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

SUMMARY RECORD OF THE THIRH (30TH) MEETING OF EXPERT APPRAISAL COMMITTEE HELD DURING 9TH TO 10TH APRIL 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 **9th to 10thApril 2018** in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

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

30.2 Confirmation of the minutes of the 29thMeeting

The minutes of 29th meeting held during **12th to 14th March 2018** as circulated were confirmed with follwng corrections:

DATE: 9thApril, 2018

30.3 Expansion of steel plant at Tulsiberia Road, village Kulgachia, PS Uluberia, Mouza Sreerampur, Dist. Howrah, West Bengal by M/s Shri Badri Narain Alloys & Steel Limited [Proposal No. IA/WB/IND/4978/2012; MoEF&CC File No. IA-J-11011/432/2008-IA II(I)] – Amendment in Environmental Clearance

1.0 M/s Shri Badri Narain Alloys & Steel Limited has made online application vide proposal no. IA/WB/IND/4978/2012 dated 02nd Jan 2018 for the amendment in Environmental Clearance granted vide no. J-11011/432/2008-IA dated 26.07.2012 for the expansion of steel plant at Tulsiberia Road, village Kulgachia, PS Uluberia, Mouza Sreerampur, Dist. Howrah West Bengal. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of EIA Notification, 2006 and the proposal is appraised at central level.

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

2.0 The proposed expansion programme for which the abov-mentioned EC was granted comprises of the following units:

Sl. No.	Unit	Capacity
1.	Mini Blast Furnace	1 x 350 m^3
2.	Sinter Plant	1 x 36 m^2
3.	Steel Melting Shop	Electrical Arc Furnace – 1x70 T with Ladle Furnace 1x70 T, Billet Caster 1x4 Strand & CCM
4.	Ferro Alloy Plant	2 x 9 MVA
5.	Captive Power Plant	10 MW (7 MW from BF gas & 3 MW from AFBC)
6.	Rolling Mill	0.45 MTPA
7.	Induction Furnace	2 x 10 T with Billet Caster

3.0 It is proposed to surrender most of the units considering the present steel market scenario. The following table mention about the units for which Environmental clearance (as mentioned above) was granted (column 2 & 3). The table also indicates the units that have been installed (column 2 & 4) and those units (column 2 & 5) which will have proposed to drop:

S. No.	Product / Unit	Units (E.C. No. J-11011/432/2008-IA II (I), dated 26th July, 2012)	Units Installed	Proposed to drop	Final configuration after amendment
(1)	(2)	(3)	(4)	(5)	
1	Mini Blast Furnace	1x350 m^3	-	1x350 m^3	-
2	Sinter Plant	1x36 m^2	-	1x36 m^2	-
3	Steel Melting Shop	Electrical Arc Furnace – 1x70 T with Ladle Furnace 1x70 T, Billet Caster 1x4 Strand & CCM	-	Electrical Arc Furnace – 1x70 T with Ladle Furnace 1x70 T, Billet Caster 1x4 Strand & CCM	-
4	Ferro Alloy Plant	2x9 MVA	-	2x9 MVA	-
5	Captive Power Plant	10 MW (7 MW from BF gas & 3 MW from AFBC)	-	10 MW (7 MW from BF gas & 3 MW from AFBC)	-
6	Rolling Mill	0.45 MTPA	0.162 MTPA installed and balance 0.288 MTPA to be installed	-	0.45 MTPA
7	Induction Furnace	2 x 10 T with Billet Caster	2 x10 T with Billet Caster (1 x 4 Strand Continuous Billet Caster)	-	2 x10 T with Billet Caster (1 x 4 Strand Continuous Billet Caster)

4.0 Name of Environmental Consultant: Envirotech East Pvt. Ltd., Kolkata-700 075, NABET certificate no. NABET/EIA/1011/010.

Observations of the committee

4.0 The committee observed that the project proponent has proposed for dropping of Mini Blast Furnace; Sinter plant; steel melting Shop; Ferro Alloy Plant; and Captive power plant. The facilities such as Rolling Mill and Induction Furnace only will be installed. Therefore, it was felt that the conditions stipulated in the earlier environmental clearance was pertaining to integrated steel plant and will not be relevant to the induction furnace and rolling mill. Therefore, the committee advised the PP to submit conditions applicable for Induction Furnace and Rolling Mill from the conditions of earlier environmental clearance. Accordingly, the PP submitted conditions applicable for Induction Furnace and Rolling Mill from the conditions of earlier environmental clearance.

Recommendations of the Committee:

5.0 After detailed deliberations, the committee recommended for amendment in environmental clearance for construding the EC to 0.45 MTPA Rolling Mill and 2 x10 T Induction Furnace with Billet Caster (1 x 4 Strand Continuous Billet Caster) with following specific and general conditions in supersession of earlier EC:

A. Specific conditions:

1. This EC will be valid up to 25.07.2019 for instsllation and start of production operations. In case, the PP fail to start the production operations, shall seek the extension of validty before 25.7.2019.

2. At least 5% of the total cost of the project shall be earmarked towards Enterprise Social Commitment (ESC) and 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.

3. 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.

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

B. General Conditions:

1. 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) and connected to SPCB and CPCB online and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
    b. monitor 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 parameters relevant to pollutants released as per National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 (as amended from time to time) 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.

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

a. install 24x7 continuous effluent 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) and connected to SPCB and CPCB online 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 for calibration of CEMS 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.

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

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

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

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

d. recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration;

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

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

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

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

4. The project proponent shall (Water Pollution Control):
   a. adhere to 'zero liquid discharge';
   b. provide Sewage Treatment Plant for domestic wastewater; and
   c. provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 as amended from time to time.

5. 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.

6. The PP shall (Energy Conservation):
   a. provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.
   b. practice hot charging of slabs and billets/blooms as far as possible;
   c. ensure installation of regenerative type burners on all reheating furnaces;
   d. provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly; and
   e. Provide the project proponent for LED lights in their offices and residential areas.

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

8. Sufficient number of colour coded waste collection bins shall be constructed at the 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.

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

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

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

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

13. 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.

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

15. 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.

16. 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.

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

18. 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).

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

20. 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.

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

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

23. The project proponent shall (Post-EC monitoring):
    a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
    b. put on the clearance letter on the web site of the company for access to the public.
    c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http:/envfor.nic.in.
    d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
    e. monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
    f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as

well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;

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

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

30.4 Proposed 12,000 TPA Bank Note Paper Mill at Village Note Mudran Nagar, Mysore in Karnataka by M/s Bank Note Paper Mill India Private Limited [Proposal No. IA/KA/IND/73355/2018; MoEFCC File No. J-11011/239/2010-IA-II(I)] - Expansion under para 7(ii) of EIA Notification 2006.

1.0 M/s Bank Note Paper Mill India Private Limited made online application vide proposal no. IA/KA/IND/73355/2018 dated 07th March 2018 seeking Environmental Clearance for the expansion of above mentioned proposed project under para 7(ii) of EIA Notification 2006. The proposed project activity is listed at S. No. 5(i) Pulp & 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 Bank Note Paper Mill India Pvt Ltd., (a joint venture of M/s Bharatiya Reserve Bank Note Mudran Private Limited (BRBNMPL) and M/s Security Printing & Minting Corporation of India Limited (SPMCIL) has been set up to manufacture 12000 TPA Bank Note Paper at Note Mudran Nagar, Mysore, Karnataka.

3.0 Bank Note Paper Mill India Pvt Ltd.,{BNPM) had obtained environmental clearance vide F.No. J-1101-1/239/2000-lA.ll(l) dated 29th April, 2011 as per the proposal submitted to ministry for setting up of 2 lines, 6000 TPA each in 41 acre of land out of 332 acre available with BRBNMPL in their premises. About 130 acre of area has been developed as green belt in BRBNMPL and an additional area of approx. 8.5 acre have been developed as green belt within BNPM. The Premises - Comes within the notified area of Karnataka Industrial Area Development Board (KIADB) and is declared as Prohibited Area by Govt. of Karnataka.

4.0 The company has installed state of art machinery imported from Germany and other European countries. A zero-discharge concept Effluent treatment plant consists of primary, secondary and tertiary treatment with ultra-filtration, RO & MEEE (Multi effect evaporator) has been established to treat trade effluent and re-cycle the water in the process and gardening.

5.0 Raw material used for the manufacturing of currency paper is 100% cotton sourced from neighbouring states. Sprinkler system has been established for firefighting system. Digestion and bleaching process has been commissioned which is totally chlorine free. Chemical required for dozing in digestion and bleaching process is very low due to no lignin content in raw materials. Dust extraction and suppression system has been provided to consolidate all loose fibres in the cotton cleaning process and this particle along with other heavy particles of raw cotton is collected at various stages and compressed to form the briquette and these briquettes are disposed as fuel & Cotton mattress makers

6.0 Furnace oil is used to prevent any fly ash/sludge in the boiler. Though consented water consumption is 3000M^3perday. The actual consumption is lower than 2000 m^3 per day to produce 12000 TPA.

7.0 The production has been streamlined and the BNPM is confident of producing bank note paper up to 19000 MT without adding any machinery and pollution load. This is found possible after optimizing of various processes, reducing rejects, increasing speed of the machinery and better utilization of machinery by reducing down time.

8.0 Certified compliance report from the Regional office of moEFCC, Bangalore was submitted vide F.No. EP/12.1/2/2010-11/ Karnataka Compliance status of the EC from the Resional Office of MoEF&CC based on the site visit made on 24.07.2077. No non-compliances of earlier environmental clearance conditions were reported.

9.0 Now, the expansion is sought for increase in production capacity from 12,000 TPA to 19,000 TPA without addition of new machines, without increase in fresh water consumption, effluent generation, pollution load. Increase of production is only due to better optimization of process and reduction of waste than envisaged.Details of the same is given below

S. No	Details	Envisaged while obtaining EC	Result of Best Run	Proposed	Remarks
1	Cotton Input per Day (MT)	Cotton Comber : 58MT Cotton Linter: 16 MT Broke: 0 MT(As per Form No.1 submitted initially)	42.1MT 1.50 MT 3.16 MT	50.0 MT 1.00 MT 3.50 MT	Within the consent limit
2	Dry Cotton Reject (%)	2.0	0.75	0.75	Improved
3	No. of Operation Days	300	NA	354	Approx. 2500 TPA increase
4	% Downtime (Maintenance + Process)	14%	NA	5%	
5	% Rejection due to Quality Parameters	16	4.9	Max 5%	Approx. 1500 TPA increase
6	% Fixed Losses like trims etc.	5	2	2	Improved
7	Machine Speed (mpm)	75	90	90-95	Approx. 3000 TPA increase

10.0 Quantum of Solid waste (Filter Press Cake) generation is envisaged to increase from present 10 TPD to 15 TPD which is not a significant as same is being sold to Board manufacturer / File manufacturer. Part of the sludge is being sold & converted in to Vermi compost in turn will be used as organic manure.

11.0 Rejected paper trims & paper briquette may increase from 800 to 1500 TPA which is not a significant as same is being sold in compressed briquette form to be used as solid fuel in Boilers.

12.0 Dry cotton is being sold & being used for making mattresses & as solid fuel. Further there will be no change in the earlier proposed Environment lmpact Analysis which was submitted for obtaining Environmental Clearance of 12,000 TPA.

Observations of the committee: --

13.0 The committee observed that as per the process explained by the project proponent, the paper is made of cotton fibre, no chipping is involved, no digester and no cooking, no lignin content is present, therefore no generation of black liquor, AOX and marcaptans. ZLD is being followed. It was noted that in the first phase the production is increased from 12000 TPA to 16000 TPA. The green belt developed within the project premises is 8.5 Acrs out of total area of 41 Acres. It was also noted that the plantation being developed was not as per the CPCB norms**.**

Recommendations of the committee:

14.0 After detailed deliberations, the committee recommended for expansion for increase in production from 12000 TPA to 16000 TPA under clause 7(ii) of EIA Notification, 2006 subject to following specific conditions:

i. The greenbelt shall be developed in 13.65 Acres which is equalent to 33% of the project area. Since 8.5 Acres developed in the project premises, the PP shall develop greenbelt in remaining area in the adjoining area of the project. The greenbelt shall be developed with broad leaved and native tree species.

30.5 Expansion of Integrated Steel Plant & Captive Power Plant (WHRB 8 MW; AFBC 17 MW) at village Punjipatra, District Raigarh, Chhattisgarh by M/s Scania Steels and Powers Limited [Online proposal No. IA/CG/IND/67506/2007; MoEF&CC File No J11011/1267/2007-IA II (I)- Further consideration for Environmental Clearance based on ADS.

1.0 **M/s Scania Steels and Powers Limited** submitted online application vide proposal No. **IA/CG/IND/67506/2007** dated 17th August 2017 along with copies of EIA/EMP report seeking environmental clearance for the proposed expansion of of Integrated Steel Plant & Captive Power Plant (WHRB 8 MW; AFBC 17 MW) at village Punjipatra, District Raigarh, Chhattisgarh by M/s Scania Steels and Powers Limited under the provisions of the EIA Notification, 2006. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of EIA Notification, 2006 and the proposal is appraised at Central level.

2.0 The proposal was for expansion of Integrated Steel Plant & Captive Power Plant (WHRB 8 MW; AFBC 17 MW) of M/s Scania Steels and Power Limited located in Village Punjipatra, Tehsil Tamnar, District Raigarh, State Chhattisgarh was initially received in the Ministry on 27th November 2007 and 7th April 2008 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 80th meeting held on 15th April 2008 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the erstwhile Ministry of Environment and Forests had prescribed ToRs to the project on 25th April 2008 vide Lr. No. J-11011/1267/2007-IA.II(I) the expansion of Sponge Iron plant production capacity from 66,000 TPA to 1,32,000 TPA, establishment of Induction furnaces with CCM to produce MS Billets of 1,35,000 TPA, Power Plant of 8 MW, based on WHRB &

17 MW, based on AFBC Boiler, a Ferro Alloys manufacturing plant of 1x5 MVA capacity to produce 7,500 TPA of Ferro Alloys. MoEFCC had accorded Environmental Clearance (EC) for the project vide Letter No. J-11011/1267/2007-IA.II(I) dated 5th November 2008. The project was exempted from the requirement of Public Hearing due to expansion of the project at the same site under 7 (ii) of the EIA Notification 2006.

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

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

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

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

7.0 Subsequently, Chhattisgarh Environment Conservation Board wrote a letter vide Lr. No. TS/CECB/2014 dated 06.06.2014 to MoEF&CC, Govt. of India, with the clear intimation of the Supreme Court Order dated 16th May 2014 and requested for the guidance to comply with the said order. The letter emphasized on the validity of the already prescribed ToRs by MoEFCC and raised the concern whether the public consultation/ hearing should be conducted based on the previously prepared EIA Report. In response, MoEF&CC issued a Letter No. L-11011/28/2009-IA.II(I) dated 24th September 2014, with the clear mention of the collection of fresh one-season data while addressing all the deficiencies, pointed out in the order, including the following issues and revise the draft EIA-EMP Report accordingly:

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

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

iii. The overall impacts worked out based on mathematical modelling does not appear to reflect the true picture, as AAQ levels of mercury, which would be found in an area

where a number of sponge iron units are located, has not been estimated (page 28 of judgment).

