p>Action has already been taken by management for developing Green Belt by undertaking extensive plantation programme. Besides, the company has also planned for the development of parks and tree plantation in the nearby areas.</p>	<p>Rs. 20 lacs are earmarked against training to unemployed educated local youth for skill development.</p> <p>Rs. 5.5 Crores and Rs. 55 lacs are earmarked as capital and recurring costs respectively on air pollution control systems.</p> <p>Rs. 30 lacs have been allocated for Risk Mitigation &amp; Safety Plan.</p> <p>Rs. 45 lacs and Rs. 4.5 lacs are earmarked as capital and recurring costs respectively on Green belt development programme.</p> <p>Besides, Rs. 30 lacs are allocated for the development of park and tree plantation in the nearby areas as CER.</p>
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	Initiate skill development program for local self-help groups through their CSR activities	CSR commitments shall be fulfilled by development of self-help groups among local women.	The company has identified certain areas, to be considered for imparting the CER (Corporate Environment Responsibility) in this context of the local scenario of the area.	Rs. 20 lacs & Rs. 20 lacs are earmarked against training to unemployed educated local youth for skill development and creation of building structure along with supporting infrastructures for self-help groups respectively.
2	<ul style="list-style-type: none"> <li>➤ To contribute towards local infrastructure development through the CSR activities.</li> <li>➤ Initiation of skill development and employment generation for the local self-help groups</li> </ul>	CSR commitments shall be fulfilled by taking up different programs like development of local roads and other infrastructural facilities, providing health care facilities, development of self-help groups among local women, development of drinking water facilities, helping the local schools, etc.	Proper emphasis will be laid on the development of infrastructure in the area	<p>The company has identified the following infrastructure facilities, to be provided along with the capital cost:</p> <ul style="list-style-type: none"> <li>• Construction of Toilets – Rs. 70 Lakhs</li> <li>• Tubewell in villages – Rs. 21 lacs</li> <li>• Road Construction – Rs. 238 lacs</li> <li>• Construction of charitable Dispensary – Rs. 13 lacs</li> <li>• Development of Community Hall – Rs. 48 lacs</li> </ul> <p>Besides, Rs. 20 lacs are earmarked for training to unemployed educated local youth for skill</p>

				development and Rs. 20 lacs for development of self-help groups among local women.
3	PP to ensure overall socio-economic development of the area.	It is expected that with proper CSR expenditure the socio-economic status of the area shall be uplifted.	Apart from creating direct & indirect employment opportunity, the company has identified certain areas, to be considered for imparting the CSR activities in this context of the local scenario of the area, which will help in uplifting the socio-economic status of the area.	The company proposes to invest Rs. 590 Lacs on the CER.
4	To develop sanitation facility of the local villages through their CSR activities in consultation with the local administration.	The company has already considered in the proposed CSR activities to develop sanitation facility in the local villages & in the schools.	The company will Construct 25 nos. Toilets at schools & community places.	Rs. 70 lacs are allocated for the construction of the same under CER.

iii. Revised Corporate environmental responsibility;

Sl. No.	Corporate Environment Responsibility	Year 1	Year 2	Total in Lakhs
<b>PUBLIC HEARING RELATED ACTIVITIES</b>				
1	Construction of 25 nos. Toilets at schools & community places (@ Rs. 2.8 Lakhs per set of 2 Toilets, separately for Ladies & Gents)	42	28	70.0
2	Drinking Water Infrastructure (Tubewell in nearby villages – 14 nos. @ Rs. 1.5 Lakhs)	12	9	21.0
3	Construction of metal consolidation road (14 km) in villages ( (@Rs. 17 Lakhs per km)	119	119	238.0
4	Development of Community Hall – Total 4 nos. (@ Rs. 12 Lakhs per Hall)	24	24	48.0

5	Construction of charitable Dispensary	8	5	13.0
6	Skill development to unemployed local youth through National Skill Development Corporation, Govt. of India Scheme	12	8	20.0
7	Developments of parks, plantation of trees in the nearby area.	18	12	30.0
<b>NEED BASED ACTIVITIES</b>				
1	Local Village Pond upgradation - 5 ponds (@ Rs. 5 Lakhs per Pond)	15	10	25.0
2	Street Lighting (solar) provision at suitable public places – 70 nos. (@ Rs. 0.5 Lakhs per Solar Light)	20	15	35.0
3	Financial Support to the Local School for extension of building / class room	13	10	23.0
4	Creation of Primary health centers (4 numbers) for the surrounding villages	12	11	23.0
5	Financial Support to Local Temple for the improvement in existing infrastructure.	13	11	24.0
6	Creation of building structure along with supporting infrastructure for self-help groups	12	8	20.0
<b>TOTAL</b>				<b>590</b>

iv. Revised Air Quality Impact prediction

Pollutants	Max. GLC ( $\mu\text{g}/\text{m}^3$ )	Direction	Distance (km)
<b>With Pollution Control Devices:</b>			
SO <sub>2</sub>	31.48	NE	0.5
NO <sub>x</sub>	4.95	NE	0.5
PM	1.67	NNW	0.5
<b>Without Pollution Control Devices:</b>			
SO <sub>2</sub>	51.15	NE	0.5
NO <sub>x</sub>	4.95	NE	0.5
PM	727.69	NNW	0.5

27.0 After detailed deliberations, the committee recommended the proposal for the grant of Environmental Clearance subject to the following specific conditions.

1. The water extraction shall not be more than 525 m<sup>3</sup>/day.
2. The PP shall replace the source of water from ground water to surface water from date of issue of EC. Thereafter no ground water shall be drawn.

3. The PP shall submit revised Corporate Environmental Policy *inter alia* including standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions; hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions; and system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large within 3 months from the date of issue of EC.

**General Conditions:**

1. An amount of Rs 590 lakhs proposed towards Corporate Environmental Responsibility shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.
2. Green belt shall be developed in 3.10 Ha equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
3. The Capital cost Rs. 1015 Lakhs and annual recurring cost Rs. 102 Lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.
4. The project proponent shall (Air Quality Monitoring):
  - a. install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008 as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
  - b. monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
  - c. Install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions; and
  - d. submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
5. The project proponent shall (Water Quality Monitoring):

- a) install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
  - b) monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories; and
  - c) submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
6. The project proponent shall (Air Pollution Control):
- a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
  - b) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;
  - c) provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;
  - d) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
  - e) recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration;
  - f) ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation;
  - g) provide wind shelter fence and chemical spraying on the raw material stock piles.
7. The project proponent shall (Water Pollution Control):
- a) adhere to ‘zero liquid discharge’;
  - b) provide Sewage Treatment Plant for domestic wastewater; and
  - c) provide garland drains and collection pits for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
8. The project proponent shall (Water Conservation):

- a) practice rainwater harvesting to maximum possible extent; and
  - b) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.
9. The project proponent shall (Energy Conservation):
- a) provide waste heat recovery system on the DRI Kilns;
  - b) use dolochar generated for power generation;
  - c) provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly; and
  - d) provide the project proponent for LED lights in their offices and residential areas;
10. Used refractories shall be recycled as far as possible.
11. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
12. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
13. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
14. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
15. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the steel plants shall be implemented.
16. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.
17. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
18. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
19. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

20. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
21. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.
22. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
23. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
24. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office.
25. Kitchen waste shall be composted or converted to biogas for further use. *(to be decided on case to case basis depending on type and size of plant)*
26. The project proponent shall (Post-EC monitoring):
  - a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
  - b. put on the clearance letter on the web site of the company for access to the public.
  - c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.
  - d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
  - e. monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
  - f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
  - g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;
  - h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.



**31.14.** Proposed capacity expansion of Refined Silver Production from 600 TPA to 800 TPA at Pantnagar Silver Plant of **M/s Hindustan Zinc Limited**, Pantnagar, Udham Singh Nagar, Uttarakhand [Online proposal No. IA/UK/IND/74306/2009; IA-J-11011/170/2017-IA- II-(I)] – **Terms of reference.**

1.0 The proponent has made online application vide proposal no. IA/UK/IND/74306/2009 dated 13<sup>th</sup> April, 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “B” EIA Notification, 2006. Since the SEAC, Uttarakhand is not yet constituted the proposal is appraised at Central level.

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

2.0 M/s. Hindustan Zinc Limited (HZL) proposes expansion of Pantnagar Silver Plant for Refined Silver production from 600 TPA to 800 TPA (monthly 85 Tonnes with overall capacity of 800 TPA) located at Plot No.-2&3, Sector-14, IIE, State Industrial Development Corporation Limited (SIDCUL), Pantnagar Village, Kichha Tehsil, Udham Singh Nagar District, Uttarakhand State. The project site is part of the Notified Industrial Area administered by SIDCUL, Department of Industries, Government of Uttarakhand. The manufacturing process consists of pyro-metallurgical refining of anode slime in furnaces and hydro-metallurgical refining in electrolysis section. The plant treats the anode slime & high-grade metal (HGM) produced as a by-product in the HZL Lead smelters in Rajasthan to recover the silver.

3.0 The existing project was accorded Environment Clearance for 500 TPA refined silver production by SEAC/SEIAA, Uttarakhand vide letter no. EC- 51/10/265 dated 16<sup>th</sup> March 2010. The EC was amended for 500 TPA to 600 TPA refined silver production by MOEF&CC vide letter no F.No. IA-J-11011/170/2017-IA-II-(I) dated 29<sup>th</sup> June 2017. Consolidated Consent to Operate and Authorization (CCA) was accorded by Uttarakhand Environment Protection and Pollution Control Board vide letter no UEPPCB/HO/Con-AWH-3797 validity of CCA was upto 31<sup>st</sup> March 2018. Application for renewal of CCA for Silver production was submitted and is under approval of UEPPCB.

4.0 The proposed unit will be located at Plot No 2 & 3, Sector 14, IIE, Village Pantnagar, Tehsil Kichha, District Udham Singh Nagar, State Uttarakhand.

5.0 HZL Pantnagar Silver Plant was established in 2010-11, in 10 ha of land is part of Notified Industrial Area administered by SIDCUL, Department of Industries, Government of Uttarakhand. The proposed expansion will not require any additional land for the project. No forestland involved. The entire land has already been acquired for the project. Of the total are 38% land 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 estimated project cost is Rs. 20 Crores. There will not be any additional manpower deployed as the existing resources will be utilized in this expansion.

8.0 The targeted production capacity of the Refined Silver production is 800TPA (85TPM overall 800TPA). The plant treats the anode slime & high-grade metal (HGM) produced as a by-product in the HZL Lead smelters in Rajasthan to recover the silver. The manufacturing process consists of pyro-metallurgical refining of anode slime in furnaces and hydro-metallurgical refining in electrolysis section. The new requirements change in plant capacity is given below:

Unit	Existing	Additional Proposed Capacity	Total Capacities
Noble Furnace	1 No (14 TPD)	-	1 No (14 TPD ) fired by LDO/HSD/PNG/FO/LSHS
Cupel Furnace	2 No (2.5 TPD)	-	2 No (2.5 TPD each) fired by LDO/HSD/PNG/FO/LSHS
Induction Furnace	3 No (0.6 TPD)	3 No (2 x 0.4 TPD + 1 x 0.9 TPD)	3 No (2 x1 TPD + 1x1.5 TPD)
Junker Furnace	-	1 No (4 TPD)	1 No (4 TPD)
BBOC Furnace	-	1 No (4 TPD)	1 No (4 TPD)

9.0 The products and by products are as follows:

Unit	Existing	Additional Proposed Quantity	Total Quantity
<b>Products</b>			
Refined Silver	600 TPA	200	800 (85TPM overall 800TPA)
<b>By-products</b>			
Antimony Concentrate	1400	400	1800
Bismuth Concentrate	140	220	360
Copper Matte	140	-	140
Oxidation Slag	840	410	1250
Silver Nitrate	25	-	25
Silver Anode Slime/ Silver Sand	-	10	10
Lead SLAG	-	450	450
VRF Zinc	-	650	650
VRF Zinc Dross	-	100	100

10.0 No additional power required for this proposed project. Existing Power of 2 MW required for the plant is being met from Uttarakhand State Power Corporation Limited (UPCL). Existing 500 KVA DG set will be used for emergency power supply to cater to critical loads.

11.0 The major raw materials for the project are Anode Slime & HGM. The plant treats the anode slime & high-grade metal (HGM) produced as a by-product in the HZL Lead smelters in Rajasthan to recover the silver. The raw materials requirement is given below:

**BASIC RAW MATERIAL– SILVER PLANT**

Raw Material	Existing	Additional Requirement	Total Requirement
Anode Slime/Dore Silver	2900	700	3600
High Grade Metal		1080	1080

**CONSUMABLES PER ANNUM**

Consumables	Unit	Quantity
Coke	MT	87
Soda Ash	MT	250
Salt Peter (Potassium Nitrate)	MT	89
Nitric Acid	MT	50
Ethyne	MT	10
Charcoal	MT	20
Sodium Chloride	MT	15
Borax	MT	15
LDO/HFO/LNG/FO/PNG/LSHS	MT	4500
Calcium Fluoride	MT	40
Sulphuric Acid	MT	5
Lime	MT	5

12.0 No additional water is required for the expansion. Existing plant water requirement is 325 m<sup>3</sup>/day, which is being met from bore wells for which necessary permission is already obtained. “Zero Discharge” of waste water during operation phase of the plant is maintained.

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

14.0 Name of the EIA Consultant: M/s. Vimta Labs Limited. QCI Certificate no.: NABET/EIA/1619/RA 0043], QCI Sl. No.: 152 as on date 5th April 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:**

1. Public Hearing to be conducted by the concerned State Pollution Control Board.
2. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
3. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry’s Office Memorandum vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018.
4. Certificate compliance of earlier EC from the Regional officer of the MoEFCC shall be submitted along with EIA/EMP.

5. The PP shall provide detailed plan for storm water management to prevent runoff from the plant site.
6. Wildlife conservation plan shall be prepared in case of any schedule-I species reported in the study area
7. Material, water and energy balance shall be provided
8. Detailed approved plan for processing the by products moving out of the project premises
9. Action Plan for 100% utilisation of waste shall be provided in the EIA/EMP.
10. Ground water quality monitoring particularly for heavy metals shall be carried out within the plant site and furnished in the EIA/EMP.
11. The PP shall conduct HIRA *inter alia* chemical hazard, fire hazard and operational hazard .

**31.15. Proposed Expansion project-I, at Raturia Industrial Area, Angadpur, PO: Mayabazar, PS: Coke Ovens, Durgapur, Dist: Bardhaman, West Bengal by M/s. Haldia Steels Pvt. Ltd [Online proposal No. IA/WB/IND/74042/2018; MoEFCC File No. J-11011/290/2008-IA(II)] –Terms of Reference.**

1.0 The proponent has made online application vide proposal no. IA/WB/IND/74042/2018 dated 6<sup>th</sup> April, 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level

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

2.0 M/s. Haldia Steels Pvt. Ltd Unit-1 proposes expansion of existing manufacturing unit by way of modification of product mix and correction of approved production figures for production of Ferroalloys like Ferrochrome and Ferro-Silicon along with the existing products Ferro Manganese and Silico-Manganese in the existing ferroalloy furnaces. It is proposed to modify the product mix of the plant for production of Ferrochrome and Ferro-Silicon based on reduction melting technology.

3.0 The existing project was accorded environmental clearance vide letter. no. J-11011/290/2008-IA(II) dated the 13th June 2008. Consent to Operate was accorded by the West Bengal State pollution Control Board vide Ir. No C0090262, dated 10/02/2016 validity of CTO is up to 30/11/2018.

4.0 The proposed unit will be located at Raturia Industrial Area, Angadpur, PO: Mayabazar, PS: Coke Oven, Durgapur, Dist: Burdwan, State : West Bengal.

5.0 The land area acquired for the proposed plant is 3.6Ha (8.9 acres) which is a government allotted land in Raturia Industrial Area allotted by Asansol-Durgapur Development Authority (ADDA). No forestland involved. The entire land has been acquired for the project. Of the total area 1.2 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.

7.0 Total project cost is approx Rs2.70 crore rupees at 2008 cost level. The expansion project being a modification of product mix and correction in achievable production quantity, there is no possibility of additional employment generation of any kind direct or indirect.

8.0 The targeted production capacity of the Ferroalloy Unit in terms of Ferro-manganese, Silico-manganese, Ferrochrome and Ferro-Silicon respectively are 49,536TPA, 32,589 TPA, 32,589 TPA and 14,569 TPA. The ore for the plant would be procured from mines in Odisha and Chhattisgarh (linkage would be established). 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 units	Capacity of each Unit	Production Capacity
SEAFs of 4MVA rating	2	Ferro Manganese: 768 TPM Silico-Manganese:505 TPM Ferrochrome: 505 TPM Ferro-Silicon: 226 TPM	1536 TPM 1010 TPM 1010 TPM 452 TPM
SEAF 6MVA rating	1	Ferro Manganese: 1153 TPM Silico-Manganese: 758 TPM Ferrochrome: 758 TPM Ferro-Silicon: 339 TPM	1153 TPM 758 TPM 758 TPM 339 TPM
SEAF 7.5 MVA rating	1	Ferro Manganese: 1539 TPM Silico-Manganese: 948 TPM Ferrochrome: 948 TPM Ferro-Silicon: 423 TPM	1539 TPM 948 TPM 948 TPM 423 T PM
Total of All SEAFS i.e 2X4 MVA,1XMVA and 1X7.5 MVA	4	Ferro Manganese: 4128 TPM Silico-Manganese: 2716 TPM Ferrochrome: 2716 TPM Ferro-Silicon: 1214 TPM	49536 TPA 32589 TPA 32589 TPA 14569 TPA

9.0 The electricity load of 24 MVA will be procured from DVC grid.

10.0 Proposed raw material and fuel requirement for project are appended in table. The requirement would be fulfilled by procurement from indigenous sources. Fuel consumption will be mainly consist of metallurgical coke.

11.0 Water Consumption for the proposed project will be 290 KL/day and waste water generated will be treated and fully reused/re-circulated. Domestic waste water will be discharged to septic tank and soak pit and industrial waste water will be treated in settling pond and reused for dust suppression.

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

13.0 Name of the Consultant – Centre for Envotech and Management Consultancy Private Limited. Sl. No in QCI List - 23

Recommendations of the committee:

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

1. Public Hearing to be conducted by the concerned State Pollution Control Board.
2. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
3. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018.
4. Certificate compliance of earlier EC from the Regional officer of the MoEFCC shall be submitted along with EIA/EMP.
5. TCLP test for ferro manganese slag.
6. Proof of ownership of 8.9 acres of land for the project from the revenue department.

**31.16. Proposed cement manufacturing unit of 200 TPD of M/s Zaffron Enterprises Pvt.Ltd. at Village Khonmoh, Tehsil & District Srinagar, Jammu & Kashmir. [Online Proposal No. IA/JK/IND/51327/2016; MoEFCC File No. J-11011/106/2016IA-II(I)] – Environmental Clearance.**

1.0 **M/s Zaffron Enterprises Private limited** made online application vide proposal no. IA/JK/IND/51327/2016 dated 31<sup>st</sup> March 2018 along with the copies of EIA/EMP seeking Environmental Clearance under the provisions of the EIA Notification, 2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 3(b) Cement Plants under Category "B" of EIA Notification, 2006. As the project attracts the general condition of the Schedule of EIA Notification, 2006, the proposal is appraised at Central level.

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

2.0 The Proposed Cement Manufacturing of M/s Zaffron Enterprises Pvt. Ltd located in Village Khonmoh, Tehsil & District – Srinagar, State- Jammu & Kashmir initially received in the ministry on 9<sup>th</sup> March 2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 5<sup>th</sup> meeting held on 30<sup>th</sup> March 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR's to the project on 19<sup>th</sup> May 2016 vide Lr. No. J-11011/106/2016-IA.II(I).

3.0 The project of M/s. Zaffron Enterprises Pvt. Ltd located in Village Khonmoh, Tehsil & District – Srinagar, State- Jammu & Kashmir is for setting up of a new cement manufacturing unit for production of 0.066 million tones per annum (66000 TPA).

4.0 The total land required for the project is 2.5084 ha, out of which 0.0 Ha is an agricultural Land, 0.0 Ha is grazing land and 2.5084 ha is others (barren Private Land. No /forest land 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 undulated and reported Geographical location is bounded between latitudes of 34 ° 04' 33.2" N to 34 ° 04' 38.5" N and longitudes of 74° 58' 56.3" E to 74° 59' 03.0" E in Survey of India topo sheet No. 43J/16, 43N/4, 43 O/1& 43K/13 at an elevation of 2438 meter m AMSL. The ground water table reported to ranges between 1.5-4.0 m. below land surface during the post-monsoon season and 1.5-2.5 below the land surface during the 2.0-3.0 pre-monsoon seasons. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be negligible. Further, the stage of groundwater development is reported to be 66.67% and 100 % in core and buffer zone respectively and thereby these are designated as safe areas.