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

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

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

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

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

10.0 The overall plant scenario is presented hereunder:

Product/ Unit	Units under operation before EC obtained vide Letter No. J-11011/1267/2007-IA.II(I) dated 5th November 2008	Units (as per EC obtained vide Letter No. J-11011/1267/2007-IA.II(I) dated 5th November 2008 and Amendment Letters dated 3rd July 2009 & 1st June 2011)	Units under Operation with valid Consent to Operate from Chhattisgarh Environment Conservation Board	Units commissioned (but not under Operation) after EC obtained vide Letter No. J-11011/1267/2007-IA.II(I) dated 5th November 2008 and after valid Consent to Establish from Chhattisgarh Environment Conservation Board
Sponge Iron Plant	66,000 TPA (2x100 TPD)	66,000 TPA (2x100 TPD)	66,000 TPA (2x100 TPD)	66,000 TPA (2x100 TPD)

Steel Melting Shop - Induction Furnaces (with matching LRF & CCM)	-	1x6 T + 1x8 T + 2x15 T	1x6 T *	1x8 T
Ferro Alloys Plant	-	7500 TPA (1x5MVA SAF)	-	-
Captive Power Plant	-	25 MW (8 MW WHRB based & 17 MW AFBC based)	-	-
* Presently not in operation. Renewal for Consent to Operate is under process.				

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

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

13.0 At present, 2x100 TPD Sponge Iron Plant is in operation, for which valid 'Consent to Operate' from Chhattisgarh Environment Conservation Board (CECB) is available. In expansion proposal, 2x100 TPD Sponge Iron Plant & 1x8T Induction Furnace have been commissioned after obtaining the necessary 'Consent to Establish' and 'Consent to Operate' for the same from CECB. However, these units under the expansion proposal are presently not in operation as the case is pending in Supreme Court. Apart from the above, another 1x6T Induction Furnace has also been implemented after necessary approvals from CECB, obtained separately. The unit is presently not in operation. Renewal for "Consent to Operate" is under process. Besides, one Rolling Mill of 30,000 TPA capacity to manufacture M. S. Rod/TMT Bar along with a Producer Gas Plant with 100 TPD capacity, using coal gas technology is also operating as Unit-2 after necessary approvals from CECB in the adjoining land.

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

15.0 The study area has a slightly rugged topography with ridges and isolated hills of Cuddapah sandstones, running in a more or less NW-SE direction and the geographical

coordinates of the project site are Latitude 22˚04'09.50"N to 22˚04'26.50"N and Longitude 83˚20'43.90"E to 83˚21'03.60"E with Above Mean Sea Level (AMSL) 323 meters (1059 ft).

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

17.0 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

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

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

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

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

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

23.0. Ground water quality has been monitored in 8 locations in the study area and analysed. The p^H ranges to (5.1 - 6.9); Total Dissolved Solids (TDS) (34 to 232) mg/lit; while Total Hardness (10 to 186) mg/lit; alkalinity (4 to 176) mg/lit; Calcium (3 to 47) mg/lit; and

Magnesium (0.5 to 17) mg/lit respectively. Sulphate, Nitrate and Chloride were observed in the ranges of (2 - 7) mg/lit, (0.5 - 2.5) mg/lit and (11 - 41) mg/lit respectively. Values of Iron content were found from below detectable limit (<0.05 mg/lit.) to 0.1 mg/lit in these water samples. Surface water samples were analysed from 8 locations. p^H: 6.0 to 7.7; DO: 5.8 to 6.7. mg/l and BOD: < 4 to 5mg/l.

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

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

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

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

28.0. The Public Hearing of the project was held on 25th May 2017 atBanjari Mandir, Tehsil Tamanar, district Raigarhunder the chairmanship of ADM Raigarh for production of 135000 TPA induction furnace with CCM for billet caster, 7500 TPA ferro alloy plant, 17 MW AFBC boiler based & 8 MW WHRB based power plant in connection with the expansion of the existing plant. The issues raised during public hearing are related to pollution, employment, solid waste management, fly ash etc. An amount of Rs. 3.75 crore (2.5% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues. The details of Enterprise Social Commitment as follows:

Sl. No	Proposed Activities under ESC	Fund provision (IN LACS)
1	Construction of W/C/Toilet (2) each for 4 schools. (@ Rs. 6.25 Lakhs per set of 2 Toilets)	25.0
2	Drinking Water Infrastructure (Tubewell in nearby villages like Punjipatra; Padkipahri, Chaidoria&Charratangar – 10 nos. @ Rs. 1.5 Lakhs)	15.0
3	Construction of metal consolidation road (7 km) in villages (Punjipatra – 3 km; Padkipahri-2 km & Charratangar-2 km) (@Rs. 15 Lakhs per km)	105.0
4	Development of Community Hall, one each for four villages likePunjipatra; Padkipahri, Chaidoria&Charratangar– Total 4 nos. (@ Rs. 8 Lakhs per Hall)	36.0
5	Local Village Pond upgradation - 6 ponds (2 ponds in each three villages- Punjipatra; Padkipahri, Chaidoria) (@ Rs. 5 Lakhs per Pond)	30.0
6	Street Lighting (solar) provision at suitable public places – 100 nos. (@ Rs. 0.5 Lakhs per Solar Light)	50.0

7	Financial Support to the Local School for extension of building / class room	24.0
8	Construction of charitable Dispensary – 1 no.	10.0
9	Primary health for the surrounding villages	20.0
10	Financial Support to LocalTample	15.0
11	Training to unemployed educated local youth for personality development.	25.0
12	Developments of parks, plantation of trees in the nearby area.	20.0
	TOTAL	375

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

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

31.0. The entire project including the existing units occupies the total 23.472 hectare (58 acres) of land. The average rainfall in the area is recorded as 1.2 m. Hence, the total run-off will be 2,81,664 cu.m/annum, out of which about 2,00,000 cu.m rain water can be harvested. The company has planned for 4 nos. ponds for rain water harvesting. In the existing plant area, a rain water harvesting tank has been recently constructed, while another one is under construction. The dimension of the existing RWH tank is Top area (50m x 33m), Bottom area (44m x 27m) and depth as 3.5 m. This can fulfil the water requirement of the plant for around 9 days, considering the maximum water requirement of the plant after the implementation of the proposed project as 905 KLD. Rest 2 nos. will be constructed after the issuance of the necessary Environment Clearance from MoEFCC.

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

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

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

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

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

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

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

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

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

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

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

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

ii. The existing Sponge Iron Plant of 66,000 TPA capacity is registered through IEM. The IEM is registered in the name of M/s Sidhi Vinayak Sponge Iron Pvt. Ltd. in the year 2003 which was acquired by M/s Scania Steels & Powers Ltd. (SSPL, the current PP) in the year 2006.

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

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

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

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

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

Sl. No.	Issues raised during PH	Response by project proponent (after PH)	Action Plan proposed	Budgetary provision as on 05.01.2018

1.	It is necessary to seek the permission of Gram Sabha for the installation of any Company.	The company has already obtained the NOC from local body/ Panchayats (namely Amaghat Gram Panchayat,Amlidihi Gram Panchayat,Gadgaon Gram Panchayat, Taraimal Gram Panchayat &Tumidihi Gram Panchayat), falling in 10 km radius area of the project.	Not applicable	Nil
2.	People belonging to the villages are illiterate. How can they read such voluminous documents prepared in English and Hindi.	as per EIA Notification, 2006 & its subsequent amendments ofMoEFCC, GoI, Executive Summary both in Hindi & English (11 pages) along with the draft EIA report were made available to the public well before the conduct of public hearing.	Not applicable	Nil
3.	There is mention of the employment of 150 people but there is no discussion for the employment of those people who are being affected by the pollution generated. There should have been discussion for the employment of the people belonging to the affected Gram-Panchayat.	76 no. of local people, who are the residents of the area in the project vicinity are already employed, in proposed expansion also, local people will be given preference, based on requirement and skill.	As in the existing project, the emphasis will be laid on the employment of the local people.	Nil
4.	Pond of the village is completely dried up due to fly ash of the company. There is absolutely no water in this pond. Tumidih dam is filled up by 10-12 feet with fly ash. A no. of animals have died in the wet land created due to fly ash. In my village,	The issue of fly ash is not applicable as the existing units do not generate fly ash.	Not applicable.	Nil.

	35 industries have been implemented. Only one village is suffering due to the pollution generated by these 35 industries. In my village, a no. of people died due to T.B., many are still suffering.			
5.	The company had made certain promises in the areas of education, health, employment, which still remain un-fulfilled.	As already mentioned above, the company has given preference in employment of the local people in its existing project.	The same approach shall be adopted in the proposed project. Besides, the company has been undertaking ESC activities in the local area as per the local needs. It shall continue to be mindful of its social and moral responsibilities to consumers, employees, shareholders, society and the local community.	The company has earmarked 58 lacs for Skill development to unemployed local youths through National Skill Development Corporation, Govt. of India Scheme under ESC. Rs. 25 lacs are earmarked towards Financial Support to the Local Schools for repairing of buildings. Rs. 15 lacs are allocated for Providing equipment to the local hospitals. Rs. 25 lacs are allocated for providing 5 nos. ambulances, equipped with emergency facilities.

6.	Please collect the data of the health status of the people, crop, Production status and ground water availability status within 10 Kms radius.	The health status report, obtained from Block Medical Officer of the area. As per BMO report, people are found suffering from the diseases like Cough & cold, fever, body pain etc. which look quite normal for any area and does not draw any concern. The entire area falls under safe zone as far as the status of ground water is concerned.	Not applicable.	Nil
7.	Promote skill development training to unemployed youth to get better skills and to get employment chances in your industry remaining youth to get other places jobs.	Already mentioned above regarding employment of the local youths in the project.	The company has planned for the skill development to the unemployed local youths through National Skill Development Corporation, Govt, of India Scheme. In this connection, it will construct a building along with the necessary infrastructures to serve the purpose.	Rs. 58 lacs are earmarked for this purpose under ESC.
8.	Take up proper pollution control measures Air, Water, Land.	Zero effluent discharge concept is being adopted which will continue after the expansion project. Required air pollution control measures have already being taken in the existing project. The stack emission analysis report substantiates this	To control air pollution, there will be required control measures like installation of Electrostatic Precipitators (ESPs), bag filters, dust	The capital cost and annual operating cost of environmental mitigation measures are estimated to be Rs. 12.0 Crores and Rs. 120.0

		as the pollutants emission data are well within the stipulated limits. The proposed expansion project will be installed within the existing 58 acres land. No additional land shall be acquired.	suppression system and stacks of adequate height at relevant points.	Lakhs respectively.
9.	Today, Kiln Nos. 1,2,3,4 all are installed and are in operation. Then, why this public hearing,	Only Kilns No. 1 & 2 are in operation.	Not applicable.	Nil
10.	Whatever data are available in the EIA report, they are for 2014. But the Public Hearing is being conducted in 2017. Have the data not changed for Raigarh District in last 4 years?	The baseline data were generated during the period of 1st December, 2014 to 28th February, 2015. The same stands valid upto the completion of 3 years period. In addition, the same was supplemented by again generating it during 1st June, 2017 to 15th June, 2017 and again from 16th October, 2017 to 16th November, 2017.	Not applicable	Nil
11.	This is the document, which tells about the data of the elephants in 10 Km. radius area and about the compensation, the Forest Department has made. But, there is no mention of any elephant in the EIA report.	There is no such incidents or records in the Forest Department.	Not applicable	Nil

12.	The expansion of this company has already taken place in 2012. For this, no permission has been taken. Here, 4 Kilns are installed.	Both Consent to Establish & Consent to Operate were obtained from CECB for the installation of the said kilns.	Not applicable	Nil
13.	Presently, 8-10 percent people are suffering from the serious diseases like Cancer, I have seen 10 families dying due to Cancer in last 2 months 52 percent people are suffering from serious diseases like asthenia, essinophilia. Water sources are so much polluted, which result in the development of the serious diseases like scabies, itching etc.	There are no such records that 8-10 percent people are suffering from the serious diseases like Cancer or 52 percent people are suffering from serious diseases like asthenia, essinophilia.	Not applicable.	Nil
14.	The person, who has prepared the EIA report was speaking in English. Out of the total public, sitting here, 2 percent people properly understand Hindi. 2 to 4 other persons might understand whatever was spoken in English. The people did not understand whatever was told. Here, people know Chhattisgarhi, Hindi.	The summary of the EIA Report was explained in Hindi by the EIA Consultant.	Not applicable.	Nil
15.	The company in its study report has nowhere studied the third most important issue regarding water level of this area.	It is understood that the issue pertains to ground water. The ground water of the area falls under safe zone.	Not applicable.	Nil

16.	I have gathered one information from Water Resource Department, PHED, people have told that this company is in operation for last 15 years, but I tell you that the Company has neither filed any application in last 15 years for ground water nor the company has any permission for the same.	Company has already obtained permission from CGWA, New Delhi to abstract the ground water for the project.	Not applicable.	Nil
17.	The company has never undertaken any CSR activity in 10 km. radius area.	The company is running in loss whereas the CSR fund is allocated on the basis of annual profit. However, the Project Proponent has invested Rs. 7 lacs for the development and needs of the local people in the year 2017-18.	Not applicable	Not applicable
18.	The way how air and water pollution is resulting in various diseases, the industries should explore how to address this through facts and mitigate.	Zero effluent discharge concept is being adopted which will continue after the expansion project. Adequate air pollution control measures have already being taken in the existing project. The stack emission analysis report substantiates this as the pollutants emission data are well within the stipulated limits. The health status report, obtained from Block Medical Officer of the area. As per BMO report, people are found suffering from the diseases like Cough & cold, fever, body pain etc. which look quite	Already mentioned against Sl. No. 8.	The cost is envisaged against Sl. No. 8 as Environmental Cost.

		normal for any area and does not draw any concern.		
19.	As per the provision of the EIA Notification 2006, its para 7, sub-para 3 and Part 3, the public hearing should be conducted only at this project site or its village. You are conducting the public hearing at 3 km. away at the premises of Banjari Temple at Taraimal, a great violation.	The location of the Public Hearing was decided by Chhattisgarh Environment Conservation Board, local administration and local panchayat..	Not applicable	Nil
20.	Honorable Justice of the Supreme Court, by upholding the order, directed the company and the administration to ensure the completion of public hearing within 60 days. This is the decision of the Honourable Supreme Court on 20.05.2014 and the public hearing is being conducted today on 25.05.2017, which is the violation of the Honourable Supreme Court,	The Public Hearing was conducted as per direction of the local administration.	Not applicable	Nil

21.	The public hearing should have been carried out within 45 days.	Same as above	Not applicable	Nil
22.	The company has not presented any report on the local development of the area, how many people have been given employment, etc. They have just mentioned in the EIA report that this number of people shall be employed in the plant.	Same as mentioned against Sl. No. 3.	Same as mentioned against Sl. No. 3.	Nil
23.	Companies make big promises but the promises are not kept. They say that they would provide employment, money, a place to live, but they provide nothing.	The company will make efforts to support development of the area by socio-economic activities under ESC & CSR.	-	Nil
24.	Have they carried out any tests in the laboratory for soil, air and water samples to detect Mercury, Lead, Arsenic and Nickel levels? There is already so much pollution. How have they been given permission? Secondly, there is no fly ash dyke. This point should be noted that the company has been operating without a fly ash dyke since the past 10-15 years. The district administration has built	There is no fly ash generation till date. The dolochar, generated is supplied to the power plants. In future, the fly ash will be supplied to the brick manufacturers. The MoUs with the respective companies are already available.	Not applicable	Nil

	a fly ash dam and they are depositing fly ash in the jungles and Kelo river.			
25.	A study on the effects of the pollutants on personal belongings, order, tradition, way of life that the local people have to face, is missing.	The EIA report is prepared in compliance with the guidelines of the EIA Notification.	Not applicable	Nil
26.	The EIA report should have contained the data of the agricultural land, forest land, wells, ponds, small streams and other sources of water which have been damaged by becoming drains due to the fly ash deposition.	Land use and land cover map is prepared and presented in the EIA Report. Since there is no disposal of fly ash, the impact of fly ash in the region has not been in the scope of impact assessment.	Not applicable	Nil
27.	Even today the people cannot think that they don't have proper drains in the villages, dirty water is flowing in the dam. There are no schools for the children to ensure their future.	There is no effluent discharge from the project.	The company will construct and repair drains.	The company has allocated Rs. 10 lacs for Construction & repairing of local drains under ESC.

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

III. Proposed Enterprise Social Commitment is as follows:

PROPOSED ESC ACTIVITIES	BUDGET (IN LACS)					TOTAL IN LACS
(A) BASED ON PUBLIC HEARING	1st year	2nd year	3rd year	4th year	5th year	
Skill development to unemployed local youths through National Skill Development Corporation, Govt. of India Scheme. Construction of a building along with the necessary infrastructures for this purpose like different machineries for industries.	20.0	14.0	12.0	6.0	6.0	58.0
Construction & repairing of local drains	2.0	2.0	2.0	2.0	2.0	10.0
Construction of total 4 nos. Toilet Complexes, separately for girls & boys	6.25	6.25	6.25	6.25	-	25.0

(@ Rs. 6.25 Lakhs per Toilet Complex)						
Financial Support to the Local Schools for repairing of buildings	5.0	5.0	5.0	5.0	5.0	25.0
Providing equipment to the local hospitals	3.0	3.0	3.0	3.0	3.0	15.0
To provide 5 no. ambulances, equipped with emergency facilities	5.0	5.0	5.0	5.0	5.0	25.0
Supporting schools for establishment of mini sports complex or playgrounds in providing the facilities like badminton court, tennis court and levelling of ground.	4.0	4.0	4.0	4.0	4.0	20.0
(B)BASED ON NEED BASED ASSESSMENT						
Drinking Water Infrastructure (Tubewell in nearby villages like Lakhs Punjipatra; Padkipahri, Chaidoria&Charratangar – 10 nos. @ Rs. 1.5 Lakhs)	3.0	3.0	3.0	3.0	3.0	15.0
Construction of metal consolidation road (4 km) in villages (Punjipatra – 2 km; Padkipahri-1 km & Charratangar-1 km) (@Rs. 15 Lakhs per km)	15.0	15.0	15.0	15.0	-	60.0
Development of Community Halls, one each for four villages likePunjipatra; Padkipahri, Chaidoria&Charratangar– Total 4 nos. (@ Rs. 8 Lakhs per Hall)	8.0	8.0	8.0	8.0	-	32.0
Local Village Pond upgradation - 6 ponds (2 ponds each in three villages - Punjipatra, Padkipahri, Chaidoria) (@ Rs. 5 Lakhs per Pond)	10.0	5.0	5.0	5.0	5.0	30.0
Street Lighting (solar) provision at suitable public places – 100 nos. (@ Rs. 0.5 Lakhs per Solar Light)	10.0	10.0	10.0	10.0	10.0	50.0
Developments of parks, plantation of trees in the nearby areas.	2.0	2.0	2.0	2.0	2.0	10.0
TOTAL						375.0

IV Materila balance and water balance diagrams were provided.

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

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

Observations of the committee:

37.0 During the deliberations, the project proponent has explained that the raw material i.e. ingots / billets used for the rolling mill, which is established out side the premises was brought from the open market and informed that the purchase orders were available for substantiating this fact. He also informed that the revised EIA is unable to upload because the ADS option was not open in the website. The Committee also noted that the particulate matter concentration in the Ambient Air in the study area is reported as higher than the norms prescribed.

Recommendations of the committee:

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

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

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

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

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

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

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

30.6 Integrated steel plant along with captive power plant (50 MW) at village Khunti, Kandra Raod, P.O. Chandil, Dist.Saraikela- Kharswan, Jharkhand by M/s NarsinghIspatLimited [Proposal No. IA/JH/IND/6416/2010; MoEFCC File No. J-11011/770/2008-IA.II(I)]- Extension of validity of Environmental Clearance.

1.0 The proponent has made online application for Extension of validity of Environmental Clearance vide proposal no. IA/JH/IND/6416/2010 dated 19thMarch 2018 along with the updated Form-Ifor the project mentioned above. The proposed project activity is listed at Sl. 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 M/s NarsinghIspat Limitedis located at Village Khunti, Kandra Road, P.O. Chandil, District Saraikela-kharswan, Jharkhandandwas granted Environment Clearance vide MoEF&CC, GOI letter No. **J-11011/770/2008-IA.II(I),** dated **31.12.2010** forinstallation of greenfield Integrated Steel Plant with Captive Power Plant (50 MW). Production capacity of the different Units of M/s NarsinghIspat Ltd. and products as per the existing EC is as follows:

Facilities	**Capacity**	**Production (TPA)**
Sponge Iron Plant	6x100 TPA	1,92,000
Sinter Plant	200 TPD	64,000
Pallet Plant (Hematite)	1000 TPD	3,20,000

Pellet Plant (Magnetite)	200 TPD	64,000
Blast Furnace	2x65 M^3	83,200
Steel Melting Shop	2x25 T EAF – LRF – CCM	1,60,000
Rolling Mill	500 TPD	1,60,000
Ferro Alloy Plant	1x5 MVA SEAF	8,320
Coal Washery	100 TPH Throughput	3,30,000
Captive Power Plant	WHRB – 12 MW AFBC Boiler – 38 MW	50 MW

3.0 At presently,2x65 M^3 Blast Furnace, 200 TPD Sinter Plant and 4 MW Blast Furnace Gas based Captive Power Plant are installed at the project site. Status of the Units installed and time schedule for installation of the remaining units are follows:

Sl. No.	Production Facility	Production Capacity	Status	Time frame by which Unit shall be Installed
1.	Sponge Iron Plant	600 TPD	Not installed	Dec., 2020
2.	Sinter Plant	200 TPD	Installed in 2012	-
3.	Pellet Plant (Hemetite)	1000 TPD	Not installed	Dec., 2019.
4.	Pellet Plant (Magnetite)	200 TPD	Not installed	Dec., 2019.
5.	Hot Metal (Pig Iron Plant)	260 TPD	Installed (1st MBF in 2011 & 2nd MBF in 2013)	-
6.	Steel Melting	500 TPD	Not installed	Dec., 2020
7.	Rolling Mill(Wire Rod Mill&TMT Bar Mill)	500 TPD	Not installed	Dec.,2020.
8.	Captive Power Plant WHRB – 12 MW AFBC – 38 MW	50 MW	4 MW BF Gas based WHRB installed in 2016	8 MW Gas based WHRB shall be installed by Dec., 2020. 38 MW AFBC Boiler shall be installed by Dec., 2020.
9.	Ferro Alloys	26 TPD	Not installed	Dec., 2020
10.	Coal Washery	1100 TPD	Not installed	Dec 2020.

4.0 Due to severe recession in steel industry and fall in cash flow of the company during the past few years, there is delay in implementation of the project. With the improvement of market condition, the company will likely to implement the remaining unimplemented portion for which EC has been accorded. Other details are as follows:

Other Details		
1.	Area required	219 Acres
2.	Water Requirement	5900 KLD
3.	Power Requirement	57 MW

5.0 The total cost of the project is **Rs. 764.43 crores** for the Greenfield projectand the capital cost for environmental protection measures is **Rs31.77 Crores**. The annual recurring cost towards the environmental protection measures is proposed as Rs1.42crores per year.

6.0 The water requirement of the project is estimated as5900m^3/day and permission for drawl of 2.75 MCM per annum from Swarnrekha River has been obtained from Water Resources Department, Govt. of Jharkhand vide letter No.-2/PMC-164/2007 (Part VI)-443 dated 30.05.2013.

7.0 The power requirement for the project is 57 MW and shall be sourced from own CPP (50 MW) and JharkhandState Electricity Board (7 MW).

8.0 At this time 500 persons work in plant. About 2000 persons will be employed when the plant becomes fully operational.

9.0 No change in raw materials requirement for the project.

10.0 Approx. 33% of the total project area shall be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project activities.

11.0 The topography of the area is flat and location co-ordinate25^0 57' 42"NLatitude and 85^0 58' 42" ELongitude in Survey of India topo sheet No. 73 F/13.

12.0 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.

13.0 The proponent has mentioned that there is no court case / litigation against the plant.

14.0 M/s NarsinghIspat Limited has been submitting Half Yearly Compliance Report of the EC conditions, time to time. Last compliance report submitted to Regional Office, MOEF&CC, Ranchiwas on 08.01.2018.

15.0 M/s VardanEnvironet, who has revalidated the EIA Report, is listed at Serial no. 148 as per NABET list of accredited consultant organizations (Rev. 63 dated 05.03.2018).

Observations of the committee:

16.0 The committee observed that the project proponent has made application for extension of validty of the environmental clearance after 2 ½ months of expery of the validty of the earlier EC.

17.0 There is no physical progress made on Ferro Alloy Plant, Pellet Plant (Magnatite) and Coal Washery and these facilities may not be possible to be implemented in the balance period.

Recommendations of the Committee:

18.0 After detailed deliberations, the committee recommended for extension of validy of the environmental clearance for the following facilties upto 30th December, 2020 subject to condonence of the delay in making application by the Hon'ble Minister as per the provisions of EIA Notification, 2006 as amendmed:

Facilities	Capacity	Production (TPA)
Sponge Iron Plant	6x100 T	1,92,000
Sinter Plant	200 TPD	64,000
Pallet Plant (Hematite)	1000 TPD	3,20,000
Blast Furnace	2x65 m3	83,200

Steel Melting Shop	2x25 T EAF – LRF – CCM	1,60,000
Rolling Mill	500 TPD	1,60,000
Captive Power Plant	WHRB – 12 MW AFBC Boiler – 38 MW	50 MW

30.7 Ferro alloys and Steel plant at Syno.179, 181-183, 185-203 of APIIC Industrial Area, village Kantakapalli, Mandal Kotahvalasa, Dist.Vizianagaram, Andhra Pradesh by M/s Sarda Metals and Alloys Ltd [Proposal No. IA/AP/IND/2973/2009; MoEFCC File No. J-11011/164/2009-IA.II(I)]- Amendment in Environmental Clearance.

1.0 M/s Sarda Metals and Alloys Ltd made online application for the amendment in Environmental Clearance vide proposal no. IA/AP/IND/2973/2009 dated 27thNovember 2017along with the Form-I for the project mentioned above. Project activity was earlier granted EC by MoEF&CC vide letter no. J-11011/164/2009-IA.II(I) dated 26.11.2009 in respect of schedule No. 3(a) Metallurgical industries (ferrous & non-ferrous), 4(b) Coke oven plants, 1(d) Thermal power plant under Category "A" EIA Notification, 2006. The proposal is appraised at Central level.

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

2.0 The project of M/s Sarda Metals is located in the Kantakapalli Village, Kothavalsa Tehsil, Vizianagaram District, Andhrapradesh state. The environmental clearance was granted vide File No.J-11011/164/2009-IA.II(I) dated 26.11.2009 and extension of validty was granted up to 25.11.2009 vide even letter number dated 6th December 2016. As per the EC project configuration is as under:

S No	Facilities	Phase I	Phase II	Phase III
	Unit I			
1	Ferro Alloys	1 x 33 MVA (75,000 MTPA)	1 x 33 MVA (75,000 MTPA)	---
2	Sinter Plant	1x24 m^2 (1,25,000 MTPA)		
	Unit II			
3	Thermal Power Plant	1 x 80 MW	1 x 80 MW	1 x 80 MW
4	Coke Oven with Stamp charging	2,00,000 MTPA	---	2,00,000 MTPA
5	Spong Iron Plant	---	2 X 500 TPD (3,00,000 MPTA)	---
6	Blast Furnace (1 x 350m^3)	---	---	2,50,000 MTPA
7	Steel Melting Shop Induction Furnace (5 x 15T) Arc Furnace (1x40 MT)	---	---	2,50,000 MTPA 2,50,000 MTPA
8	Rolling Mills	---	---	4,50,000 MTPA
9	Iron Ore crushing Plant	---	---	6,00,000 MTPA
10	Pellet Plant	---	---	6,00,000 MTPA
11	Railway Siding	---	---	---

3.0 The company has commissioned 2x33 MVA Ferro Alloys and 1X80 MW Thermal Power Plant during Feb'2013.

4.0 It was requested for amendment in the existing EC as follows:

Sl. No	Facilties	As per Existing EC	Proposed amendment	Remarks
1	Ferro Alloys	2X33 MVA (150000 TPA)	3X33 MVA (150000 TPA)	No change in the overall production capacity
2	Steel Melting Shop & Rolling Mill			
	Induction furnace	5 x 15 T (2,50,000 TPA)	4 x22 T (3,50,000 TPA)	
	Arc Furnace	1 x 40 MT (2,50,000 MTPA)	---	Proposed to drop the facilty
	Rolling Mill	4,50,000 TPA	3,50,000 TPA	Reduction of 100000 TPA
3	Coke Oven with Stamp charging	2,00,000 MTPA	Nil	Proposed to drop
4	Iron Ore Crushing Plant	6,00,000 MTPA	Nil	Proposed to drop

5.0 Details of project for each component and schedule of completion of the un-implemented facilities along with justification is given below:

SlNo	Facilities	Phase I	Phase II	Phase III
	Unit I			
1	Ferro Alloys	1 x 33 MVA (75,000 MTPA) Commissioned on Feb 2013	1 x 33 MVA (75,000 MTPA) Commissioned on Feb 2013	---
2	Sinter Plant	1x24 m^2 (1,25,000 MTPA) Techno commercial offers are available and it is under negotiation. Expected Commissioning by August 2019		
	Unit II			

3	Thermal Power Plant	1 x 80 MW Commissioned on Feb 2013	1 x 80 MW CHP and DM Plant capacity installed along with phase-1. Detailed Engineering completed. Repeat order for Boiler and TG to be placed with a commissioning by Mar 2022	1 x 80 MW Shall be ordered along with Phase II with a staggered delivery with a commissioning by July 2024
	Unit III			
4	Coke Oven with Stamp charging	2,00,000 MTPA Not being considering	---	2,00,000 MTPA Shall be ordered by Dec'2022 and commissioning by July 2024
5	Spong Iron Plant	---	2 X 500 TPD (3,00,000 MPTA) Similar Plant is in operation at our Raipur Plant. Detailed project report is in progress. Expected commissioning by May 2024	---
6	Blast Furnace (1x 350m^3)	---	---	2,50,000 MTPA Detailed project report is in progress. Commissioning by Sept 2024.
	Unit-II			
7	Steel Melting Shop Induction Furnace (5 x 15T)	---	---	2,50,000 MTPA 2,50,000 MTPA Capacity is being reduced from 5,00,000 MTPA to 3,50,000 MTPA. By considering 4x22 T Induction furnace

	Arc Furnace (1x40 MT)			with capacity of 3,50,000 MTPA. Detailed Project report ready. Commissioning by Sept 2022.
8	Rolling Mills	---	---	4,50,000 MTPA Capacity is being reduced from 4,50,000 MTPA to 3,50,000 MTPA. Detailed project report completed and equipment specification finalized. Enquiries floated, target commissioning by Sept 2022.
9	Iron Ore crushing Plant	---	---	6,00,000 MTPA Not being considered.
10	Pellet Plant	---	---	6,00,000 MTPA Detailed project is in progress. Commissioning by Sept 2024.
11	Railway Siding	---	---	---

Observations of the committee:

6.0 The committee observed that the environmental clearance was granted on 26th November 2009 and valid up to 25thNovemebr 2019. As on date, company has commissioned 2x33 MVA Ferro Alloys and 1X80 MW Thermal Power Plant only. The facilities such as 2X80 MW TPP; Coke oven plant; Blast Furnace; Steel Melting Shop Induction Furnace; Rolling Mills are proposed to complete after validity of the environmental clearance. The facilities like Sponge Iron Plant; Pellet Plant; Railway siding are proposed to drop. The committee opined that the project proponent can not implement the facilities such as 2X80 MW; Coke oven; Blast Furnace; Steel Melting Shop Induction Furnace; Rolling Mills after expiry of the validity of environmental clearance.