6.0 The National Park is located at a distance of 3.5 KM from the site. Dachigam National Park reported to be located in the core and buffer zone of the project. Schedule-I i.e. Hangul, Common Leopard & Asiatic Black Bear etc. have been reported in the Dachigam National Park during the study period. The authenticated list of Flora & Fauna provided through the Deputy Conservator of Forest (WildLife) reporting presence of schedule-I fauna in the study area. (Enclosed with the summary).

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. (Refer Chapter-2)

8.0 The targeted production capacity of the 66000 TPA. The ore for the plant would be procured from (local market). The ore transportation will be done through Road.

9.0 The water requirement estimated about 35 m<sup>3</sup>/ Day and will be meet out from ground water after obtaining requisite NOC from concern state govt. authority. The CGWA does not issue NOC for Ground water with drawl in the J & K state.

10.0 The power requirement of the project is estimated as 1.5MW, which will be supply by the J&K Power dept.

11.0 Baseline Environmental Studies were conducted during summer season i.e. from April to June 2016. Ambient air quality monitoring has been carried out at 8 locations during April to June 2016 and the data submitted indicated: PM<sub>10</sub> (31.1 µg/m<sup>3</sup> to 56.20 µg/m<sup>3</sup>), PM<sub>2.5</sub> (15.5 to 27.8 µg/m<sup>3</sup>), SO<sub>2</sub> (5.5 to 13.90 µg/m<sup>3</sup>) and NO<sub>x</sub> (11.5 to 23.10 µg/m<sup>3</sup>). The results of the modeling study indicate that the maximum Increase of GLC for the proposed project is 11.30 µg/m<sup>3</sup> with respect to the PM<sub>10</sub> 2.44 µg/m<sup>3</sup> with respect to the SO<sub>2</sub> 3.26 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.

12.0 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 6.98 to 7.27, Total Hardness: 158 to 189 mg/l, Chlorides: 37.11 to 58.08 mg/l, Fluoride: 0.17 to 0.27 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 2 locations. pH: 7.25 to 7.39; DO: 6.7 to 6.8mg/l and BOD: <5.0mg/l. COD from 9.6 to 12.8mg/l

13.0 Noise levels are in the range of 46.4 to 50.2 dB(A) for daytime and 38.4 to 43.4 dB(A) for nighttime. Reported that the all baseline parameters are within prescribe norms.

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 19.5 Kg/day of solid waste will be generated due to the project, which will be sold to the authorized recyclers. It has been envisaged that an area of 0.82772 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

16.0 It has been reported that the Consent to Establish/Consent to Operate from them NIL State Pollution Control Board / Pollution Control Committee obtained vide Lr. No NIL. Dated NIL and consent is valid up to NIL.

17.0 The Public hearing of the project was held on 28th December 2017 at Village-Khonmoh, State –J&K. under the chairmanship of Mr. Syed Sajad Qadri, Additional District Magistrate Srinagar and Dr. Syed Nadeem Hussain, IFS, Regional director J&K State Pollution Control Board, Kashmir for production of 66000 TPA cement manufacturing plant by M/s Zaffron Enterprises Pvt Ltd. At earmarked area. The issues raised during public hearing are mention in page no. 124-127. An amount of 35 Lakhs has been earmarked for Enterprise Social Commitment to public hearing issues.

18.0 The capital cost of the project is Rs 35.44 Crore and the capital cost for environmental protection measures is proposed as Rs324.38 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 32.0Lakhs .The detailed CSR plan has been provided in the EMP in its page No. 114 to 115. The employment generation from the proposed project is 250.

19.0 Greenbelt will be developed in 0.82772 Ha which is about 33 % of the total project area. A 100 Mtr 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 960 trees per hectare. Saplings will be planted and nurtured in 0.82772 hectares in 4 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 Consultant Details: Enviro Concept (I) Pvt. Ltd., 1/3 A, Yudhister Marg, C-Scheme, Jaipur NABET/EIA/396/IA-021 Dated 21<sup>st</sup> August 2015 and listed at S.No.10 of NABET updated list-2.

22.0 After detailed deliberations, the committee sought the following additional information

1. Proof of ownership of project land in certified translated document in English
2. Proof of permission for change of land use from the revenue department
3. Endorsement of Wildlife conservation by the CWLW
4. Clarification of clearance by the CWLW in respect of the Conservation Reserve in the vicinity of the proposed project site.



5. Revised Corporate Environment Responsibility based on the issues emerged during PH along with time bound action plan and budgetary provision as per revised CER norms.
6. Proof of application for drawl of groundwater
7. Revised Corporate Environment Policy *inter alia* including standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions; hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions; and system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large.

**31.17. Proposed expansion project by M/s ASR Multimetals Private Limited, located at Village Chhadwada, Tehsil, Bhachau, District, Kutch, Gujarat [Online Proposal No. IA/GJ/IND/27526/2015; MOEFCC File No. F. No. J-11011/251/2007-IA II (I)] – Extension of validity of ToR.**

1.0 M/s ASR Multimetals Private Limited made online application vide proposal no. IA/GJ/IND/27526/2015 dated 5<sup>th</sup> April 2018 seeking extension of validity of terms of reference issued vide F. No. J - 11011/251/2007 - IA II (I) dated 07.07.2015.

2.0 It was informed that the plant is operative from 2005. Initially company had installed rolling mill products. The details of rolling mill products for existing plant are as mentioned below:

Product	Quantity	Remarks
MS Rods	5000 MT/month	EC was not applicable to these products. CCA was renewed vide order no. AWH 55787 dated 25/07/2013 and valid up to 13.05.18
MS Wires	2500 MT/month	
MS Flats	2500 MT/month	
Re rolled steel products of MS i.e channels, angles, bars, rounds, sections and profiles etc	2000 MT/month	
Steel billets/ ingots	12,333 MT/month	

3.0 Company later applied for expansion project for sponge iron, pig iron and captive power plant. The products were covered under EIA notification 2006 and accordingly EC was applied to MoEF. EC was obtained for the same vide letter no. F. No. J- 11011/ 251/2007- IA II (I) dated 31st March 2008 with validity of five years. Products considered for EC are:

Product	Granted capacity	Installed capacity	Remark
Sponge iron	6000 MT/month	5500 MT/month	Company has obtained consent to operate for sponge iron plant and captive power plant vide order no. AWH 55787 dated 25/07/2013 and the plant has commissioned.
Captive power plant <ul style="list-style-type: none"> <li>• Coal/ lignite based CPP</li> <li>• WHRB</li> </ul>	20 MW <ul style="list-style-type: none"> <li>• 16 MW</li> <li>• 4 MW</li> </ul>	8 MW <ul style="list-style-type: none"> <li>• 4 MW</li> <li>• 4 MW</li> </ul>	
Pig iron	5400 MT/month	---	Pig iron plant was not installed and accordingly Consent to operate was not obtained.

4.0 Now the company proposes for expansion in their existing manufacturing capacity. Company has procured additional land for the same. The Extended product profile is as mentioned below:

Name of Products /By Products & Intermediate Products	Existing quantity	Proposed quantity MT/month	Total quantity MT/month
MS (MILD STEEL) Rods	5000 MT/Month	24000 MT/Month	36000 MT/Month
MS (MILD STEEL) Wires	2500 MT/Month		
MS (MILD STEEL) Flats	2500 MT/Month		
Re-Rolled Steel Products of MS (i.e. Channels, Angles Bars, Rounds, Sections & Profiles etc.)	2000 MT/Month		
Steel Billets / Ingots (Semi Finished Products)	12333 MT/Month	24000 MT/Month (Along with Preheater & LRF)	36333 MT/Month
Sponge Iron	5500 MT/Month	15000 MT/Month	20500 MT/Month
Power from AFBC Boiler (Coal Base)	4 MW	17 MW	21 MW
Power from WHRB (Waste Heat Gases from Rotary Kiln)	4 MW	8 MW	12 MW

5.0 Terms of reference was issued to the proposed project by MoEF vide letter no. J - 11011/251/2007 - IA II (I) dated 07.07.2015. Due to market viability the project was kept on hold. As per the office memorandum vide letter no. J-11013/41/2006 IA.II(I) dated 29.08.2017, ToR will get expire on 07.07.2018. Therefore, requested to extend the validity of ToR for one more year to for preparation of EMP and PH.

6.0 After detailed deliberations the committee recommended for extension of validity of ToR one more year i.e. up to 06.07.2019.

**31.18. Expansion of Ferro Alloys plant at Manesamudram&Malguru Villages, Hindupur Mandal, Ananthpur District, Andhra Pradesh by M/s M.B. Smelters Private Limited [Online proposal No. IA/AP/IND/6013/2011; MoEFCC File No. J-11011/647/2009-IA.II(I)] - Validity of extension & amendment to EC**

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

**31.19. Enhancement of production (in pulp from 2,20,000 to 2,30,000 BDTPA and in paper & paper board from 3,00,000 to 3,20,000 TPA) by de-bottlenecking of present equipment & processes in existing pulp, paper and paper board and power plant at village Chandili, District Rayagada, Odisha by M/s JK Papers Limited [Online Proposal No. IA/OR/IND/3049/2011; MoEFCC File No. J-11011/172/2010-IA.II(I)] – Expansion under clause 7(ii) of EIA Notification, 2006**

1.0 M/s JK Papers Limited has made an application vide online proposal no. IA/OR/IND/3049/2011 dated 8<sup>th</sup> March 2018 for Enhancement of production (in pulp from

2,20,000 to 2,30,000 BDTPA and in paper & paper board from 3,00,000 to 3,20,000 TPA) by de-bottlenecking of present equipment & processes in existing pulp, paper and paper board and power plant at village Chandili, District Rayagada, Odisha under clause 7(ii) of EIA Notification, 2006.

2.0 The proposal is for Extension of Validity & Amendment in EC granted vide letter no. J-11011/172/2010-IA.II(I) dated 20.04.2011 & its amendment dated 10.05.2013 vide which pulp production sanctioned was 2,20,000 BDTPA and Paper and Paper Board production sanctioned was 3,00,000 TPA. The company has achieved the production and has latest CTO no. 3789/IND-I-CON-41 dated 29.03.2018 from Odisha SPCB.

3.0 Since 2013, as measures of self improvement and also to improve the quality of the product and reduce the production cost, the company has undertaken various de-bottlenecking exercises to further improve processes and efficiency of the machines. As a consequence of this, higher production can be made using the same machinery and chemicals, with minor modifications like Change of Pumps and motors of ODL & 1<sup>st</sup> stage screening at Pulp Mill, replacement of pulley, pumps and motors in Paper Machines warranting an investment of Rs. 2.0 Crores only. Hence, the pulp can go up by 10,000 BDTPA (6.7%) while the paper and paper board production capacity can go up by 20,000 TPA (4.5%). The raw material wood & bamboo will increase from 5,66,373 to 6,23,306 TPA and will be met from existing Farm Forestry sources. The total chemical consumption will decrease by 15600 TPA due to use of substitutes, better grade chemicals, change in consumption than initial estimates and reduction in purging in recycling system.

4.0 Total water consumption will remain within the already sanctioned capacity of 40000 cum/day, even after increase in production due to water conservation measures implemented during the last few years. The measures created a cushion which is being utilized for the proposed increase in production. The existing ETP has been augmented with extended aeration system in the year 2013 and will be able to cater to the additional load.

5.0 The coal consumption sanctioned in EC dated 20.04.2011 was 2,28,000 TPA. Due to reduction in overall power consumption by implementation of different power conservation schemes and maximum power generation from liquor fired boiler, present coal consumption is 2,00,000 TPA and it will remain same after enhancement of production. There will be marginal increase from 14,353 to 14,820 TPA in use of bamboo and hard wood dust (otherwise a waste material) for combustion, thereby further reducing coal consumption. Installation of an additional 3.4 MW back pressure TG set, which will utilize excess heat from recovery boiler, will further reduce overall coal consumption by 1500 TPA. CTE has been obtained from OSPCB for the TG. Therefore, no additional fossil fuel requirement is there.

6.0 With respect to emissions, in addition to the DG sets (4MW), in the EC dated 20.04.2011, there were four stacks of coal fire boiler No.5 & no.6, liquor fired boiler no.6 and Lime Kiln no.2. However, during implementation, the actual stack heights installed for LF6 and LK2 were taller than the theoretical estimates (leading to better dispersion) and as on date, boiler CF 5 and DG (4 MW) have been shut down. Only coal fire boiler No. 6, liquor fired boiler no. 6 and Lime Kiln 2 are and will remain operational in future.

7.0 Entire process solid waste from the plant is re-utilizable- Effluent sludge from primary clarifier in card board / egg tray manufacturing industries or combustion in CF boiler, Secondary sludge (currently scientifically landfilled) in future can be utilized as fuel in LF (liquor fired) boiler, white sludge from paper machine back water in low grade paper

manufacturing industries, Lime sludge as binding material in Fly Ash brick manufacturing industry, oily sludge in boiler for combustion, and bamboo & hardwood dust in CF boilers. The minor increase in solid waste due to the minor increase in production will be completely re-utilized.

8.0 Therefore, company is desirous of seeking amendment in environmental clearance for the increase in capacity under clause 7(ii) of the EIA Notification 2006 and its amendments till date. Regional office of MoEF&CC, Bhubaneshwar has issued the certified compliance Report vide letter No. 101-723/EPE/496-H dated 28.11.2017, which directed:

- i. Submit the Environmental Statement Report to its office on regular basis
- ii. Conduct noise monitoring and submit report to its office
- iii. set up a Rain Water Harvesting pit in factory premises & to consult CGWA/CGWB for further direction.

9.0 The copy of the Environmental statement, which was being submitted every year to MS, OSPCB was submitted in compliance and will be submitted in future to MOEF&CC's regional office also. The noise monitoring was got conducted from a third party and submitted. Rainwater harvesting is already implemented in the plant but as directed, the document describing same was submitted to CGWB, Bhubneswar on 11.12.2017 and correspondence with CGWA is going on. These compliances were submitted to Regional Office, MoEF&CC vide letter No. JKPW/CTS/08.04A/99/2017 dt. 16.12.2017.

10.0 The amendment requested is as follows:

- i. Increase in Pulp production from 2,20,000 to 2,30,000 BDTPA
- ii. Increase Paper and Paper Board production from 3,00,000 to 3,20,000TPA

11.0 In order to implement the above amendment, extension of validity of the EC dated 20.04.2011 is also requested.

12.0 Name of Consultant: 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.

13.0 After detailed deliberations, the committee recommended for enhancement of production in pulp from 2,20,000 to 2,30,000 TPA and in paper & paper board from 3,00,000 to 3,20,000 TPA by de-bottlenecking of present equipment & processes in existing pulp, paper and paper board and power plant at village Chandili, District Rayagada, Odisha under clause 7(ii) of EIA Notification, 2006 subject to following conditions in addition to earlier EC conditions:

- i. Increase the number of rainwater harvesting pits from 8 nos. to 12 nos.
- ii. 5% increase in green belt plantation within project boundary i.e. from the current 45 to 50% of project area
- iii. Installation of advanced ESP controllers to improve the efficiency of all ESPs

- iv. Solar lighting for all streets and parking area in colony
- v. Combustion of secondary sludge in recovery boiler, thus, eliminating requirement for disposal on land

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

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

**31.21. 3.5 MTPA Integrated Steel Plant including 295 MW CPP at Village: Halavarthi, Tehsil: Koppal, Dist: Koppal, State: Karnataka by M/s AARESS Iron & Steel Limited(AISL) [Online Proposal No. IA/KA/IND/27952/2015; MoEFCC File No. F. No. J-11011/161/2015-IA.II(I)] – Validity Extension of ToR.**

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

**31.22. Proposed 2x9 MVA Ferro Alloy Plant (Fe-Si: 12,780 TPA or Si-Mn: 28,620 TPA or Fe- Mn: 37,080 TPA) at Village Taraimal, Tehsil Tamnar, District Raigarh in Chhattisgarh by M/s Sumit Ispat Private Limited [Online proposal no. IA/CG/IND/20443/2011; MoEF File No. J-11011/688/2009-IA.II (I)]–Extension of validity of Environmental Clearance**

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

**31.23. Cement Plant (Clinker 3.0 MTPA; Cement 3.8 MTPA) at village Sanghipuram, P.O. Kari Talai, Tehsil Vijayraghavgarh, District Katni in Mandya Pradesh along with Captive Lime Stone Mine (889.76 Ha, 5.64 MTPA) near Jamuani Khurd, Chari, Durjanpur and Padrehi Villages in Katni District in M.P by M/s Sanghi Infrastructure M.P. Limited [Online proposal No. IA/MP/IND/73595/2011; J-11011/252/2009-IA II(I)] – Extension of validity of EC.**

1.0 M/s. Sanghi Infrastructure made an application vide online proposal No. IA/MP/IND/73595/2011 dated 24<sup>th</sup> April, 2018 seeking extension of validity of environmental clearance granted vide letter No .J-110011/525/2009IA-II(I) dated 03.05.2011.

2.0 The project of M/s. Sanghi Infrastructure M.P. Limited located in at Sanghigram, P.O. Kari Talai, Tehsil Vijayraghavgarh, District Katni, and State - Madhya Pradesh is for setting of New Cement Plant (Phase-I, Clinker, 3.0 MTPA; Cement, 3.8 MTPA) along with Captive Limestone Mines Lease Area-889.76 ha, 5.64 MTPA (Project Area-230.39 Ha.) was granted environmental clearance vide letter No .J-110011/525/2009IA-II(I) dated 03.05.2011.

Name of Unit	No. of Unit	Capacity of Each unit	Production Capacity
Phase-I Cement Plant	1	3.8 Million TPA	3.8 Million TPA
Clinker Unit	1	3.0 Million TPA	3.0 Million TPA
Lime Stone Mines		889.76 ha	5.64TPA

3.0 The Total Land required for the project is 230.39 ha which is government waste land and same has been allocated by the State Govt. of Madhya Pradesh. The land was taken into possession after registration of the same. No forest land involved. No water body exist in the project area.

4.0 After detailed prospecting of limestone area, Mining Lease have been granted and accordingly Mining Lease agreements have been entered after payment of stamp duty and registration fee.

5.0 It was informed that main reason for delay in implementation of the project is due to procurement of lands in the Mining Lease area as most of the lands belong to SC/ST. Most of the private lands have been acquired and the procedure / process for acquiring the SC/ ST lands is longer. In view of the challenges and delays in acquiring such lands under Land Acquisition Act, we have opted for obtaining the surface right under section 247(4) of MP Land Act. Even for this, the procedure is to issue notice to the land owners, obtain the consent of owner through hearing by SDM, after the consent prepare detailed report of land status & valuation of land as per the Land Acquisition rules and submit to Collector through SDM of the Taluq. After obtaining the approval, Revenue Department raises the demand note for depositing the compensation amount into the Account of SDM. Under the surface right, the compensation to be received by the land owner as per the Land Acquisition rules but the land would be leased to us for 30 years. After receiving the compensation amount by the SDM, their office would send notices to the land owners to receive the payment. Most of the land owners do not have the Bank Accounts, proper revenue records/succession/legal heir certificates and rectification of the records and necessary certificates takes very long time which includes legal proceedings. After opening of bank account and rectification of records, land owners shall receive the amounts and sign the documents for lease. Necessary entries in the records of Bhu-Pravesh are made and final approval from the Collector are obtained to carry out mining activities.

6.0 First phase of surface rights over an area of around 100 Ha has been completed and we have deposited an amount of Rs.14,61,64,601 on 04.09.2017 and according the rights have been obtained.

7.0 Second phase of 300 ha for obtaining surface rights is in the advanced stage and we plan to obtain approval and payment advice shortly. Around 150 ha of private lands and government waste lands have been acquired.

8.0 Till date more than Rs. 51 Crores has been spent on the project. Major expenses being.

S.No	Major expenses our Project	Amount( Rs)
1	Plant Land	Rs. 6 Crores
2	Land purchases in Mining Lease Area	Rs.10 Crores

3	Land under 247(4) in Mining Lease area	Rs.15 Crores
4	Dead Rent	Rs.1 Crores
5	MP Rural Infrastructure Development Fund	Rs.1 Crores
6	Land Survey & Land Bearing testing and Development	Rs.7 Crores
7	Feasibility Studies, Railway siding studies	Rs.1 Crores
8	Salaries and Wages	Rs.8 Crores
9	CSR Activities	Rs.2Crores
	Total	Rs.51 Crores

9.0 It was informed that the balance works will be completed within 30 months.

10.0 After detailed deliberations, the committee observed that the proponent has initiated several preparatory works including advance payment to the plant and machinery. It was also opined that the balance works can be completed within next three years.

11.0 Therefore, the committee recommended for extension of validity of environmental clearance for another three years i.e up to 02.05.2021.