Recommendations of the committee:

7.0 After detailed deliberations, the committee recommended for amenmdnet in the environmental clearance construed to following facilities subject to specific conditions give hereunder:

Sl. No	Facilties	Configuration amendment	Capacity
1	Ferro Alloys	3X33 MVA	150000 TPA
2	Sinter Plant	1x24 m^2	1,25,000 TPA
3	Captive thermal power Plant	1X80 MW	1X80 MW

i. The EC will be construed to the above facilties and valid up to 25th Novemebr 2019 for implementation and start of prodcition operations.

ii. In case the PP fail to implement and start of prodcition operations before 25th Novemebr 2019, shall obtain the environmental clearance as de-novo as per the procedure envisaged in the EIA Notification, 2006.

30.8 Proposed mineral beneficiation (Manganese Ore) of capacity 12,000 TPA of M/s Paonakhari Minerals and Chemicals (PMC) Pvt.Ltd., located at village Paonakhari, District Bhandar, Maharashtra. [MoEFCC File NoJ-11015/269/2012-IA-II(M)]- Reconsideration for Environmental Clearance.

1.0 The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/s Pollution and Ecology Control Services, Nagpur) gave a detailed presentation on the salient features of the project. The Terms of Reference (ToRs) to this project were recommended during the 7th Meeting of Reconstituted Expert Appraisal Committee (Non-Coal Mining) held on 15th – 17th May, 2013 for preparation of EIA-EMP report. The ToR was awarded by MoEFCC vide letter F. No. J-11015/269/2012-IAII(M) dated 22nd August, 2013 for the preparation of EIA-EMP report. The PP submitted the final EIA report online dated 14th January, 2015. The proposal was appraised by the EAC for Non-Coal Mining sector in its 34th meeting held on 29th May, 2015. Subsequently, vide note dated 19th June, 2015 it was decided to transfer the file to SEIAA, Maharashtra considering it as Category 'B' project. In the meantime, the PP informed that the proposals are Category 'A' project under item 3(a) of the schedule to the EIA Notification 2006 and should be transferred to Industry (I) sector. Therefore, the file was transferred to Industry (I) sector and appraised in the EAC Industry (I) committee.

2.0 M/s Paonarkhari Minerals and Chemicals Pvt. Ltd. (PMC) was established in 1995 for processing of Manganese ore and is registered as a small-scale industry with the District Industries Centre, Bhandara. The unit is involved in purchasing raw material (i.e. Manganese ore of required grade) from Manganese Ore India Ltd. (MOIL) and Product (i.e. roasted, calcined or reduced ore) is supplied to manufacturers of Manganese Sulphate, which is used in fertilizers. PMC has proposed to expand its existing unit from capacity 3500 MTPA of output (combined capacity of MnO, MnO2 and ground minerals) to 12000 MTPA of combined capacity at Paonarkhari, Distt. Bhandara, Maharashtra.

3.0 The unit is located at Gut No. 330, Village Paonarkhari, Tumsar, District Bhandara, Maharashtra. The site is located at 21° 32' 03.64" N Latitude and 79° 42' 33.97" E Longitude. Nearest city is Tumsar (17 km), nearest populated area is Goberwahi Village (1 km), nearest Railway station is Goberwahi Railway station (2.0 km). The SH-251 is at 2 km from the site and and NH-6 is at 60 km. No National Park, Sanctuaries, Wildlife corridors, Elephant/Tiger

Reserve located within 10 km radius. A reserve forest is present within 5-6 km from project site. Following table shows the present and the proposed capacity of the plant:

S. No.	Product	Existing Capacity (TPA)	Proposed Capacity (TPA)
1	Manganese Oxide (MnO)	1750	6000
2	Manganese Di-oxide (MnO_2) and other processed minerals	1750	6000

4.0 The details for the raw material required for the plant is given below:

S. No.	**Raw Material**	**Current Requirement (Combined Capacity 3500 TPA)**	**Requirement After Expansion (Combined Capacity 12000 TPA)**	**Source**
1.	Manganese Ore	5000 Ton	15000 T	Dongri Buzurg and other mines of MOIL
2.	Fuel Wood	400 Ton	2400 T	Maharashtra Forest Dept. in Bhandara and Gondia.
3	Mineral Coal	320 Ton	1920 T	Western Coal Fields Ltd.
4	Charcoal	40 Ton	240 T	-
5	Coke	255 Ton	1535 T	Suppliers located at major integrated steel plants
Total		6015 Ton	21095 T	

5.0 The Power Requirement for the project is 54 KW for the existing project and the proposed project would require 200 KW of power, which will be sourced from Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL), Tumsar. One D.G. set of capacity 40 KVA is available to meet emergency power requirement.

6.0 The ambient air quality monitoring was carried out for the period of September to November 2013 at 6 monitoring locations selected within 10 km radius of study area. It was seen that PM_{10} values ranged from 39.11 to 48.13 $\mu g/m^3$. $PM_{2.5}$ values ranged from 15.47 to 19.14 $\mu g/m^3$. Similarly, the SO_2, levels ranged from 7.91 to 10.48 $\mu g/m^3$, while NOx ranged from 11.91 to 15.8 $\mu g/m^3$. All the resultswere within the permissible limit as per NAAQ standards.

7.0 Dust suppression system will be provided in the form of water sprinklers. All vibrating screens and weigh feeders below the hopper; day bins etc are totally covered to prevent leakages of dust. All bins are packed and covered so that there is no chance of dust leakage. Regular monitoring of air polluting concentrations, etc. will be carried out. Avenue plantation along the internal roads will be done. It is proposed that installation of Wet Scrubbers be followed in the Stacks.

8.0 The Public Hearing for the project was held on 25.07.2014 at Godavaribai Podar Smruti Bhavan, Paonarkhari, Post Gobarwahi, Tumsar, Bhandara under the chairmanship of Additional Collector, Bhandara.

9.0 Based on the presentation made and discussions held, the Committee recommended the project for environmental clearance subject to stipulation of the following specific conditions and any other mitigative measures and conditions for environmental protection:

i. The project proponent should install 24x7 air monitoring devices to monitor air emission, as provided by CPCB and submit report to Ministry and its Regional Office.

ii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.

iii. Gaseous emission levels including secondary fugitive emissions from all the sources should be controlled within the latest permissible limits issued by the Ministry and regularly monitored.

iv. Water sprinkling arrangements should be installed to control fugitive emission

v. Efforts shall further be made to use maximum water from the rain water harvesting sources. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources. Use of air cooled condensers shall be explored and closed circuitcooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly.

vi. Continuous ambient air quality monitoring and online monitoring facilities for all the stacks should be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. should be provided.

vii. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage shall be treated in septic tank followed by soak pit.

viii. Green belt shall be developed in 33 % of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

ix. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Chennai. Implementation of such program shall be ensured accordingly in a time bound manner.

x. Pre-placement medical examination and periodical medical examination of the workers engaged in the project should be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.

xi. 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.

10.0 The ministry has desired to examine the issue whether the production made by the project as violation of the EIA Notification and referred to the committee for their recommendation

Observations of the committee:

11.0 The committee observed that the plant was established during 1995 and did not attract the provisions of the EIA Notification, 1994 as the investment (i.e. 80 lakhs) was less than 100 crs. Subsequently the State Pollution Control Board directed to obtain the prior environmental clearance under the EIA Notification, 2006 before grant of consent to operate. Accordigly, the PP has made an applicatrion for Terms of Reference, granted ToRs and conducted Public Hearing. The EAC has recommended for grant of EC. However, the ministry has desired to examine the issue whether the production made by the project as violation of the EIA Notification and referred to the committee for their recommendation. The committee examined the issue in details and arrived at the openion that since the activity did not attract the provisions of EIA Notification, as the PP made an application for consent to operate to the State Pollution Control Board, the production made by the project shall not be considered as violation of EIA Notification.

Recommendations of the committee:

12.0 Having arrived at the opinion as stated above regarding the violation by PP, the committee reiterated its recommendations made earlier in 45th EAC meeting.

30.9 Proposed Expansion of Cement Plant (Clinker from 700 TPD to 1,350 TPD and Cement Grinding from 1,100TPD to 2,000 TPD) at Vill: Sarutari, P.O.- Byrnihat, Mouza: Sonapur, Dist: Kamrup, Assam by M/s. Purbanchal Cement Ltd. [Proposal No. IA/AS/IND/73389/2018; MoEFCC File No. J-11011/669/2009-IA.II(I)]- Prescribing Terms of Reference

1.0 M/s. Purbanchal Cement Ltd has made online application vide proposal no. IA/AS/IND/73389/2018 dated 09th 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(b) cement plants under Category "A" EIA Notification; 2006.The proposal of expansion is submitted and appraised at Central level.

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

2.0 M/s. Purbanchal Cement Ltd.proposes expansion of existing manufacturing unit for cement plant (clinker from 700 TPD to 1,350 TPD and cement grinding from 1,100 TPD to 2,000 TPD).It is proposed to modify existing production facility to achieve targeted production based on Rotary Kiln technology.

3.0 The existing project was accorded environmental clearance vide lr.no. F. No. J-11011 / 669 / 2009-IA II (I), dated 13th January,2011Consent to Operate was accorded by Assam State Pollution Control Board vide UBIN: AA00379/AADCP2083L/11/2017 and UAIN :PCB /F50 /KU /001329 /11/2017validity of CTO is up to 31-03-2019.

4.0 The proposed unit will be located at Village Sarutari, P.O.: Byrnihat, Mouza: SonapurDist: Kamrup, Assam – 793101.

5.0 The additional land area utilized for the proposed expansion project is 11.47 Acres which is non-agriculture land. No forest land involved. The entire land was already in possession of the company. The green belt will be developed at 33% of the land.

6.0 The boundry of ESZ of Amchang Wildlife sanctuary is located at a distance of 4.2 Km approximately from the proposed project site. Proposed Project Site does notreport to form corridor for Schedule-I fauna.

7.0 Total project cost is approx 126.18Crore rupees. Proposed employment generation fromproposed project will be 25 direct employments and 100 indirect employments.

8.0 The targeted production capacity of the clinker 1,350 TPD and Cement Grinding 2,000 TPD. The lime stone will be procured from Meghalaya& Assam, coal from Meghalaya& Assam (North Eastern Coalfield) and Gypsum from Bhutanfor the plant. All these raw material transportations will be donethrough road/rail. The proposed capacity for differentproducts for new site area as below:

Name of unit	Production Capacity	
	Present Capacity	Proposed Capacity
Clinker Manufacturing	700 TPD	1,350 TPD
Cement Grinding	1,100 TPD	2,000 TPD

9.0 The electricity load of 2.5 MW will be procured from APDCL/ASEB Company will not required additional D.G. Set for the proposed Expansion project.

10.0 Proposed raw material and fuel requirement for project are Lime Stone 750 TPD, Additives 50 TPD, Fly Ash 268 TPD, Clinker 50 TPD, Gypsum 10 TPD, Slag 200 TPD, Coal 95 TPD, Sludge 175 TPD. Therequirement would be fulfilled by domestic market of Meghalaya, Assam, West Bengal and Bhutan.

11.0 Additional Water Consumption for the proposed project will be 4 KLD and waste watergeneration will be 0.8 KLD from domestic use only. Domestic waste water is being treated in STP and treated water is being reused in Green Belt Development and sprinkling purpose, same practice will be continuing after expansion and no industrial waste water will be generated.

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

13.0 Name of the consultant: Envisafe Environmental Consultants, Sl. No. 59 in the QCI list.

Recommendations of the committee

14.0 After detailed deliberations, the committee recommended the ToRs alongwith the following specific ToRs for conducting EIA study:

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 as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and Enterprise Social Commitment (ESC) related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

iv. Certificate of compliance of earlier EC from the Regional office of MoEFCC shall be submitted along with EIA/EMP.

v. The plan showing the boundry of ESZ of Amchang Wildlife sanctuary and proposed project site along with the distance shall be submitted along with EIA/EMP eport.

vi. Possibility and maximize the use of alternate fules shall be submiited in the EIA/EMP report

vii. Study on NoX control shall be conducted and included in the EIA/EMP.

30.10 Sponge Iron Plant (2 x 350 TPD) 2 x 8 MW WHRB Induction Furnace (2 x 40T & 1 x 30T) Rolling Mill Dolachar/Coal based 16MW (AFBC), Sponge Iron 300000 TPA, M.S. Billets 600000 TPA, Rolled Products 500000 TPA, Power 32MW at Survey Nos. 91 to 95 & 97 to 103, Amirthamangalam, Gummidipoondi, Dist.Tiruvallur, Tamil Nadu by M/s J.R.Metal Chennai Ltd. [Proposal No. IA/TN/IND/73464/2018; MoEFCC File No. IA-J11011/107/2018-IA-II(I)]- Prescribing terms of Reference.

1.0 The proponent has made online application vide proposal no. IA/TN/IND/73464/2018 dated 13th 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.The proposal of expansion is submitted and appraised at Central level.

The details of the project as per the submissions of the project proponent:

2.0 M/s. J. R. Metal Chennai Limitedproposed to install a new manufacturing unit for Primary / Secondary Steel Plant consisting of Sponge Iron Plant consisting of WHRB / AFBC, and Electric Induction Furnace with a Steel Rolling Mill to produce M.S. Rolled Products.

3.0 The proposed unit will be located at S.Nos. 91 to 95 & 97 to 103 Amirthamangalam Village, Gummidipoondi Taluk, Thiruvallur Dt. Tamil Nadu.

4.0 The land area acquired for the proposed plant is 17.33 Ha. No forestland is involved. The entire land has been acquired for the project. Of the total area 4.05 ha (23.4%) land will be used for green belt development. The entire land is unclassified as per DTCP and is a dry rainfed agricultural.

5.0 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

6.0 Total project cost is approxRs. 350 Crore. Proposed employment generation fromproposed project will be 200 direct employment and much indirect employment.

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

Products	**Production Details (TPA)**		
	PHASE – I	**PHASE - II**	**PHASE – III**
Sponge Iron (2 x 350 T)	1,50,000	1,50,000	--
Intermediate Product – M.S. Billets Induction Furnace with Billet Caster	--	4,50,000 (40T x 2)	1,50,000 (30T x 1)
Re-Rolled Steel Products (M.S. Rounds, Flats, Angles, etc.,) 1 No x 40 T Reheating Furnace	--	5,00,000	--
Power Plant – AFBC (65 TPH)	--	16 MW	--
Waste Heat Recovery Boiler (WHRB)	8 MW	8MW	--

8.0 The electricity load of 20 MW will be procured from TNEB, Company has also proposed to install 625 KVA & 750 KVA DG Set. The proposed plant will have WHRB to generate 16 MW of Power, and also a 16 MW AFBC. The generated electricity power will be used captively.

9.0 Annual requirement of raw materials on the basis of achievable production is as follows:

FOR SPONGE IRON PLANT

Sl. No.	**Raw Material**	**Quantity (TPA)**
1.	Iron-Ore	5,40,000
2.	Coal	2,70,000
3.	Dolomite/Limestone/ Quartz	14,900

FOR INDUCTION FURNACE / (BILLET)

Sl. No.	**Raw Material**	**Quantity (TPA)**
1.	Sponge Iron	2,15,000
2.	Melting Scrap	4,32,000
3.	Ramming Mars	1,200
4.	Refractories	620

FOR RE-ROLLING MILL

The Billet produced by the Steel Melt Shop will be the Raw Material for Re-Rolling Mill

Sl. No.	**Raw Material**	**Quantity**
1.	Coal	23,000 TPA
2.	Furnace Oil	4 KL/day

FOR POWER PLANT

Sl. No.	Raw Material	Upon Expansion
1.	Imported Coal	384 TPD

10.0 Water Consumption for the proposed project will be 325 KLD and waste water generation will be 194 KLD Domestic waste water will be treated in STP. and industrial waste water generated will be taken to 2- consecutive Cooling Ponds, and then to Guard Pond after neutralization. Further the treated water from Guard Pond taken to RO Plant for further treatment and then about 148 KLD will be recycled for make-up water. From RO Reject about 30 KLD used for green belt and about 7 KLD will be used for coal dust suppression and ash dyke. Hence, 177 KLD of Fresh Water will be required for process after recycling of waste water. The domestic sewage will be treated in Sewage Treatment Plant and about 9 KLD discharged on land within the plant premises for green belt development.

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 The committee onserved that the proposal is for setting up of green filed project and no alternative site analysis was provided, monitoring loactions was not shown, not project specifToRs were proposed.

Recommendations of the committee:

13.0 After detailed deliberations the committee advised the following:

i. Alternative site analysis shall be carried and incuded the pre-feasibility report

ii. No phasing of the proposal shall be made

iii. Proposed Monitoring locations in respect of Ambeient air, surface water, ground water, soil, noise, flora & fauna, socio-economic etc shall be included in the pre-feasibility report.

iv. The PP shall submit proposed site-specific ToRs

v. The PP shall make the presentation before EAC along with Accredited EIA Consultant.

30.11 Expansion of Cement Plant Increase in Production of Clinker 3.50 to 6.50 MTPA; Cement 3.07 to 7.60 MTPA; Power 50 to 75 MW (Addition of 25 MW through WHRB) at Devapur Village, Kasipet Mandal, Mancherial District, Telangana State by M/s Orient Cement Ltd. [Proposal No. IA/TG/IND/73266/2018; MoEFCC File No. J-11011/669/2009-IA.II(I)]- Terms of Reference

1.0 M/s Orient Cement Ltd made online application vide proposal noIA/TG/IND/73266/2018 dated 01th March 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for the expansion project mentioned above. The proposed project activity is listed at Sl. No. 3(b) cement plants under Category "A" EIA Notification; 2006.The proposal of expansion is submitted and appraised at Central level.

The details of the project as per the submissions of the project proponent:

2.0 **M/s. Orient Cement Limited (OCL)**proposes to increase clinker production capacity of Unit – I, II and III marginally by optimization and de-bottlenecking. At the same time it proposes to install a new unit i.e. Unit-IV of 2.50 MTPA Clinker production capacity. The total clinker production of OCL after modernization of three units and installation of new unit will be 6.50 MTPA.OCL Cement plant is supported by existing Coal based Captive power plant of 50 MW. It is now proposed to setup a Waste Heat Recovery Power Plant of 25 MW to meet the additional Power requirement. The Limestone requirement is met from adjacent APMDC Devapur Limestone. The limestone production capacity of the mine will be increased from 5.3 to 6.0 MTPA for meeting the requirement of the existing units. For the proposed new unit i.e. Unit-IV, the requirement will be met from the TSMDC newly proposed mine of 275 Ha, lying adjacent to the existing mine.

3.0 The existing cement plant was accorded environmental clearance vide lr.no. J-11011/266/2007-IA II (I) dt 6-9-2007. Consent to Operate was accorded by Telangana State Pollution ControlBoard vide lr. No. TSPCB/CFO/NZB/HO/2017-830 dated 01.06.2017 validity of CTO is up to 30thJune 2022.

4.0 The proposed expansion is planned within the existing unit located at Devapur Village, Kasipet Tehsil, Mancherial District, Telangana State.

5.0 Expansion of the cement plant will be taken up within the existing OCL cement plant complex of 425.89 Acres. About 11 acres of land will be acquired for the proposed expansion. No forestland is involved. Already 216 acres was developed under Green belt.

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

7.0 Total project cost is about Rs.2100.0 Crores. Proposed expansion project will result in about 150person's direct employment indirect employment.

8.0 The targeted production capacity of the Cement plant is 6.50 MTPA Clinker, 7.60 MTPA Cement and 25 MW WHRB. The coal will be received from Singareni Collieries/imported/e-auctionand transportation will be donethroughRail/Road. Details of Raw Material is as follows:

Raw Material		Quantity per annum (in MTPA)			Mode of Transport
		Before Expansion	After Expansion	Sourced from	
Limestone requirement	Captive	5.3	9.75	Captive Mines	Road
Coal/Pet coke	Cement plant	0.30 (IND) 0.18 USA 0.30 (IND) 0.126 (US)- Pet coke	0.55 - IND 0.30 USA (OR) 0.51 - IND 0.21 - Pet coke	SCCL, USA, ESSAR	Road / Rail
	Power plant	0.35	0.35		
Laterite - 1		0.13	0.22	Warangal Area	Road

Laterite - 2	0.05	0.088	Warangal Area	Road
Al. Laterite	0.13	0.22	Rajamundry	Rail
Gypsum	0.093	0.23	Gujarat / Imported	Road/Rail
Fly ash for PPC	0.55	1.7	Captive /STPP	Road

9.0 The proposed capacity for differentproducts for new site area as below:

	Present Capacity			Capacity after Expansion		
	Clinker	Cement	Power	Clinker	Cement	Power
	MTPA		MW	MTPA		MW
Unit –I	1.19	3.07	50 MW (Coal based Power Plant)	1.25	4.10	75 MW (Addition of 25 MW Waste Heat Recovery Based Power Plant)
Unit –II	0.92			1.10		
Unit –III	1.39			1.65		
Unit-IV (New Unit)	-	-		2.50	3.50	
Total	3.50	3.07		6.50	7.60	

10.0 Present Power requirement is 45 MW and for expansion it will be additional 40 MW. This additional Power requirement will be met from the proposed WHRB and Grid.

11.0 Proposed raw material and fuel requirement for project are limestone and Coal. Therequirement would be fulfilled from adjacent mine for Limestone as well as Singareni Collieries/imported/e-auction for Coal. Fuel consumption will bemainly Coal/Pet coke.

12.0 Water Consumption for the proposed project will be increase from 1895 m^3/day to 4095 m^3/day. Whole water requirement will be met from Mine Pit. Ground water requirement permission also will be taken from Statutory Authority.Waste water get generated in the Power plant is recirculated in the Power plant and DM plant waste use in our plant premises plantation after treatment. No industrial waste water is likely to be generated during cement manufacturing process. The plant is a zero-effluent discharge unit. Domestic Sewage generated from the colony & office toilets will be treated in existing STP & treated water will be used for horticultural activities.

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

Observations and recommendations of the committee:

14.0 After detailed deliberations, the committee recommended the ToRsalongwith the following specific ToRs for conducting EIA study:

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 as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and Enterprise Social Commitment (ESC) related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

iv. Certificate of compliance of earlier EC from the Regional office of MoEFCC shall be submitted along with EIA/EMP.

v. Possibility and maximize the use of alternate fules shall be submiited in the EIA/EMP report.

vi. Study on NOx control shall be conducted and included in the EIA/EMP.

vii. The PP shall explore the possibility of getting the coal from the nearest source in order to avoid transporation from long distances shall be included in the EIA/EMP.

viii. No pet coke shall be planned to sue in the thermal power plant.

30.12 Pig Iron plant (39000 TPA) located at Village Manjhiladih, Tehsil Giridh, DistristGiridh, Jharkhand, by M/s Balmukund Sponge & Iron Private Ltd. (proposal No. IA/JH/IND/66842/2017; File No. J-11011/870/2008-IA.II(I)) - Amendment in ToRs.

1.0 M/s Balmukund Sponge & Iron Private Ltd. made online application vide proposal no. IA/JH/IND/66842/2017 dated 06th March 2018 seeking amendment in ToR issued vide reference no. J-11011/870/2008-IA.II (I) dated 22.08.2017. The proposal is submitted and appraised at Central level**.**

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

2.0 Terms of Reference was granted vide letter Ref. F. No. J-11011/870/2008-IA-II(I) Dt 22.08.2017 for the following configuration:

Manufacturing Facilities	**Product**	**Existing**	**Proposed**	**Total**
Mini Blast Furnace	Pig Iron	39000 TPA (110 TPD)	No Expansion	39000 TPA (110 TPD)
Induction Furnace (SMS with CCM)	MS Billet	102660 TPA (290 TPD)	No Expansion	102660 TPA (290 TPD)
Iron Ore Beneficiation Plant	Iron Ore Beneficiation	94000 TPA (266 TPD)	No Expansion	94000 TPA (266 TPD)
Rolling Mill	M.S / TMT Rod	16000 TPA (50 TPD) [Will be replaced with new plant]	86400 TPA (270 TPD)	86400 TPA (270 TPD)

3.0 It was informed that due to misinterpretation, existing production capacity of Induction furnace plant is mentioned as 290 TPD, whereas actual production capacity is 350 TPD (60 TPD existing & 290 TPD expansion).

4.0 It was requested for amending the ToR with manufacturing detailed as below:

Manufacturing Facilities	**Product**	**Existing**	**Proposed**	**Total**
Mini Blast Furnace	Pig Iron	39000 TPA (110 TPD)	No Expansion	39000 TPA (110 TPD)
Induction Furnace (SMS with CCM)	MS Billet	123900 TPA (350 TPD)	No Expansion	123900 TPA (350 TPD)
Iron Ore Beneficiation Plant	Iron Ore Beneficiation	94000 TPA (266 TPD)	No Expansion	94000 TPA (266 TPD)
Rolling Mill	M.S / TMT Rod	16000 TPA (50 TPD) [Will be replaced with new plant]	86400 TPA (270 TPD)	86400 TPA (270 TPD)
Ferro Alloys Plant	Silico Manganese	35 TPD		35 TPD

5.0 Name of the Consultant:M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar-751010, Sl. No. 89, List of Accredited Consultant Organizations (Alphabetically) Rev. 64 rev April 05, 2018

Recommendations of the committee:

6.0 After detailed deliberations, the committee agreed for amendment in the ToR

30.13 Proposed 1.2 MTPA Integrated Steel Plant with 225 MW CPP Mouza Nandarchak (J.L. N0.- 124) and Kanjarichak (J.L. No. 129) at Village Gokulpur, P.O. Shyamraipur, P.S. Khargpur (L) Dist Paschim Maidnapur, West Bengal of M/s Orissa Metaliks Pvt. Ltd. [proposal No. IA/WB/IND/64050/2017; File No. J-11011/169/2017-IA.II(I)] - Corrigendum to ToRs.

1.0. The proponent has made online application vide proposal no. IA/WB/IND/64050/2017 dated **14th March 2018** seeking corrigendum to the ToR granted vide reference no. J-11011/169/2017-IA.II(I) dated 22.05.2017.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 the project proponent

2.0 M/S Orissa Metaliks Private Limited proposes to install a new manufacturing unit for Integrated Steel Plant along with Captive Power Plant. It is proposed to set up the plant for 1.2 MTPA Integrated Steel Plant along with 225 MW Captive Power Plant.

3.0 The said project was accorded ToR vide File No-. J-11011/169/2017.I A II (I) dated 22.05.2017

4.0 The said unit will be located at Mouza – Nandarchak (J.L. No. 124), Bargai (J.L No. 197) &Kanjarichak (J.L. No-125) at Village: Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), District: Paschim Mednipur, State: West Bengal.

5.0 The corrigendum desired is:

- Related to location:

For	Read as
1.2 Million Ton Integrated Steel Plant with 225 MW CPP Mouza – Nandarchak (J.L. No. 124), Bargai (J.L No. 124) &Kanjarichak (J.L. No-129) at Village – Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), Dist. Paschim Mednipur , West Bengal	**1.2 Million Ton Integrated Steel Plant with 225 MW CPP** Mouza – Nandarchak (J.L. No. 124), Bargai (J.L No. 197) &Kanjarichak (J.L. No-125) at Village – Gokulpur, P.O – Shyamraipur, P.S – Kharagpur(L), Dist. Paschim Mednipur, West Bengal

- Related to Project Breakup :

In favour of:

Sl. No	Particulars of Facilities	Capacity
1	Blast Furnace (2 x 550m^3)	1.00 Million T.P.A
2	Sinter (1 x 175m^2)	1.00 Million T.P.A
3	DRI (2 X 500 TPD + 2 x 350 TPD)	0.50 Million T.P.A
4	Steel Making Facilities [(20 T EIF X 10) + (50T EAF X 2)] with LRF and oxygen optimized furnace	1.00 Million T.P.A
5	Ferro Alloy (FeMn, FeSi, SiMn, FeCr) Plant (10 x 9 MVA)	0.12 Million T.P.A
6	FeCr Briquette Manufacturing plant	40 ton/hr
7	Coke Oven Plant (2 x 0.25 MTPA)	0.50 Million T.P.A
8	Lime Dolomite Plant	200 TPD
9	Oxygen Plant	200 TPD
1	Hot Rolling Mill	0.60 Million T.P.A
1	Cold Rolling Plant with Pickling Line & Continuous Galvanizing	0.35 Million T.P.A
1	Ductile Iron Pipe Unit	0.20 Million T.P.A
1	Captive Power Plant	225 MW [WHRB Based 90 MW + CFBC (Coal &Dolochar Mix based) 3 x 45 MW]
1	Pellet Plant	2.4 MTPA (2 x 1.2 MTPA)
1	I/O Beneficiation Plant	2.4 MTPA (2 x 1.2 MTPA)
1	Producer Gas Plant	150000 (20 x 7500 N.m^3/hr)

Instead of:

Sl. No	Particulars of Facilities	Capacity
1.	Blast Furnace (2 x 550m^3)	1.00 Million T.P.A
2.	Sinter (1 x 175m^2)	1.00 Million T.P.A
3.	DRI (2 X 500 TPD + 2 x 350 TPD)	0.50 Million T.P.A
4.	Steel Making Facilities [(20 T EIF X 10) + (50T EAF X 2)] with LRF and oxygen optimized furnace	1.00 Million T.P.A
5.	Ferro Alloy (FeMn, FeSi, SiMn, FeCr) Plant (10 x 9 MVA)	0.12 Million T.P.A

6.	FeCr Briquette Manufacturing plant	40 ton/hr
7.	Coke Oven Plant (2 x 0.25 MTPA)	0.50 Million T.P.A
8.	Lime Dolomite Plant	200 TPD
9.	Hot Rolling Mill	0.60 Million T.P.A
10.	Cold Rolling Plant with Pickling Line & Continuous Galvanizing	0.35 Million T.P.A
11.	Ductile Iron Pipe Unit	0.20 Million T.P.A
12.	Captive Power Plant	225 MW [WHRB Based 90 MW + CFBC (Coal &Dolochar Mix based) 3 x 45 MW]
13.	Pellet Plant	2.4 MTPA(2 x 1.2 MTPA)
14.	I/O Beneficiation Plant	2.4 MTPA (2 x 1.2 MTPA)
15.	Producer Gas Plant	150000 (20 x 7500 $N.m^3$/hr)

Observations and recommendations of the committee:

6.0 After detailed deliberations, the committee agreed for corrigendum to ToR as mentioned above.

10thApril 2018

30.14 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 Silico-Manganese (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.