### 9<sup>th</sup> May 2018

**31.24. Integrated Steel Plant (6.0 MTPA) and Captive Power Plant (1,080 MW) at Kerjang, Angul, Orissa by M/s Jindal Steel & Power Ltd. [Online proposal No. IA/OR/IND/4541/2006; MoEFCC File No. J-11011/365/2006-IA.II(I)] – Amendment in Environmental Clearance**

1.0 The proposal of M/s Jindal Steel & Power Ltd. (JSPL) made an application vide online proposal No. IA/OR/IND/4541/2006 dated 24<sup>th</sup> April, 2018 seeking following amendment in Environmental of existing Integrated Steel plant & Captive Power Plant located at Kerjang, Angul, Odisha without increase in steel production capacity of 6 MTPA:

- i. enhancement of production of existing Blast Furnace from 3.2 to 4.25 million TPA and Sinter Plant from 4 to 5 million TPA
- ii. deletion of 2x135 MW captive power plant i.e. change capacity of captive Power Plant from 1080 MW (8x135 MW) to 810 MW (6x135 MW).
- iii. Deletion of requirement of Coke Dry Quenching (CDQ) and permit use of wet quenching system on permanent basis.
- iv. Shift of proposed location of ash dyke within the boundary of steel plant.

2.0 The existing project was accorded environmental clearance vide letter no. J-11011/365/2006-IA.II (I) dated 22.02.2007 and amendments dated 14.11.2008 and 08.02.2007. The capacities proposed amendments will be as below:

S No.	Name of plant	Units	Capacity as per EC	Proposed enhancement/reduction	Capacity after proposed amendment
1.	Pellet Plant	MTPA	5.0	-	5.0
2.	Coal Gasification plant	Nm <sup>3</sup> /year	4000x10 <sup>6</sup>	-	4000x10 <sup>6</sup>
3.	DRI	MTPA	4.0	-	4.0

4.	Blast Furnace	MTPA	<b>3.2</b>	<b>(+)1.05</b>	<b>4.25</b>
5.	Coke Oven	MTPA	2.0	-	2
6.	Sinter Plant	MTPA	<b>4.0</b>	<b>(+)1.0</b>	<b>5.0</b>
7.	SMS	MTPA	6.0	-	6.0
8.	Rolling Mills	MTPA	6.0	-	6.0
9.	Ferro-alloy plant	MTPA	0.08	-	0.08
10.	Lime Dolime Plant	TPD	3000	-	3000
11.	Process gas recovery turbine	MW	62	-	62
12.	Coal based Captive Thermal Power Plant	MW	<b>1080 (8x135)</b>	<b>(-) 270 (2x135)</b>	<b>810</b>

3.0 No additional land is required for the proposed proposal of amendments. The proposed changes will be made with the existing Steel plant boundary.

4.0 The targeted production capacity of the Blast furnace is 4.25 MTPA and Sinter Plant is 5.0 MTPA. The additional ore required for the plant will be procured through auction and transported through rail.

5.0 The additional water requirement for the project is estimated as 168 m<sup>3</sup>/hr. and will be obtained from the existing source i.e. Samal Barrage on Brahmani River. However, the water requirement for the Captive Power Plant will be reduced by about 675 m<sup>3</sup>/hr., as the Company proposes to delete 2 units of 135 MW each of CPP.

6.0 The additional power requirement for the project is estimated as 15 MW, which will be obtained from the existing Captive Power Plant.

7.0 The data of ambient air quality (max. values) for the month of March 2018 from CAAQMS is as follows: PM 10 (76.3 µg/m<sup>3</sup>), PM 2.5 (47.5 µg/m<sup>3</sup>), SO<sub>2</sub> (27.8 µg/m<sup>3</sup>) and NO<sub>2</sub> (29.9 µg/m<sup>3</sup>). The results of the modelling study indicates that the maximum increase of GLC due to modified scenario and full operations of the existing plant is 2.23 µg/m<sup>3</sup> with respect to the PM10, 14.3 µg/m<sup>3</sup> with respect to SO<sub>2</sub> and 9.47 µg/m<sup>3</sup> with respect to the NO<sub>2</sub>.

8.0 It has been reported that additional of 311804 tons (per annum) of waste will be generated due to the proposed capacity changes of BF & Sinter Plant and the same will be used or sold. Further, it has also been reported that estimated 1.08 MTPA of ash generation will not occur due to deletion of the proposed 2 units of CPP.

9.0 It has been reported that the revised Consent to Operate from the Odisha State Pollution Control Board obtained vide letter no. 4169/IND-I-CON-6310 dated 04.04.2018 and consent is valid upto 31.03.2019.

10.0 Greenbelt is at various stages of development in 467.3 ha, which is about 33 % of the total plant area. Local and native species are being planted for development of Green Belt.

11.0 The proponent has mentioned that there is no violation under EIA Notification to the project or related activity. However, a case is pending against the project at NGT, Eastern Zone Bench.



**Observations of the committee:**

12.0 After detailed deliberations, the committee observed that the PP sought amendment in the EC without changing the overall production capacity of 6MTPA crude steel in respect of following:

- i. enhancement of production of existing Blast Furnace from 3.2 to 4.25 million TPA and Sinter Plant from 4 to 5 million TPA;
- ii. deletion of 2x135 MW captive power plant i.e. change capacity of captive Power Plant from 1080 MW (8x135 MW) to 810 MW (6x135 MW);
- iii. Deletion of requirement of Coke Dry Quenching (CDQ) and permit use of wet quenching system on permanent basis;
- iv. Shift of proposed location of ash dyke within the boundary of steel plant.

13.0 The committee observed that the implementation of CDQ will require about three years and the request for shifting of ash dyke was not made in the original application uploaded on the website but was made as additional request as a part of reply to essential details sought .

**Recommendations of the committee:**

14.0 The committee deliberated in detail on the above request of the committee and suggested following:

- i. The committee recommended for enhancement of production of existing Blast Furnace from 3.2 to 4.25 million TPA and Sinter Plant from 4 to 5 million TPA with following specific conditions.
  - a. Upgradation of existing APCD to control / prevent the additional pollution due to increase in the capacity
  - b. 100% utilization of the BF Slag / dust
  - c. Upgradation of gas cleaning plant of Blast Furnace to control additional effluent.
- ii. The request of the alteration of quenching from dry to wet was not agreed. During the deliberations, PP requested for time extension of 5 years stating that they still need so much time to instal the CDQ. However, the committee took into consideration that they had already been given extension and therefore, after detailed deliberations, the committee agreed for extension of another 2 years i.e upto 31<sup>st</sup> December 2020. Thereafter the PP shall switch over to CDQ.
- iii. Wet quenching to be kept as standby for emergency operation and also to be used during the annual shut down for CDQ Boiler.
- iv. Committee agreed for deletion of 2x135 MW captive power plant i.e. change capacity of captive Power Plant from 1080 MW (8x135 MW) to 810 MW (6x135 MW)
- v. The committee agreed for the shift of location of ash dyke and recommended to reduce the dyke area from 350 Acres to 280 Acres and reduced 70 Ha will be used for development of greenbelt with native tree species.

**31.25.** Expansion of Integrated Cement Plant [Clinker: 15 MTPA, Cement: 13.2MTPA; WHRB (90 MW to 125 MW); CPP: 180MW to 160 MW, DG sets 2000 KVA] and production of 1560 TPD of synthetic gypsum; 40 Ha Residential Colony of **M/s Shree Cement Ltd.** located at near Village Ras, Tehsil Jaitaran, District Pali, Rajasthan [Online proposal No. IA/RJ/IND/74532/2018; MoEFCC File No J-11011/343/2012-IA.II(I)] – **Environmental Clearance for expansion of WHRB from 90 MW to 125 MW under clause 7(ii) of EIA Notification, 2006.**

1. M/s. Shree Cement Limited made online application vide proposal no. IA/RJ/IND/71885/2017 dated 27th December 2017 seeking amendment in Environmental Clearance under clause 7(ii) of EIA Notification, 2006 for expansion of WHRB from 90 MW to 125 MW and reduction in Captive thermal Power Plant capacity from 180 to 160 MW in the Integrated Cement Plant [Clinker: 15 MTPA, Cement : 13.2MTPA, Synthetic Gypsum: 1560 TPD, DG sets 2000 KVA and Bagatpura Residential Colony (Built-up area of 136799 sqm, 599 units and area of 40 ha)] located near Village Ras, Tehsil Jaitaran, District Pali, Rajasthan. The proposal was considered in 28th EAC meeting held on 5th-7th Feb. 2018 and committee recommended the proposal for grant of amendment in EC.

2. Thereafter, M/s. Shree Cement Limited again made online application vide proposal no. IA/RJ/IND/73056/2018 dated 17th February 2018 seeking amendment in Environmental Clearance under clause 7(ii) of EIA Notification, 2006 for change in configuration by modification with respect to clinker production of 15.0 Million TPA and Cement production of 13.2 Million TPA in the same Integrated Cement Plant located near Village Ras, Tehsil Jaitaran, District Pali, Rajasthan. Ministry issued EDS on 12th April 2018 to direct the industry to apply a comprehensive application for both the proposals.

3. Accordingly, M/s. Shree Cement Limited submitted comprehensive online application vide proposal no. IA/RJ/IND/74532/2018 dated 14th April 2018 seeking amendment in Environmental Clearance under clause 7(ii) of EIA Notification, 2006 for change in configuration by modification with respect to clinker production of 15.0 Million TPA, Cement production of 13.2 Million TPA, Captive Power Plant 180 to 160 MW, increase of Waste Heat Recovery generation capacity from 90 to 125 MW and Synthetic Gypsum 1560 TPD, DG Sets of 2000 KVA and Bagatpura Residential Colony (Built-up area of 136799 sqm, 599 units and area of 40 ha) near Village – Ras, Tehsil – Jaitaran, District – Pali, Rajasthan.

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

4.0 Shree Cement Ltd has obtained Environmental Clearance vide letter no. J-11011/343/2012-IA II(I) dt.7th November, 2017 for increase of clinker capacity from 11.2 to 15 Million TPA, Cement from 8.8 to 13.2 Million TPA, WHRS from 68 to 90 MW, CPP at 180 MW, Synthetic Gypsum Capacity of 1560 TPD, DG Sets Capacity of 2000 KVA and Bagatpura Residential Colony (40 ha, Super built-up area of 136799 Sq Meters and Total Unit 599 with Amenities).

5.0 To meet the latest PAT target given by BEE and comply the NO<sub>x</sub> norms, modification in Clinker & Cement units, WHRS and CPP have been proposed by SCL.

- In clinker units from III to X, modification in pre-calciner system by mainly increase the height of calciner, which will result in the reduction of specific power consumption by 4 KW/T of clinker, reduction in specific energy consumption by 2 kcal/kg of clinker

and reduce the NOx emissions. The capacity of clinker after the proposed change in configuration will remain same as 15.0 Million TPA.

- In cement units, the power consumption of existing Ras New Cement Unit (RNCU) combined circuit of VRM+BM is 30 KW/T of cement. In the proposal VRM+BM will be operated separately. Power consumption of VRM will be 24 KW/T of cement and of Ball Mill (BM) with proposed roller press (RP) as a pre-grinding system will be 26 KW/T of cement. Over all power consumption will be reduced by ~5KW/T of cement. The capacity of cement after the proposed change in configuration will remain same as 13.2 Million TPA.
- Due to development of energy efficient technologies in Waste heat recovery power generation, SCL has proposed expansion in Waste Heat Power Generation Capacity from 90 MW to 125 MW and also reduction of Captive Thermal Power Generation Capacity from 180 to 160 MW.

6.0 Following are the existing and proposed capacities with revised configuration by modification:

S.N	Product	Name of Unit	Existing EC Granted Capacity	Proposed Configuration	Remarks
1	Clinker (Million TPA)	Unit-III to VIII	6 X 1.2 = 7.2	6 X 1.55 = 9.3	Modification in pre-calciner system of clinker unit-III to X for: <ul style="list-style-type: none"> <li>- Reduction of specific power consumption by 4 KW/T of clinker</li> <li>- Reduction of specific thermal energy consumption by 2 kcal/kg of clinker</li> <li>- Help to meet the PAT targets</li> <li>- DeNox arrangements in calciner for reduction in NOx emission (Low NOx calciner)</li> </ul>
		Unit-IX to XI (U-IX & X running & XI is proposed)	3 X 2.6 = 7.8	2 X 2.85 = 5.7 (U-IX & X)	
		Total for Unit-III to X	15.0	15.0	No change
2	Cement (Million TPA)	Unit-III & IV	2 X 2.2 = 4.4	2 X 2.2 = 4.4	No change
		Ras New Cement	4.4 (VRM+ Ball Mill)	4.0 (Existing VRM)	- Existing combined circuit of VRM+BM

		Unit (RNCU)	Running	2.2 (Existing Ball Mill + proposed RP)	<p>power consumption is 30 KW/T of cement.</p> <ul style="list-style-type: none"> <li>- In the proposal VRM+BM will be operated separately.</li> <li>- VRM power consumption will be 24 KW/T of cement.</li> <li>- Ball Mill (BM) with roller press (RP) as a pre-grinding system power consumption will be 26 KW/T of cement.</li> <li>- Over all power consumption will be reduced by ~5KW/T of cement.</li> <li>- Help to meet the PAT targets</li> </ul>
		Cement Mill	4.4 (VRM+ BM) Proposed, yet to be installed	2.6 (Proposed one cement mill)	
		Total	13.2	13.2	
3	Thermal Power Generation (MW)	Thermal Power Generation	180 (2X50 MW; 4X20 MW)	160 (2X50 MW; 3X20 MW)	Reduction By Removal of one 20 MW Turbine and one 100 TPH boiler
4	Waste Heat Recovery Power Generation (MW)	Waste heat recovery Power Generation	90 (1X21 MW; 1X14 MW; 1X25 MW; 2X15 MW)	125 (1X21 MW; 1X14 MW; 1X25 MW; 1X30 MW; 1X20 MW and 1X15 MW)	Increase in waste heat power generation by <ul style="list-style-type: none"> <li>- Increase of Clinker cooler flue gases temp from 550 to 625 DegC for more steam generation</li> <li>- Replacement of existing 21 MW turbine of Heat Rate 4027Kcal/ Kwh with 3518 Kcal/Kwh</li> <li>- New Turbine of heat rate 3248 Kcal/Kwh</li> </ul>
5	Synthetic Gypsum (TPD)	Synthetic Gypsum (TPD)	1560	1560	No change
6	DG Sets (KVA)	DG Sets (KVA)	2000	2000	No change

7	Bagatpura Residential Colony (40 ha)	Built-up area and unit	136799 sq meter and 599 units	136799 sq meter and 599 units	No change
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7.0 It was informed that no existence of National Parks and Wild Life Sanctuaries within 10km radius. No additional Land is required; the existing land of 187.56 ha is adequate. No additional ground water will be required; total ground water requirement for industrial & industrial domestic consumption is 3050 and Bagatpura residential colony is 450 KLD. NOC from CGWA is available for use of 4000 KLD for Plant, Mine and Bagatpura Residential Colony. The total cost of proposal will be Rs. 384.68 Cr. (Rs.150 Cr for roller press, feeding hoppers, cement silos and packers + Rs. 93.18 for kiln modification of Unit-III to X + Rs. 141.50 Cr for expansion of WHRS).

#### Observations of the committee:

8.0 After detailed deliberations, the committee opined that the WHRB is eco-friendly measure and utilizing the waste heat does not generate any additional pollution. Further, the TPP using waste heat boilers (WHRB) without any auxiliary fuel are exempt from EC vide its Notification S.O. 1599 (E) dated 25<sup>th</sup> June 2014.

#### Recommendations of the committee:

9.0 Therefore, the committee recommended for modification in Environmental Clearance under clause 7(ii) of EIA Notification, 2006 for change in configuration by modification with respect to clinker production of 15.0 Million TPA, Cement production of 13.2 Million TPA, Captive Power Plant 180 to 160 MW, increase of Waste Heat Recovery generation capacity from 90 to 125 MW and Synthetic Gypsum 1560 TPD, DG Sets of 2000 KVA and Bagatpura Residential Colony (Built-up area of 136799 sqm, 599 units and area of 40 ha) near Village – Ras, Tehsil – Jaitaran, District – Pali, Rajasthan.

**31.26. Cement Plant near Village Khapradih, Tehsil Simga, District Balodabazar, Chhattisgarh of M/s Shri Raipur Cement Plant [online proposal no. IA/CG/IND/73054/2018; MoEFCC File No. J-11011/235/2008-IA(I)] - Environmental clearance under clause 7(ii) of EIA Notification for increase in the Waste Heat Power generation capacity from 30 MW to 55 MW without changing the Clinker Capacity of 2 X 2.6 MTPA**

1.0 M/s. Shree Cement Limited made online application vide proposal no. IA/CG/IND/73054/2018 dated 17<sup>th</sup> February 2018 seeking amendment in Environmental Clearance under clause 7(ii) of EIA Notification, 2006 for expansion of WHRB from 30 MW to 55 MW without changing the Clinker Capacity of 2 x 2.6 Million TPA, Cement Capacity of 2 x 3.0 Million TPA, Captive Power Plant 25 MW along with Synthetic Gypsum Unit (65 TPH) and DG Sets {2000 KVA (size 1000/500/250/125)} near Village Khapradih, Tehsil Simga, District Balodabazar - Bhatapara (Chhattisgarh).

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

2.0 Shree Cement Ltd has obtained Environmental Clearance vide letter no. J-11011/235/2008-IA-II (I) dated 5<sup>th</sup> Sept. 2016. for increase of clinker capacity from 2x1.5 to

2x2.6 Million TPA, Cement from 2x2.6 to 2x3.0 MTPA, WHRS from 15 to 30 MW, CPP at 25 MW, Synthetic Gypsum Capacity of 65 TPH, DG Sets Capacity of 2000 KVA (size 1000/500/250/125).

3.0 Due to development of energy efficient technologies for recovery of waste heat for power generation without use of fuel, SCL has proposed amendment in EC under the Provision of Section 7(ii) of EIA Notification 2006 with respect to increase in Waste Heat Power Generation Capacity from 30 MW to 55 MW without changing the Clinker Capacity of 5.2 Million TPA.

4.0 The following measures will be implemented for to increase the waste heat power generation:

S. No.	Descriptions	Present Conditions (Heat Rate, Efficiency, Losses)	Proposed Conditions (Heat Rate, Efficiency, Losses )	Recurring Benefits (MW)
1	To maintain higher temp and DP of hot gases changing the cooler plate of Kiln. This will help in getting higher steam flow which in turn improve Power generation	AQC Boiler Flue Gas Temp is around 550°C and DP is around 100mmwc.	AQC Boiler Flue Gas Temp is around 625°C and DP is around 125 mmwc hence power generation will be improved by 7.9 Kwh/Mt of clinker	5.18
2	Reuse of Hot gases back in the cooler for additional waste heat availability for power generation.	Heat Available for AQC boiler inlet without HAR is 141Kcal/Kg clinker	Heat Available for AQC boiler inlet with HAR will be 177 Kcal/Kg clinker	7.39
3	Special technology will be used for reduction in False air in the boiler	Asbestos/kevelor cloth with sodium silicate as sealant	New Air seal technology will be used for better sealing	1.60
4	Turbine with better Heat rate	Existing Turbine heat rate is 3450 kcal / Kwh	New Turbine Heat Rate is 3150 Kcal/Kwh	1.89
5	Better insulation of the kiln and boiler area for reduction of radiation losses	Lightly Resin Bonded (LRB) thickness as per calculation for ambient+15°C	Thickness will be increased for Ambient+10°C. Ceramic fiber blanket will be used	3.74
6	Additional super-heater in AQC boiler to increase steam temperature and capture more waste heat	Steam temp is below 440°C	Steam Temp will be 480°C	2.60
7	Additional heat recovery from pre-heater boiler through	Flue Gas Outlet Temp is 160°C	Flue Gas Outlet will be 125°C	1.63

	gas outlet temperature reduction by means of water pre heating			
8	Margin for future modification and energy efficiency measures			1.00
Total				25.0

5.0 It was informed that no existence of National Parks and Wild Life Sanctuaries within 10 Km radius. No additional Land is required, existing land of 159.256 ha will be adequate. No additional ground water will be required; total ground water requirement for industrial & industrial domestic consumption is 3000 m<sup>3</sup>/day for Cement plant, CPP, WHRS, Residential Colony and Limestone Mine. NOC from CGWA is available for use of 3000 KLD for Cement plant, CPP, WHRS, Residential Colony and Limestone Mine. Total cost for the proposal will be Rs.103.70 Cr.

**Observations of the committee:**

6.0 After detailed deliberations, the committee opined that the WHRB is eco-friendly measure and utilizing the waste heat does not generate any additional pollution. Further, the TPP using waste heat boilers (WHRB) without any auxiliary fuel are exempt from EC vide its Notification S.O. 1599 (E) dated 25<sup>th</sup> June 2014.

**Recommendations of the committee:**

7.0 Therefore, the committee recommended for environmental clearance for the proposed increase in the Waste Heat Power generation capacity from 30 MW to 55 MW without changing the Clinker Capacity of 2 X 2.6 MTPA under clause 7(ii) of EIA Notification.