The project proponent did not attend the meeting and informed that they didn't attend due to assessment of accreditation by their consultants. It was requested to consider in the ensuing EAC meeting. The committee agreed for the request made by PP.

30.15 Capacity enhancement by increasing pulp production from 62,000 TPA to 90,000 TPA by upgrading the existing pulp mill without increase in permitted paper production capacity of 1,00,000 TPA by M/s Orient Paper and Industries Ltd at Almai, Dist.Shaldol, Madhya Pradesh [Proposal No. IA/MP/IND/71872/2017; MoEFCC File No. J-11011/1142/2007- IA.II(I)]- Enhancement of Pulp production under 7(ii)

1.0 M/s Orient Paper and Industries Ltd has made online application vide proposal no. IA/MP/IND/71872/2017 dated 26thMarch 2018 seeking Environmental Clearance under the 7(ii) provisions of the EIA Notification, 2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 5 (i) under Category "A" EIA Notification, 2006 and the proposal is appraised at the Central Level.

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

2.0 The details of earlier Environmental clearances are as follows:.

SI. No.	EC No.	Dated	Details on Environmental Clearance
1	F. No. J-11011/1142/2007-IA-II(I)	19th March 2008	• Modernization, balancing and expansion of paper mill (85,000 TPA to 1,00,000 TPA) • New Tissue Paper Machine of 59 TPD • Upgradation of existing Bamboo/Hardwood pulping system by new Oxygen Delignification pulp production to 275 TPD • Augmentation power generation 6 MW Extraction-condensing type Turbo Generator Set
2	Amendment of EC -F. No. J-11011/1142/2007-IA-II(I)	18th August 2008	• Amendment in capacity of power generation (Total 43 MW)
3	Amendment of EC -F. No. J-11011/1142/2007-IA-II(I)	10th December 2010	• Modernization, balancing and expansion of paper mill (from 85,000 TPA to 1,00,000 TPA) • Captive Power Plant capacity from 43 MW to 55 MW
4	Amendment of EC- F. No. J-11011/1142/2007-IA-II(I)	17th October 2016	• Enhancement of Tissue Paper Production from 25,000 TPA to 55,000 TPA by installation of additional 30,000 TPA Tissue Machine without increasing permitted Paper Production of 1,00,000 TPA • The existing writing/printing paper machine was de-rated from the existing capacity of 60,000 TPA to 45,000 TPA • In house pulp generation was reduced to 62,000 TPA

3.0 Compliance status of the EC from the Regional Office of MoEF&CC was obtained from MoEF&CC Regional Office, Bhopal vide letter No. 5-210/2008(ENV)/1259 dated 23/03/2018.

4.0 It was informed that, although the unit has the capacity to produce 275 TPD of pulp with all the required pulping system, the production is limited to 62,000 TPA (182 TPD) based on the EC granted by MOEF dated 17th Oct'16. In view of upgrading existing pulp mill by addition of balancing equipment and by adopting Elemental Chlorine Free (ECF) bleaching operations and also due to availability of adequate installed capacity of pulping system along with utilities such as water, power and raw materials, the management of OPM has proposed to enhance the in-house pulp production throughput to 90,000 TPA without increasing the total consented paper production capacity of 1,00,000 TPA.

5.0 The salient features of the proposed project are listed as follows:

- No increase in the total consented paper production of 1, 00,000 TPA.
- The existing wood chipper and pulp mill have adequate capacities to produce 90,000 TPA and hence no additional units will be installed (except for addition of balancing equipment and adopting Elemental Chlorine Free (ECF) bleaching operations.)

- No additional land is required as the proposed project includes only up-gradation of existing pulp mill and enhancement of the production of in-house pulp.
- ECF Chlorine Bleaching technology will be adopted, which will be environmental friendly option to help reduce the specific water consumption and pollution load.
- No increase in freshwater consumption during the post project scenario due to increase in recycling options and also upgrading the pulp mill to ECF technology thereby reducing the specific water consumption per tonne of paper production.

5.0 Air Quality Management is as follows:

- No additional coal consumption is envisaged beyond the existing levels and hence no additional emissions from the Captive Power Plant will be envisaged.
- The additional steam required for increased pulp production will be generated by firing of additional solids (Black liquor) generated from the pulp mill and hence no additional boilers are proposed. Therefore there will not any increase in pollution load from the existing scenario.

6.0 Water Quality Management is as follows:

- Specific water consumption during the post project scenario will be reduced to 32 m3/T of paper production (main plant) as against the existing specific water consumption of 45 m3/T of paper production.
- The total fresh water consumption in the existing facility is about 20,250 m3/day whereas during the post project scenario the total fresh water consumption will be reduced to 17,225 m3/day due to increase in recycling options.
- There will be reduction in wastewater generation from main plant (pulp mill and paper mill) during the post project scenario from 10,790 m3/day as per the current operation to 9,265 m3/day.
- No treated wastewater will be discharged into nearby water bodies and thus zero liquid discharge to river will be adopted. The remaining treated effluent after recycling will be discharged for land irrigation application carried out through HRTS (High Rate Transpiration System) design as per the existing practice.

7.0 Noise Quality Management is as follows:

- No additional noise generating units will be installed during the post project scenario.

8.0 Solid and Hazardous Waste Management

- No additional solid or hazardous waste generation is envisaged due to the proposed project.

9.0 Name of the Consultant: Cholamandalam MS Risk Services Limited, Chennai. Sl. No. in the QCI document (List '1' – Accredited EIA Consultant Organizations (ACOs) - as on March 05, 2018).

Observations of the committee:

10.0 The committee observed that the environmental clearance granted vide F. No. J-11011/1142/2007-IA-II(I), dated 19 March 2008 for modernization, balancing and expansion of paper mill (85,000 TPA to 1,00,000 TPA) under the provisions of clause 7(ii) of EIA Notification without conduct of public hearing, Later on amendment of EC was obtained vide

F. No. J-11011/1142/2007-IA-II(I), dated August 18 2008; 10thDecember 2010; and 17th October 2016. Therefore, it is understood that the project has not gone for public consultation during its life time. It is also observed that the instant proposal will also add additional pollution load. Therefore, environmental clearance under 7(ii) was not agreed and advised for issue of ToRs.

Recommendations of the committee:

11.0 After detailed deliberations, the committee recommended the ToRs alongwith the following specific ToRs for conducting EIA study with due deligence under the provisions of clause 7(ii) of EIA Notification, 2006:

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 as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and Enterprise Social Commitment (ESC) related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

iv. Certificate of compliance of earlier EC from the Regional office of MoEFCC shall be submitted along with EIA/EMP.

v. Action plan for sustainable agri-forestry for raw material.

30.16 Expansion of steel plant (0.105 MTPA to 0.533 MTPA) at village Kamta, Block Gola, Dist.Ramgarh, Jharkhand by M/s Brahmaputra Metallics Ltd. [Proposal No. IA/JH/IND/73649/2011; MoEFCC File No. J-11011/285/2008-IA II(I)]- Extension of validity of Environmental Clearance.

1.0 M/s Brahmaputra Metallics Ltd has made online application vide proposal no. IA/JH/IND/73649/2011 dated 23rdMarch 2018seeking extension of validity of Environmental Clearance, earlier granted by MoEF&CC vide no**.** J-11011/285/2008-IA II(I) dated 29.03.2011. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous &non ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at the Central Level.

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

2.0 M/s BRAHMAPUTRA METALLICSLIMITED is located at Village: Kamta, Block Gola District- Ramgarh, Jharkhandwas granted Environment Clearance for expansion of the steel plant from 0.105 MTPA to 0.533 MTPA vide MoEFCC, GOI letter No. **J-11011/285/2008-IA II(I)** on dated **29.03.2011**. Products and other details as per the existing EC are as follows:

S. No.	Production Facility	Units	Production
Existing Unit			
1	DRI Plants	1x350 TPD	1,05,000 TPA
2	Captive Power Plant	WHRB – 8 MW	20 MW

	WHRB + AFBC	AFBC Boiler – 12 MW	
Proposed configuration after expansion			
1	Coke Oven Complex (Recovery type)	2x35 Ovens, 4.5 mt. height	4,13,800 TPA
2	Sinter Plant	1x36 m2	3,83,200 TPA
3	DRI Plants	3x350 TPD	3,15,000 TPA
4	Mini Blast Furnace	1x380 m3	4,50,000 TPA
5	Electrical Arc Furnace (EAF)	1x50 T with 1x50 T Ladle Furnace Billet Caster 1x3 + 1x2 Strand	3,50,000 TPA
6	Induction furnace (IF)	4x15 Ton with 4x15 T LRF, AOD & CCM	3,07,300 TPA
7	Captive Power Plant WHRB – 2x20 AFBC – 2x40	2x20 MW WHRB 2x40 MW AFBC based Boiler	 40 MW 80 MW
8	Bar Mill	Single Strand Continuous Mill	3,00,000 TPA
9	Lime & Calcined Dolo Plant	2x100 TPD	51,200 TPA
10	Oxygen Plant (BOD Basis)	1x250 TPD	1 X 250 TPD
11	Ferro Alloys	2x12 MVA	43,000 TPA

3.0 The following units are installed at project site as on date:

S. No.	Production Facility	Units	Production
1	DRI Plants	1x350 TPD	1,05,000 TPA
2	Captive Power Plant WHRB + AFBC	WHRB – 8 MW AFBC Boiler – 12 MW	20 MW
3	Induction furnace (IF)	4x15 Ton with CCM	3,07,300 TPA

4.0 Status of the Units installed and time schedule for installation of the remaining Units are follows:

S. No	Units	Module	Capacity (TPA)	Time Period Required for installation of remaining capacity
1	Coke Oven complex (Recovery type)	2 x 35 ovens, 4.5 m ht	4,13,800	March 2021
2	Sinter Plant	1 x 36 m^2	3,83,200	March 2021
3	DRI Plants	3 x 350 TPD	3,15,000	June 2020
4	MBF	1 x 380 m^3	4,50,000	June 2020
5	Electrical Erc Furnace(EAF)	1 x 50 T with 1 x 50 T Laddel Furnace and Maching VD/VOD and Billet Caster 1x 3 Strand + 1x 2 Strand	3,50,000	March 2021
6	Induction Furnace	4 x 15 T with 4 x 15 T LRF, AOD and CCM	3,07,300	Installation Complete

7	Bar Mill	Single Strand, Continuous Mill	3,00,000	June 2019
8	Lime and calcined Dolo Plant	2x 100 TPD	51,200	March 2020
9	Oxygen Plant (BOD basis)	1 x 250TPD	-	March 2020
10	Ferro Alloy Plant	2 x 12 MVA	43,000	December 2019
11	Captive Power Plant	2 x 12 MVA	43,000	
		Total 120 MW		
		2 x 20 MW (WHRB)	40 MW	June 2019
		2 x 40 MW (AFBC)	80 MW	

5.0 Reasons for the delay in implementation of the Project inter alia include slump in steel market; and ram material paucity. Domestic steel industry has seen a revival of demand in last one year and the raw material availability like iron ore has improved in past 1 year with increase in total iron ore output in India. Company has also been able to secure coal linkage from coal India for its coal requirement which has improved our operating margin. Considering the turnaround in the steel sector, time is favourable to go for value addition products like TMT.

6.0 The total cost of the project is **Rs. 2100 Crores**and the capital cost for environmental protection measures is Rs**12.48Crores**. The annual recurring cost towards the environmental protection measures is proposed as Rs1.42Crores per year.

7.0 The water requirement of the project is estimated as 40,965 KLD for which permission for drawl of 37,400 KLD from Water Resources Department, Govt. of Jharkhand vide letter No.-2/PMC/jalapurty/08/2010/357 dated 05.05.2010 and drawl of 765 KLD from CGWA obtained vide letter no.- 21-4(23)/MER/CGWA/2008-2049 dated 04.02.2008 and 2800 KLD used from Rain Water Harvesting.

8.0 The power requirement for the project is 134 MW and shall be sourced from own CPP (140 MW).

9.0 At this time 800 persons are working in the plant and about 1230 persons will be employed when the plant becomes fully operational.

10.0 Approx. 33% of the total project area shall be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project activities.

11.0 The topography of the area is flat and location co-ordinates are 23^0 31' 40"NLatitude and 85^0 42' 03" E Longitude in Survey of India topo sheet No. 73 E/10.

12.0 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.

13.0 The proponent has mentioned that there is no court case / litigation against the plant.

14.0 Therfore, the PP requested for extension of the validity of the Environmental Clearance of M/s Brahmaputra Mettalics Ltd. up to 31st March, 2021.

15.0 M/s VardanEnvironet, who has revalidated the EIA Report, is listed at Serial no. 150 as per NABET list of accredited consultant organizations (Rev. 63 dated 05.03.2018).

Observations of the committee:

16.0 During the presentation, the project proponent has submitted for extension of validty of environmental clearance for the following units after dropping of non-implementable units within another 3 years also.

S. No	Units	Capacity (TPA)	Installation Schedule
1	Coke Oven complex	4,13,800	Will not be installed; maybe omitted from EC
2	Sinter Plant	3,83,200	
3	DRI Plants	1,05,000	Installed
4	DRI Plants	2,10,000	Will not be installed; maybe omitted from EC
5	MBF	4,50,000	
6	Electrical Arc Furnace (EAF)	3,50,000	
7	Induction Furnace	3,07,300	Installed
8	Bar Mill	3,00,000	Will be installed by December 2020
9	Lime and calcined Dolo Plant	51,200	Will not be installed; maybe omitted from EC
10	Oxygen Plant (BOD basis)	-	
11	Ferro Alloy Plant	43,000	
12	Captive Power Plant	40 MW - WHRB	Installed – 20 MW (8 MW WHRB and 12 MW AFBC) Proposed: Additional 5 MW AFBC by December 2019
		80 MW - AFBC	

Recommendations of the committee:

17.0 After detailed deliberations, the committee recommended for extension of validity of the environmental clearance up to 28.03.2021 for the following units:

S. No	Units	Module	Capacity (TPA)
1	DRI Plants	1 x 350 TPD	1,05,000
2	Induction Furnace	4 x 15 T with LRF, AOD and CCM	3,07,300
3	Bar Mill	Single Strand	3,00,000
4	Captive Power Plant	1 x 8 MW (WHRB)	8 MW
		1 x 12 MW + 1 x 5 MW (AFBC)	17 MW

30.17 Expansion of total Production Capacity and augmentation of integrating melting and rolling facility (from 54000 TPA to 92500 MT/Annum) located at Village Balyana, Post Barotiwala, Tehsil Baddi, District Solan, Himachal Pradesh by M/s. KundlasLoh Udyog Ltd. (Online proposal No. IA/HP/IND/65822/2017; File No. J-11011/350/2017-IA.II(I))- Amendment in ToR.