**31.27. Cement Plant near Village Benkanhalli, Tehsil Sedam, District Gulbarga, Karnataka of M/s Shree Cement Limited [online proposal no. IA/KA/IND/73001/2018; MoEFCC File No. J-11011/458/2008-IA(I)] - Environmental clearance under clause 7(ii) of EIA Notification for increase in the Waste Heat Power generation capacity from 20 MW to 30 MW without changing the Clinker Capacity of 2.4 MTPA.**

1.0 M/s. Shree Cement Limited made online application vide proposal no. IA/KA/IND/73001/2018 dated 15<sup>th</sup> February 2018 seeking amendment in Environmental Clearance under clause 7(ii) of EIA Notification, 2006 for expansion of WHRB from 20 MW to 30 MW without changing the Clinker Capacity of 2.4 Million TPA, Cement Capacity of 4.0 Million TPA, Captive Power Plant 2x22 MW and Residential Colony of 400 near village Benkanhalli, Taluka Sedam, District Gulbarga, Karnataka.

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

2.0 Shree Cement Ltd has obtained Environmental Clearance vide letter no. J-11011/458/2008-IA-II (I) dated 19<sup>th</sup> Sept. 2012 and amended on 9<sup>th</sup> February, 2018 for Integrated Cement Project capacity Clinker - 2.4 Million TPA, Cement - 4.0 Million TPA, Captive Thermal Power Plant – 2x22 MW, Captive Limestone Mine - 3.8 Million TPA (517.61 ha, ML No. 2673 & 2674) Residential Colony of 400 units to M/s. Shree Cement Ltd., Unit:

Karnataka Cement Project near village Benkanhalli, Taluka Sedam, District Kalaburgi, Karnataka.

3.0 Due to development of energy efficient technologies for recovery of waste heat for power generation without use of fuel, SCL has proposed amendment in EC under the Provision of Section 7(ii) of EIA Notification 2006 with respect to increase in Waste Heat Power Generation Capacity from 20 MW to 30 MW without changing the Clinker Capacity of 2.4 Million TPA.

4.0 The following measures will be implemented for to increase the waste heat power generation:

S.No.	Descriptions	Existing Proposal (Heat Rate, Efficiency, Losses)	New Proposal (Heat Rate, Efficiency, Losses )	Recurring Benefits (MW)
1	Higher temp and DP of Hot gases will be maintained by using the better cooler plates of Kiln. This will help in getting higher steam flow which in turn improves Power generation	AQC Boiler Flue Gas Temp 550°C and DP 100mmwc	AQC Boiler Flue Gas Temp will be 625°C and DP will be 125 mmwc which will improve power generation by 7.5 Kwh/Mt of clinker	2.36
2	Reuse of hot gases back in cooler for additional waste heat availability to generate more power	Heat Available for AQC boiler inlet without Hot Air Recirculation is 141Kcal/Kg clinker	Heat Available for AQC boiler inlet with HAR will be around 157 Kcal/Kg clinker	3.00
3	Reduction in False air in the boiler	Asbestos/kevelor cloth proposed with sodium silicate as sealant	New Air seal technology will be used for better sealing	0.50
4	Installation of Turbine with better Heat Rate	Turbine heat rate is 3450 kcal / Kwh	Turbine Heat Rate will be 3200 Kcal/Kwh	1.24
5	Better insulation of the kiln and boiler area to reduce radiation losses	Lightly Resin Bonded (LRB) thickness as per calculation for ambient+15°C	Thickness will be increased for Ambient+10°C. Ceramic fiber blanket will be used	1.62
6	Additional super-heater in AQC boiler to	Steam temp is below 440°C	Steam Temp will be 480°C	1.30



	increase steam temperature and capture more waste heat			
Total				10.0

5.0 It was informed that no existence of National Parks and Wildlife Sanctuaries within 10 km radius. No additional Land is required, existing land of 173.32 Ha is adequate. No additional ground water will be required; total ground water requirement for industrial & industrial domestic consumption will be 1242 m<sup>3</sup>/day for Cement plant, CPP, Residential Colony and Limestone Mine. NoC from CGWA is available for use of 2000 KLD for Cement plant, Residential Colony and Limestone Mine. Total project cost of the proposal will be Rs. 79.73 Cr.

**Observations of the committee:**

6.0 After detailed deliberations, the committee opined that the WHRB is eco-friendly measure and utilizing the waste heat does not generate any additional pollution. Further, the TPP using waste heat boilers (WHRB) without any auxiliary fuel are exempt from EC vide its Notification S.O. 1599 (E) dated 25<sup>th</sup> June 2014.

**Recommendations of the committee:**

7.0 Therefore, the committee recommended for environmental clearance for the proposed increase in the Waste Heat Power generation capacity from 20 MW to 30 MW without changing the Clinker Capacity of 2.4 MTPA under clause 7(ii) of EIA Notification.

**31.28. Integrated Cement Plant, Clinker 2.5 Million TPA, Cement 3.5 Million TPA, Waste Heat Recovery Power Plant 20MW (GPP), Captive Thermal Power Plant 25MW (CPP) along with Synthetic Gypsum Unit 65 TPH, DG Sets of 1250 KVA and Railway Siding near village Maldo, Tehsil Lakhpat, District Kachchh, Gujarat by M/s Shree Cement Limited. [Proposal No. IA/GJ/IND/73058/2018; MoEF&CC File No. J-11011/61/2018-IA.II(I)] – Terms of Reference – Further consideration on submission of reply to ADS.**

**1.0 M/s Shree Cement Limited** made online application vide proposal No. **IA/GJ/IND/73058/2018** dated 18<sup>th</sup> February 2018 along with the Form-I, copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) cement plants under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

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

2.0 M/s. Shree Cement Limited Unit: Bhuj Cement Plant proposes to install an Integrated Cement Plant, Clinker 2.5 Million TPA, Cement 3.5 Million TPA, Waste Heat Recovery Power Plant 20MW (GPP), Captive Thermal Power Plant 25MW (CPP) along with Synthetic Gypsum Unit 65 TPH, DG Sets of 1250 KVA and Railway Siding. It is proposed to set up the plant for cement manufacturing based on dry process technology.

3.0 The proposed unit will be located near village Maldo, Tehsil Lakhpat, District Kachchh, Gujarat.

4.0 The land area acquired/ required for the proposed plant is 141.96 Ha. Out of which Nil is an agricultural land, Nil is grazing land and 141.96 ha is Government Land. No forestland involved. The entire land has been acquired/ not acquired for the project. Of the total area 46.84 ha (33%) land will be used for green belt development.

5.0 Narayan Sarovar sanctuary is located at a distance of 5.6 KM from the site and eco-sensitive zone of Narayan Sarovar sanctuary is located at 4.6 KM. Project site is out of sanctuary and its Eco sensitive zone. The area also does not report to form corridor for Schedule-I fauna.

6.0 Total project cost is approximately Rs. 1837.36 Crore rupees. Proposed employment generation from proposed project will be 500 direct employments and 550 indirect/ contract based employments.

7.0 The targeted production capacity of Clinker is 2.5 Million TPA, Cement is 3.5 Million TPA, Waste Heat Recovery Power Plant is 20MW (GPP), Captive Thermal Power Plant is 25MW (CPP), Synthetic Gypsum Unit is 65 TPH and DG Sets of 1250 KVA. The limestone for the plant would be procured from the proposed Shree cement's captive limestone mine which is adjacent to the plant site. The limestone transportation will be done through conveyor belt. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Clinker Production	1	2.5 Million TPA	2.5 Million TPA
Cement Production	1	3.5 Million TPA	3.5 Million TPA
Synthetic Gypsum	1	65 TPH	65 TPH
Thermal Power Generation	1	25 MW	25 MW
Waste Heat Recovery Power Generation	1	20 MW	20 MW
DG Sets	3	2*500 and 1*250	1250

8.0 The electricity load of 31 MW will be procured/sourced from Captive Power Plant, WHRS & Grid. Company has also proposed to install 1250 KVA DG Sets.

9.0 Proposed raw material and fuel requirement for project are given in the following table:

Cement Plant		
Raw Material	Quantity (Million TPA)	Source
Lime Stone	4.0	Captive lime stone mine
Indian and Imported Pet coke / Coal and Lignite	0.25	Local petroleum refinery Jamnagar, Reliance & Essar/ USA / Saudi Arabia / Turkey / Canada etc.
	0.40	Local market / USA etc.
Laterite or	0.1	Local market

Iron ore		
Bauxite	0.02	GMDC Dabhan Mines
Indian, Imported, synthetic and chemical Gypsum	0.175	Synthetic gypsum –manufacturing at the site
		Chemical Gypsum
		Marine Gypsum
		Imported (Iran/Oman)
Fly ash	1.22	Captive power plant and nearby Thermal Power Stations
Sulphuric Acid	655 TPD	Local sources
		Imported (Japan / South Korea)

<b>Fuel and Limestone Requirement for CPP</b>		
<b>Raw Material</b>	<b>Quantity (Million TPA)</b>	<b>Source</b>
Lime Stone	0.01	Captive lime stone mine
Imported and Indian Coal	0.20	Imported from USA
	0.22	Indian from local market
<b>Raw materials Requirement for Synthetic Gypsum Manufacturing</b>		
<b>Material</b>	<b>Requirement 65 TPH / 1560 TPD</b>	
	<b>%</b>	<b>TPD</b>
Limestone	62.0	968
H <sub>2</sub> SO <sub>4</sub> 98%	42.0	655
Water	35 .0	546

10.0 Water Consumption for the proposed project will be 1500 m<sup>3</sup>/day with TDS 300 mg/l which will be sourced from ground water, mine dewatering and sea water with RO and desalination plant and waste water generation will be discharged in nearby estuary. Domestic waste water will be treated in the STP and treated water will be used for plantation.

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

12.0 EIA Consultant: M/s Vimta Labs, Hyderabad

13.0 The proposal was considered in the 29<sup>th</sup> meeting of Expert Appraisal Committee held during 12<sup>th</sup> – 14<sup>th</sup> March 2018. After detailed deliberations, the committee observed that neither the PP nor the EIA consultant visited the site while preparing the prefeasibility report. Thus, the prefeasibility report prepared with out any idea of the site location with respect to its environmental aspects.

14.0 Therefore, the committee advised the PP to revise the pre-feasibility report after visiting the site and taking into consideration of the ecology of the area with respect to ecosensitivity/biodiversity, socio-economic aspects and land use /land cover.

15.0 Accordingly the PP submitted reply to ADS on 30<sup>th</sup> March 2018 based on the site visit by the EIA Consultant.

**Observations of the committee:**

16.0 The committee observed that the instant proposal is adjacent to the Integrated Limestone Mine Area 251.9 Ha, Clinkerization Plant (3X3.3 MTPA), Cement Plant (3 MTPA), Captive Power Plant (99 MW) including coal based Thermal Power Plant & Waste Heat Recovery System), Berthing Jetty of length 820 mx 28 m (Capacity 15 MTPA) and conveyor corridor (10.2 Km.) of M/s Lakhpat Cement Works Limited at Villages Koriyani, Kapurasi, Maldo, Mudhvay, Taluka Lakhpat, District Kutch, Gujarat.