1.0 M/s. KundlasLoh Udyog Ltd. has made online application vide proposal no. IA/HP/IND/65822/2017 dated 28thFebruary 2018 seeking amendment in ToR issued vide reference no. J-11011/350/2017-IA.II (I) dated 19.09.2017 for the above mentioned proposed project.

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

2.0 M/s KundlasLoh Udyog proposed for expansion of total production capacity and augmentation of integrating melting and rolling facility in the existing premises. It was proposed to set up a plant of melting and rolling by using induction furnaces. The earlier ToR was issued on dated 19th September 2017 vide letter no-IA-J-11011/350/2017-IA-II(I).

3.0 It was requested to substitute phrase "Two induction furnaces each having 12 MT/heat capacity (one existing will be enhanced from 6 MT/heat to 12 MT/heat & another new 12 MT/heat)" in ToR point number 3.0 for Proposed expansion Project M/s KundlasLoh Udyog located at Village Balyana, Post Barotiwala, Tehsil Baddi, District Solan, Himachal Pradesh.

4.0 Name of the consultant: Shivalik Solid Waste Management Ltd, Punjab-140604, QCI/NABET S.No. 133, Rev. 63 March 05, 2018

Recommendations of the committee:

5.0 After detailed deliberation, the committee recommended for corrigendum to the earlier ToRs as follows:

Reference No	For	Read as
TOR point 3.0	M/s Kundlas Loh Udyog has proposed for expansion and augmentation of melting and rolling facility from 54000 TPA to 92500 TPA	M/s Kundlas Loh Udyog has proposed for expansion and augmentation of melting and rolling facility from 54000 TPA to 92500 TPA and replacement of existing Induction furnace having 6 MT/heat capacity with 12 MT/heat capacity and addition of one more Induction furnace having 12 MT/ heat capacity. Total capacity of two Induction furnaces proposed is 24 MT/heat

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.

1.0 M/s Utkal Alumina International Limited made online application vide proposal no. IA/OR/IND/64028/2017 dated 15th January 2018 along with the copies of EIA/EMP seeking Environmental Clearance under the provisions of the EIA Notification, 2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of EIA Notification, 2006 and the proposal is appraised at Central level.

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

2.0 The application for EC of M/s Utkal Alumina International Ltd. located in Village - Doraguda, Tehsil - Kashipur, District - Rayagada, State - Odisha was initially received in the Ministry on 20.04.2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006.

The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 18th meeting held on 3rd to 5th May, 2017 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 22.05.2017 vide Lr. No. F. No. J-11011/753/2007-IA-II(I).

3.0 The project of M/s Utkal Alumina International Ltd. located in Village - Doraguda, Tehsil - Kashipur, District - Rayagada, State - Odisha is for enhancement of production capacity of Alumina Refinery (from 1.5 to 3.0 MTPA) along with Cogeneration Power Plant (from 90 to 150 MW). The existing project was accorded environmental clearance vide letter no. F. No. J-11011/753/2007-IA-II(I), dated 29.01.2008. The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide letter no. 101-375/EPE dated 25.10.2017 and letter. no. 101-375/EPE/134, dated 15.01.2018. There are no non-compliances reported by Regional officer. The proposed capacity for different products for new site area as below:

Particulars	Existing Configuration	Post Expansion Final Configuration
Alumina Refinery (Calcined Alumina)	Line-I: 0.75 MTPA	Line-I: 1.0 MTPA
	Line-II: 0.75 MTPA	Line-II: 1.0 MTPA
		Line-III: 1.0 MTPA
Co-generation Power Plant	90 MW [3x30 MW]	150 MW [5 x 30MW]

4.0 The total land required for the project is 1069.51 ha, out of which 0 ha is an agricultural land, 800.784 ha is grazing land and 164.391 ha is others (164.391 ha Government Land). 104.335 ha of forest land is involved. The entire land has been acquired for the project. The Barha River passes through the project area. It has been reported that no water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is undulated and reported to lies between 19º 10' 31.5408" to 19º 12' 8.532" N Latitude and 83º 01' 19.65" to 83º 01' 57.1764" E Longitude in Survey of India topo sheet No. E44 F/4 at an elevation of 800 m to 823 m AMSL. The ground water table reported to ranges between 1.14 m bgl to 11.62 m bgl below the land surface during the post-monsoon season and 5.05 m bgl to 10.99 m bgl below the land surface during the pre-monsoon season. There will be no drawl of ground water.

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 approval w.r.t. the "Site Specific Conservation Plan & Wildlife Management Plan" is given at Annexure – 3.1 in EIA/EMP Report.

7.0 The Bayer's process for extraction of Alumina using the basic raw material (Bauxite, Caustic Soda, Lime, Furnace Oil and Coal) and the various processes involved (Bauxite crushing, Grinding, Predesilication, Digestion, Clarification, Mud washing, Security filtration, Hydrate classification, Seed filtration, Precipitation, Hydrate washing and Calcination to produce the Calcined alumina. Waste generated in Bayer's process is Red Mud, Lime Grit (From lime slaking) and Fly ash from the captive power plant.

8.0 The targeted production capacity of the Alumina refinery is 3.0 million TPA of Calcined Alumina. The ore for the plant would be procured from Captive Bauxite Mine (Baphlimali Bauxite Mine). The ore transportation will be done through Long Distance Conveyor.

9.0 The water requirement of the project is estimated as 20,000 m^3/day, out of which 19,800 m^3/day of fresh water requirement will be obtained from the San River. The permission for drawl of surface water is obtained from Department of Water Resources, Govt. of Odisha vide Lr. No. 3326/WR.,Irr-II-WRC-154/2009, dated 11.02.2010.

10.0 The power requirement of the project is estimated as 150 MW, which will be obtained from the Co-generation Power Plant.

11.0 Baseline Environmental Studies were conducted during Pre-Monsoon season i.e. from March to May, 2017 Ambient air quality monitoring has been carried out at 11 locations during 01.03.2017 to 31.05.2017 and the data submitted indicated: PM_{10} (42.1 to 73.2 µg/m^3), $PM_{2.5}$ (21.7 to 40.7 µg/m^3), SO_2 (11.5 to 24.6 µg/m^3) and NOx (11.6 to 25.2 µg/m^3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.3075 µg/m^3 (0.11394 µg/m^3 w.r.t. Point Source Emission and 0.19356 µg/m^3 w.r.t. Line Source Emission) µg/m^3 with respect to the PM_{10}; 0.82689 µg/m^3 (0.63333 µg/m^3 w.r.t. Point Source Emission and 0.19356 µg/m^3 w.r.t. Line Source Emission) with respect to the SO_2; 0.82689 µg/m^3 (0.63333 µg/m^3 w.r.t. Point Source Emission and 0.19356 µg/m^3 w.r.t. Line Source Emission) µg/m^3 with respect to the NOx.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 6.5 to 7.5, Total Hardness: <0.05 to 172 mg/l, Chlorides: 7.6 to 95 mg/l, Fluoride: 0.06 to 0.65 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 10 locations. pH: 6.5 to 8.0; DO: 6.6 to 7.4 mg/l and BOD: 4.0 to 14.0 mg/l. COD from 19 to 81 mg/l.

13.0 Noise levels are in the range of 45.9 to 67.1 dB(A) for daytime and 40.0 to 61.8 dB(A) for night time.

14.0 It has been reported that there are no people in the core zone of the project. No/ R&R is involved. It has been envisaged that no families to be rehabilitated, which will be provided compensation and preference in the employment.

15.0 It has been reported that a total of 40,80,000 tons/m^3 of waste will be generated due to the project and same will be dumped in the earmarked dump yard. It has been envisaged that an area of 353 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

16.0 It has been reported that the Consent to Operate from the Odisha State Pollution Control Board obtained vide Lr. No 5057/IND-I-CON-6101 dated 22.03.2016 and consent is valid up to 31.03.2021.

17.0 The Public hearing of the project was held on 15.11.2017 at village Baghrijholla, Tahsil- Kashipur in Rayagada district under the chairmanship of Project Director, DRDA, Rayagada for production of Alumina Refinery from 1.5 to 3.0 MTPA and CPP from 90 to 150 MW. The issues raised during public hearing inter alia, include Barrier around Red Mud Pond & Ash Pond for protection of human & animals; Prevention of Dust pollution caused by the

industry; River water Pollution in Bada Nadi due to discharge from plant; Plantation over surrounding bare hills; employment and development of social infrastructure; etc. The Statement of main issues raised by the public and response of the project proponent with action plan is as follows:

Issues raised by the Public in Hearing	Response of the Project Proponent	Activity	Approximate Budget (Rs. In lakhs)	Timeline
Environmental Issues:-				
1. Barrier around Red Mud Pond & Ash Pond for protection of human & animals.	Red mud pond area is protected by boundary wall and fence. Ash pond is situated on a hill top valley and surrounded by deep garland drains and guard wall, and thus is protected. The guard wall is being strengthened. It is worth mentioning here that, we have recently commissioned the Red Mud Filtration Unit, which will filter the wet Red Mud from 55% solids to 75% solids, thereby eliminating wet disposal. Now, Red Mud is disposed in dry form, hence hazards for humans and animals due to wet disposal have been completely eliminated. Both these ponds are under continuous security surveillance. Operation and maintenance personnel are continuously monitoring the pond status. In future expansion also similar actions will be continued.	Boundary wall and fencing around RMP & AP	500	3 years
2. Prevention of Dust pollution caused by the industry in Dwimundi, D Korol& other nearby villages	All the mitigation measures stated in the EIA, EMP have been implemented effectively to protect the environment. These measures are the part of the plant design and have been implemented since the day one of operation of the plant. The Air Pollution Control measures that have already been implemented to mitigate dust pollution are installation of state of the art equipment like ESP, Bag Filters, DSS, DES and Wet Scrubbers etc. at respective point source or fugitive source. In addition to the above High pressure fixed water sprinkling system put in place at Bauxite & Coal handling area to control fugitive dust emission. Regular water sprinkling and cleaning is being carried out on roads through mobile water tanker to reduce fugitive emission. All in plant roads have been black-topped/concreted. Moreover, plantation along the boundary wall is being carried out to prevent the dust pollution in Dwimundi, D. Korol and other nearby villages. In proposed expansion similar air pollution control	Air Pollution mitigation measures as proposed in the EIA/EMP and part of the project cost.	15700	5 years

	measures will be adhered to, from the design stage.			
3. River water Pollution in Bada Nadi due to discharge from plant affecting downstream villages.	The plant is operating on a zero liquid discharge principle as mandated by the OSPCB &MoEFCC. Various ponds like Red Mud Pond, Ash Pond, Caustic Pond, Guard Pond and Holding Pond are in place to collect and reuse waste water in the process. STP (Sewage treatment Plant) has been provided to treat the domestic waste water and reuse of treated water in gardening and afforestation. The expanded plant will have similar features to prevent any waste water discharge to outside and the plant will be designed and operated on Zero Discharge concept.	Water Pollution mitigation measures as proposed in the EIA/EMP and part of the project cost.	7200	5 years
4. Plantation over surrounding bare hills.	Plantation is a continuous activity at Utkal. We have developed in-house Nursery spreading over an area of five acres having capacity of 2.0 lakh saplings at Plant site and another nursery at Baphlimali Bauxite Mines of capacity 0.5 lakh saplings. These saplings are being planted for greenbelt development in and around the plant premises & Bauxite mines. Plantation has been carried out on bare hills and other areas owned by Utkal Alumina. UAIL will explore possibility of plantation in the surrounding private land and bare hills in coming years in consultation with the concerned land-owners and the Govt.	Greenbelt development and plantation as proposed in the EIA/EMP and part of the project cost	500	5 years
Peripheral development: -				
1. Regular Employment for local youths having Technical &other qualifications on priority basis.	Preference will be given to the local youth having Technical & other qualifications commensurate to their proficiency and skill set as and when similar vacancies arise.			
2. Suitable jobs for local ladies	Already employment has been provided to more than 210 local ladies (Direct & Indirect) depending on their qualification and skill levels. This will continue.			
3. Provision of 500 bedded Hostel at Kucheipadar, ITI at	i) Will be looked into after due consultation with the District Administration.	Infrastructure for ITI	25 500	2 years 3 years

Baghrijholla, +2 Science College at Tikiri, Support to all Government UP School to develop as Model Schools & appointments of Teachers by the company.	ii) ITI at Kashipur will be strengthened through infrastructures as needed. iii) As committed during the PH, +2 Science College will be opened nearby Tikiri within the next two years. iv) Several of the Government run UP Schools of the area have been supported as required from time to time and will continue to support. Appointment of teachers will be done in consultation with the Govt. and the School Management committees with due approvals.	+2 Science College Support to Govt. schools Remedial coaching by teachers	50 50	3 years 3 years
4. Hospital facility & provision of 10 nos Ambulance as medical aid.	A modern 25- bedded hospital with secondary health care facilities will be operational at Oshapada village within the next few months, wherein, local community will be provided with best in class health care. Already six numbers of Ambulances are available for the local community. Possibility of providing four more will be looked into.	Utkal Hospital at Oshapada Four ambulances	500 (establishment cost) 500 per annum 40	By March 2018 Every Year after that towards operational cost. 3 years
5. Development of Road from Doraguda to Baphlimali& provision of 02 nos of Student Bus from Dongasil to Kashipur.	i) Road work has been undertaken by the Govt. ii) Provision of 02 nos of student buses will be looked into.	Two buses	60 for purchasing 30 per annum	2 years Every year after that as operational cost
6. Provision of Drinking water facilities at Hadiguda Panchayat.	Drinking water facility has been provided fully by the company in 3 villages (2 villages through overhead water tank and 1 village through Spring based water supply system) of the Hadiguda Gram panchayat. These villages are also provided with hand pump bore wells for ensuring drinking water supply at all the times. Along with this, hand pump bore wells have been provided in 5 other villages of Hadiguda Gram Panchayat. Repair and maintenance of hand pumps is done by the company as and when required. This support will be extended to rest of the villages after due consultation with the Govt.	Additional drinking water facility in the villages of Hadiguda GP	300	5 years
7. Permanent Identity Card for Land Losers	As committed during the PH, Permanent Identity Cards for Land losers will be provided within the next three months.	Identity cards	6	March 2018
8. DP status for Dwimundi& D Korol village.	This issue comes under the purview of the RPDAC and the Govt.			