17.0 the sub-committee visited the proposed site of site M/s Lakhpat Cement Works Limited on 9<sup>th</sup> March 2018 and recommended following specific ToRs in view of the site-specific conditions:

1. Detailed study of community dependence on the existing land use including grazing, crop productivity and measure for its sustenance (this is applicable to mines, plant and conveyor corridors. It may also be stated that the entire land is single crop agriculture and grazing and almost 40% is covered with native vegetation).
2. The committee observed that the site for the integrated cement plant including plant, mine, conveyor corridor and jetty is found to be rich in desert vegetation with species diversity and also wild animals including avifauna. The committee also observed high grazing activity in the area. Therefore, the committee is of the view, a detailed study on existing flora and fauna and its diversity including marine ecosystem should be undertaken by the expert institutions in combination such as NIO, CAZRI, and WII.
3. A detailed study on the impact of noise and human activity due to conveyor corridors on wildlife and avifauna shall be conducted. Mitigation and conservation measures shall be incorporated in the detailed wildlife management plan in consultation with the Forest Department.
4. Detailed drainage and hydrography studies for the entire area including plant, mine and conveyor corridor shall be conducted using high resolution satellite imagery such as PAN6, QUICKBIRD and IKINOS.
5. Detailed hydrological and geohydrological studies shall be conducted for the mine and plant area to determine the water table and its gradient by involving geo-physical study.
6. Detailed study and remediation plan for salinity management of the area due to mining operations below water table.
7. Detailed Emergency Response Management Plan for the Spillage and other emergencies for the entire conveyor corridor.
8. It is understood that the mineral strike is at 20m depth. For 250 ha, the total top soil and over burden area would be around 80 MT. A management plan for top soil and over burden shall be prepared.

9. A detailed survey shall be conducted to identify the employable youth and provide adequate training for employment in the proposed project.
10. The committee observed that lot of fly ash is being dumped in the Narayan Sarovar WLS most probably by the GMDC power plant. Therefore, the committee is of the opinion that the plan for 100% utilisation of fly ash from the captive power plant shall be submitted.
11. Cumulative Air Quality Assessment /Modelling shall be conducted for the proposed mines and plant including existing power plant in the study area.
12. The committee is of the view that the lime stone contains high sulphur by its physical appearance of the lime stone pieces found in the area. Based on the actual sulphur content, plans for desulfurization of the flue gases shall be proposed.

### **Recommendations of the committee**

18.0 Therefore, 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 1st May 2018.
- iv. Detailed study of community dependence on the existing land use including grazing, crop productivity and measure for its sustenance shall be conducted.
- v. A detailed study on existing flora and fauna and its diversity including marine ecosystem should be undertaken by the expert institutions in combination with NIO, CAZRI, and WII.
- vi. A detailed study on the impact of noise and human activity due to conveyor corridors on wildlife and avifauna shall be conducted. Mitigation and conservation measures shall be incorporated in the detailed wildlife management plan in consultation with the Forest Department.
- vii. Detailed drainage and hydrography studies for the entire area including plant, mine and conveyor corridor shall be conducted using high resolution satellite imagery such as PAN6, QUICKBIRD and IKINOS.
- viii. Detailed hydrological and geohydrological studies shall be conducted for the mine and plant area to determine the water table and its gradient by involving geo-physical study.
- ix. Detailed study including remediation plan for salinity management of the area due to mining operations below water table shall be under taken.

- x. Detailed Emergency Response Management Plan including security issues for the Integrated Cement Plant shall be prepared.
- xi. A detailed management plan for top soil and over burden shall be prepared.
- xii. A detailed survey shall be conducted to identify the employable youth and provide adequate training for employment in the proposed project.
- xiii. A detailed plan for 100% utilisation of fly ash from the captive power plant shall be prepared.
- xiv. Cumulative Air Quality Assessment/Modelling shall be conducted for the proposed mines and plant including existing power plant in the study area.
- xv. Based on the actual sulphur content in the lime stone and coal, plans for desulfurization of the flue gases shall be prepared

**31.29.** Proposed Integrated Cement Project - Clinker (2.5 MTPA), Cement (3.4 MTPA), Captive Power Plant (39 MW) & WHRS (8 MW), near Village: KolKarhiya, Tehsil: Pawai, District: Panna (Madhya Pradesh) by **M/s. Springway Mining Private Limited**. [Online Proposal No. IA/MP/IND/27405/2015; MoEFCC File No. J-11011/131/2015-IA-II(I)] – **Extension of validity of ToR**

1.0 **M/s. Springway Mining Private Limited** submitted an application vide online proposal no. IA/MP/IND/27405/2015, dated 5<sup>th</sup> April 2018 seeking extension of validity of Terms of reference granted to M/s. Springway Mining Pvt. Ltd. For the proposed Integrated Cement Project Clinker (2.5 MTPA), Cement (3.4 MTPA), Captive Power Plant (39 MW) & WHRS (8 MW) Near Village: Kol Karhiya, Tehsil: Pawai, District: Panna (Madhya Pradesh) vide F.No. J-11011/131/2015-IA-II (I) dated 07th July, 2015.

2.0 It was informed that the baseline studies were carried and EIA/EMP was prepared and submitted for PH. However, they require some more time to conduct PH. Therefore, requested for extension of validity of ToR for one more year.

3.0 The committee recommended for extension of validity of the ToRs for one more year i.e. up to 6<sup>th</sup> July 2019.

### **Standard EC consitions for Manganese Mineral Benification Plant:**

#### **General Conditions:**

1. An amount of Rs. -----(2.5% Of of total cost proposed) towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.
2. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.

3. The Capital cost Rs. ---- and annual recurring cost Rs. ----- towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.
4. The project proponent shall (Air Quality Monitoring):
  - a. install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 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. monitor fugitive emissions in the plant premises;
  - b. monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
  - c. Install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, MnO<sub>2</sub>, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> 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;
5. submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emission and concentrations in excess of five micro grams of Mn/m<sup>3</sup> should be brought to the notice of the Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with quarterly monitoring report. The project proponent shall (Water Quality Monitoring):
  - a) 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 system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
  - b) monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories; and
  - c) submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality specially with reference to MnO<sub>2</sub> to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with quarterly monitoring report.
6. The project proponent shall (Air Pollution Control):

- a. provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
  - b. provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
  - c. use leak proof trucks/dumpers carrying ore and other raw materials and cover them with tarpaulin;
  - d. provide wind shelter fence and chemical spraying on the raw material stock piles; and
  - e. design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.
7. The project proponent shall (Water Pollution Control):
- a) provide the slime disposal facility with impervious lining and collection wells for seepage. The water collected from the slime pond shall be treated and recycled;
  - b) adhere to ‘zero liquid discharge’;
  - c) provide Sewage Treatment Plant for domestic wastewater; and
  - d) provide garland drains and collection pits for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
8. The project proponent shall (Water conservation):
- a) practice rainwater harvesting to maximum possible extent; and
  - b) make efforts to minimise water consumption in the beneficiation plant by segregation of used water, practicing cascade use and by recycling treated water.
9. The project proponent shall (Energy Conservation):
- a) provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly; and
  - b) provide LED lights in their offices and residential areas.
10. The project proponent shall ensure that the concentration of the chemicals such as cyanides, dichromate, amines and polymers kept below the toxic limits.
11. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
12. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.



13. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
14. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.
15. 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.
16. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
17. 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).
18. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016. Coal tar sludge shall be recycled to coke ovens.
19. 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.
20. Occupational health surveillance of the workers shall be done on a regular basis (once in three months) and records maintained as per the Factories Act. Thorough exam of nervous system, Chest X-Ray and lung function test, liver function test and complete blood count.
21. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. While processing manganese ore, nose, eyes and throat should be covered with masks to avoid the contact/ inhalation of MnO<sub>2</sub> particles. Body also should be fully covered to avoid the spillage of MnO<sub>2</sub> particles/slurry.
22. The project proponent shall (Post-EC monitoring):
  - a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
  - b. put on the clearance letter on the web site of the company for access to the public.
  - c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.
  - d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;

- e. monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
- f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
- g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;
- h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

**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 30<sup>th</sup> 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<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, 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 4<sup>th</sup> August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.
- ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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**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<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> 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 PELLETT 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<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> 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.

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### **ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY**

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

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### **LEATHER/SKIN/HIDE PROCESSING INDUSTRY**

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

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### **COKE OVEN PLANT**

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

5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.

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### **ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS**

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

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### **INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE**

1. Details of proposed layout clearly demarcating various units within the plant.
2. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
3. Details on design and manufacturing process for all the units.
4. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
5. Details on requirement of raw materials, its source and storage at the plant.
6. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
7. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
8. Details on toxic content (TCLP), composition and end use of chrome slag. Details on the recovery of the Ferro chrome from the slag and its proper disposal.

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**METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)**

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


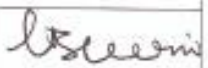

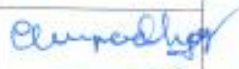



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## **Executive Summary**

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

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

**LIST OF PARTICIPANTS OF EAC (I) IN 31<sup>st</sup> MEETING OF EAC (INDUSTRY-I)**  
**HELD ON 7<sup>th</sup> – 9<sup>th</sup> May 2018**

S. No	Name and Address	Position	Attendance			Signature
			7 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>	
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P	P	
<b>Members</b>						
2.	Dr. B.P. Thapliyal, Director Central Pulp and Paper Research Institute	Member	A	P	P	
3.	Director, Central Leather Research Institute	Member	A	A	A	
4.	Dr.Siddarth Singh, Representative of Indian Meteorological Department	Member	P	A	A	
5.	Representative of Central Ground Water Board	Member	A	A	A	
6.	Dr. G. Bhaskar Raju	Member	P	P	P	
7.	Prof. Naresh Chandra Pant	Member	A	A	A	
8.	Dr. Jagdish Kishwan, IFS(Retired)	Member	P	P	P	
9.	Dr.G.V.Subrahmanyam	Member	P	P	P	
10.	Prof. Arun Pandey	Member	A	A	A	
11.	Shri Santosh Raghunath Gondhalekar	Member	A	A	A	
12.	Shri Ashok Upadhyay	Member	P	P	P	
13	Mr. R.P. Sharma	Member	P	P	P	
14.	Shri Sharath Kumar Pallerla, Scientist 'F' / Director, MoEF&CC	Member Secretary	P	P	P	
15.	Shri RajasekharRatti, Scientist 'C', MoEF&CC	Dy. Director	P	P	P	

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