18.0 An amount of Rs. 135.8 Crores (2.5% of Project cost of Rs. 5432.00 Crore) 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	Total
1.	Environmental Issues	4847	4847	4847	4680	4680	23900
2.	Education	213	213	200	--	--	626
3.	Hospital	1040	540	540	540	500	3160
4.	Student Bus facility	45	60	30	30	30	195
5.	Drinking water facility	60	60	60	60	60	300
Total							**28181**

19.0 The capital cost of the project is Rs 5432.00 Crores and the capital cost for environmental protection measures is proposed as Rs. 255.00 Crore. The annual recurring cost towards the environmental protection measures is proposed as Rs. 5.55 Crores. The employment generation from the proposed project/expansion is 375 direct employees and about 725 contractual workforces. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures are as follows:

Approx., Capital Investment for Environmental Protection

Sl. No.	Particulars	Rs. in Lakhs
I	AIR POLLUTION CONTROL	
1	Electrostatic precipitator	10000
2	Chimney	3000
3	Flue Gas Desulphurization System unit for boilers	2000
4	Dust Collector – Bag Filters	500
5	Water Sprayer (Stationary)	200
II	WATER POLLUTION CONTROL	
1	Domestic effluent treatment plant	100
2	Industrial ETP	200
3	Storm water drains, Caustic drain	1500
4	Caustic Pond/Guard Pond	300
5	Sewage System	100
6	Ash Pond/Red Mud Pond lining	3000
7	Sump Pit & Pumps	2000
III	NOISE POLLUTION CONTROL	200
IV	ENV. MONITORING AND LAB INSTRUMENTS	200
V	OCCUPATIONAL HEALTH & FIRE FIGHTING SYSTEM	
1	Occupational Health Equipment	100
2	Fire Fighting Equipment & Network System	1500
VI	GREEN BELT AND PLANTATION	500
VII	RAIN WATER HARVESTING	100
	GRAND TOTAL	25500

Recurring Annual Cost for Environmental Protection

Sl. No.	**Particulars**	**Rs. in Lakhs**
1	Air pollution control	50

2	Water pollution control	70
3	Noise pollution control	30
4	Environmental monitoring and management	80
6	Occupational health	150
7	Green belt & Plantation	100
8	Others (Environmental studies, expert advice etc.)	75
	TOTAL	**555**

20.0 Greenbelt will be developed in 353 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 3,00,000 saplings will be planted and nurtured in 353 hectares in 6 years.

21.0 The proponent has mentioned that there is court case (W.P.No. 5697 of 2007 in High Court of Odisha and No order/direction of the court as on today) and no violation under EIA Notification to the project or related activity.

22.0 The EIA/EMP has been prepared by EIA Consultant Organization M/s Kalyani Laboratories Pvt. Ltd. Accredited vide QCI/NABET Ref.:RAAC-137, dated 07.07.2017; Sl. No. 87 of the list in QCI Accreditation Register dated 5.01.2018.

Observations of the committee:

23.0 The committee observed that a court case is pending in the matter of writ petition no 5697 of 2007 in high court of Orissa regarding earlier Environmental Clearance granted in 1995. It was informed that no other order/direction was issued by the court till date. Further, it was observed that certain non-compliances were reported by RO, Bhubaneswar and the same was not closed.

Recommendations of the committee:

After detailed deliberations, the Committee sought following information

1. Action plan for 100% utilization of fly ash generated in existing plant as well as proposed expansion.

2. Closure of non-compliances reported by RO, Bhubaneswar

3. A detailed R&D scheme for utilization of red mud

4. Revised land use and land cover study based on high resolution satellite imagery (IRS LISS IV merged with CARTOSAT PAN-B data). Temporal changes shall also be presented by different date of pass.

5. Revised statement of issues raised during PH along with time bound action plan and budgetary provision.

6. Revised statement of ESC based on the issues raised during PH and need based assessment. The activities shall be for creation of assets and capacity building in CAPEX mode estimated as per scheduled rates.

7. Detailed management plan for storm water collection, treatment and disposal including the plant as well as red mud pond.

24.0 The project proponent has submitted reply to ADS vide their letter dated 21st February 2018 and 12th March 2018.

A. Action plan for 100% utilization of fly ash generated in existing plant as well as proposed expansion as follows:

Year	Estimated quantity of Ash generation (MT)	Supply to Bricks Manufacturing (MT)	Land fill / Land Development (MT)	Utilization in Embankment / Dyke raising of RMP / Ash Pond (MT)	Mine void filling (MT)	Plantation / Horticulture work (MT)	Road Making (MT)	Export ** (MT)	Total Ash utilization (MT)	% of utilization	Remarks
2017-18	250019	14232	206171	0	0	0	0	0	220403	88.11	Actual data till March 2018
2018-19	250000	8500	90000	150000	0	500	1000	0	250000	100.0	Estimated
2019-20	250000	10000	127000	100000	12000	500	500	0	250000	100.0	Estimated
Considering production 1.8 MTPA & 90 MW											
2020-21	300000	10000	164000	100000	25000	500	500	0	300000	100.0	Estimated
Considering production 2.0 MTPA & 90 MW											
2021-22	333000	13300	229200	50000	40000	500	0	0	333000	100.0	Estimated
2022-23	333000	15100	217700	50000	50000	200	0	0	333000	100.0	Estimated
Considering production 2.5 MTPA & 150 MW											
2023-24	416000	18100	327700	10000	60000	200	0	0	416000	100.0	Estimated
Considering production 3.0 MTPA (Maximum Capacity) & 150 MW											
2024-25 onwards	500000	20000	399800	10000	70000	200	0	0	500000	100.0	Estimated

** UAIL is in contact with M/s. Alchemy Corporation, Jharkhand for fly ash export in large quantity.

B. Closure of non-compliances reported by RO, Bhubaneswar:

Specific Condition No. (iv): Total water requirement from San River (Upstream of Indravati Reservoir) shall not exceed 22,330 m^3/day as per the permission accorded by the Department of Water / Resources, Govt. of Orissa. The wastewater shall be treated in ETP and reused in the process. 'Zero' discharge shall be adopted. Multi-effect evaporators shall be installed to recover water and recycle for process consumption to reduce the fresh consumption. The domestic wastewater shall be treated in the Sewage Treatment Plant (STP) and treated wastewater conforming to the standards for land application shall be reused for green belt development.

Observation made by Regional officer during monitoring on 25.08.2017: It has been found PAs are having only neutralization pit, sedimentation pit and guard pond for the treatment of waste water. They do not have full-fledged ETP for the treatment of waste water. Therefore, it is reqcired to construct the full-fledged ETP for the treatment of waste water and treated water only be used in the process.

Action taken report submitted by the project proponent: The plant operates on a Zero Discharge principle. All waste water generated in the Alumina refinery are alkaline in nature, which is centrally collected through a dedicated drainage system in a pond called the Caustic Pond. The waste water so collected is entirely recycled back to the process for Red Mud washing. Similarly. in the CPP, the blow down water from the Boilers and the Cooling Towers along with the OM Plant waste water are collected in a Holding Pond after sedimentation and neutralisation. This water is also entirely reused for sprinkling in CHP, AHP and roads and Ash conditioning. Similarly, the surface run-off water is also collected centrally in a pond called the Guard Pond having neutralisation system at the inlet with continuous pH monitoring. This water is also entirely recycled into the process for Red Mud washing. Moreover, as per the CPCB guidelines, the Guard Pond is under continuous surveillance through a Web- Camera and a Flow meter at its outlet. The quality of waste water of guard pond, Neutralization Pit and Holding Pond are well within the prescribed norms and moreover the waste water is being reused in the process. The above process of collection and reuse of waste water does not require a full-fledged ETP rather as indicated only neutralisation and sedimentation are required which are in place.

Comments of the Regional Office on dated 15.01.2018: As stated, plant is operated on ZLD and set up continuous surveillance through web camera and flow meter in its outlet. There are two major sources for waste water generation from the plant, viz. alumina refinery plant and power plant high TDS and high pH characteristic. Before recycling of this waste water, it is important to neutralize pH and remove the suspended solid. Therefore, they are having neutralization pit, sedimentation pit and guard pond for the treatment of waste water. As per the Specific Condition No.(iv), it is required to set up ETP for the treatment of waste water and treated water will be reused in the process:

Reply submitted by the project proponent on 15.02.2018: The typical characteristics of waste water generated in the Alumina refmery are alkaline in nature with suspended particles of red mud. All this waste water from the process is centrally collected through a dedicated drainage system (RCC) in a concreted pond called the caustic pond bottom lined with LDPE. The waste water so collected is entirely recycled back to the process for red mud washing and the sediments are disposed in red mud pond. Similarly, in the CPP, the blow down water from the boilers and the cooling towers along with the DM plant waste water are collected in a holding pond after sedimentation and neutralization. This water is also entirely used for sprinkling in CHP, AHP, roads and ash conditioning. Similarly, the surface run off water is also collected centrally in a pond called the guard pond having neutralization system at the inlet

with continuous pH monitoring. This water is also entirely recycled into the process for red mud washing. The quality of water of guard pond, neutralization pit and holding pond are being monitored continously to maintain the pH well within the prescribed norms. The above-mentioned collection and treatment systems at specific required locations are parts of waste water management and treatment system. Moreover, 100 % of the waste water so generated is being reused in the process and no waste water is discharged to outside the plant as the plant operates on a zero-discharge principle. The zero-discharge condition is ensured by continuous surveillance through web camera and flow meter as per CPCB guidelines.

Comment of the Regional Office: As stated, plant is operated on ZLD and set up continuous surveillance through web camera and flow meter in its outlet. There are two major sources for waste water generation from the plant, viz. alumina refinery plant and power plant high TDS and high pH characteristic. Before recycling of this waste water, it is important to neutralize pH and remove the suspended solid. Therefore, they are having neutralization pit, sedimentation pit and guard pond for the treatment of waste water. As per the Specific Condition No.iv, it is required to set up ETP for the treatment of waste water and treated water will be reused in the process.

C. A detailed R&D scheme for utilization of red mud is as follows:

Sr. No.	Area	Project details	Collaborations, if any	Time Target
1	Geopolymerisation - for Construction Applications	Development of Geopolymers along with fly ash other solid wastes for construction applications and field demonstration	IIT Bombay	Mar-20
2		Development of Paver Blocks from BR & Fly ash and other additives and field demonstration	National Metallurgical Laboratory (NML), Jamshedpur	Mar-19
3	Geopolymerisation - for Mine Backfilling	Study on use of Red Mud for Mine Backfilling and development of Green Belt and field demonstration	IIT Bombay	Mar-19
4	Cement Application	R&D Project on enhancement of utilization of Red Mud in development of new Type of Cement	Cement Industries	Mar-21
5	Value Recovery	High value recovery - Iron & Titanium powder and Rare Earth Elements (REE) - Technology scanning and selection.	Niti Aayog, Govt of India, CSIR Labs and JNARDDC Nagpur	Mar-22

6	Neutralisation with weak acid	Neutralisation of BR with weak acid or CO2 for its different usage and safe disposal.	IIT Bombay and Chemical Industries	Mar-20
7	Recovery of Iron from Red Mud	Pelletisation of red mud, reduction roasting followed by magnetic separation.	IMMT, Bhubaneswar	Oct-20

D. Temporal Changes as follows:

LANDUSE / LAND COVER CATEGORY	Area Statistics (in Sq. km) Prior to Project Completion (2009-2010)	Recent Area Statistics (in Sq. Km) (2016- 2017)
Settlement	27.58	27.58
Industrial area	2.00	4.79
Open Forest	11.80	11.28
Scrub Forest	67.90	64.45
Agricultural Land	98.52	109.73
Land With Scrub	70.13	68.19
Land without Scrub	44.87	36.78
Barren Rocky	48.13	48.13
Water body	18.26	18.26

E. Issues Raised During Public Hearing (Held on 15.11.2017) and Commitment of the Project Proponent with Time Bound Action Plan and Budgetary Provision**:**

Issues raised by the Public Hearing	Response of the Project Proponent	Activity	Approximate Budget (Rs. In lakhs	Timeline
Environmental Issues				
1. Barrier around Red Mud Pond & Ash Pond for protection of human & animals. (Sri. Lakhi Naik, Tikarpada, Sri Bhubani Gauda, Luchuguda)	Red mud pond area is protected by boundary wall and fence. Ash pond is situated on a hill top valley and surrounded by deep garland drains and guard wall, and thus is protected. Both these ponds are under continuous security surveillance. Operation and maintenance personnel are continuously monitoring the pond status. Continuous maintenance of the boundary wall and chain-link fencing will be ensured for the protection of human and animals.	Regular maintenance activity.	500	Continuous
2. Prevention of Dust pollution caused by the industry in Dwimundi, D Korol & other nearby villages (Sri Josheph Bhadra, D.Korol)	Potential dust pollution sources have been identified during the EIA/EMP study. All the mitigation measures have been outlined and shall be implemented during project construction stage. These measures are the part of the plant design. State of the art equipment like ESP, Bag Filters, DSS, DES and Wet Scrubbers etc. at respective point/fugitive source shall be installed. High pressure fixed water sprinkling system shall be put in place at Bauxite & Coal handling areas. Regular water sprinkling and cleaning shall be carried out on roads through mobile water tankers. All in plant roads have been black-topped/concreted. Greenbelt being developed along the boundary wall of the plant. All the above measures have already been implemented in the existing operating plant. These measures have successfully prevented any kind of dust pollution in the nearby villages like Dwimundi and D. Korol. **In proposed expansion all the above air pollution control measures shall be adhered to, from the design stage.**	ESP with Stack FGD Bag Filters Water Sprayer Stationary) **Sub Total**	13000 2000 500 200 15700	5 years
3. River water Pollution in Bada Nadi due to discharge from plant affecting downstream villages. (Sri. Sanjib Kumar Bagh, Badlijharan)	The plant is operating on a zero liquid discharge principle as mandated by the OSPCB & MoEFCC ensuring Zero river water pollution of the Bada Nadi. Various ponds like Red Mud Pond, Ash Pond, Caustic Pond, Guard Pond and Holding Pond are in place to collect and reuse waste water in the process. STP (Sewage treatment Plant) has been provided to treat the domestic waste water	Sewage system & STP Storm & Caustic drains Caustic/Guard Pond	200 1500	5 years

	and reuse of treated water in gardening and afforestation. **The expanded plant will have similar features to prevent any waste water discharge to outside and the plant will be designed and operated on Zero Discharge concept.**	with pumping stations Ash/Red Mud Pond lining: 3000 Steel lined sump pits & pumps	500 3000 2000	
		Sub Total	7200	
4. Plantation over surrounding bare hills. (Sri BidyadharDhuria, Tikiri, Sri JosephBhadra, D.Korol, Sri Bhabagrahi Naik, Kashipur)	Plantation has been carried out on bare hills inside the plant and surrounding of the plant area like D.Korol, railway corridor and other areas. UAIL will continue the plantation in the vacant areas available in the plant and as well as surrounding of the plant.		500	5 Years
Peripheral Development Issues				
1. Regular Employment for local youths having Technical & other qualifications on priority basis. (Sri Shankar Naik, Paikupakhal Sri Ram Shankar Naik Sri Haladhar Naik, D.Korol Sri Bhagaban Majhi, Kucheipadar)	Preference will be given to the local youth having Technical & other qualifications commensurate to their proficiency and skill set as and when similar vacancies arise. 18 local youth with Diploma & B.Tech have been identified and employed directly. Similarly, 48 local youth have been employed in the unskilled and semi-skilled category with the associate partner companies.			
2. Suitable jobs for local ladies (Smt. Kunti Naik, D.Korol)	Already employment has been provided to more than 210 local ladies (Direct & Indirect) depending on their qualification and skill levels.			
3. Provision of 500 bedded Hostel at Kucheipadar, ITI at Baghrijholla, +2 Science College at Tikiri, Support to all Government UP School to develop as Model Schools &appointments of Teachers by the company. (Sri Shankar Prasad Muduli, Bagrijhola,	i) Govt. is taking up similar projects in the area as part of model school. ii) Skill building center will be set up for training of local youth in consultation with SDC. iii) As committed during the PH, +2 Science College will be opened nearby Tikiri (Osapada) within the next two years. iv) Several of the Government run UP Schools of the area have been supported as required from time to time and will continue to support.. Necessary assistance for education through school	Skill building center +2 Science College Infrastructure Support to Govt. schools	1405 1500 236	4 years 3 years 3 years

Sri Phakir Majhi, Bhitaramuchukuni, Sri JoshephBhadra, D.Korol, Sri Bhabagrahi Naik, Kashipur)	management committees shall be extended	**Sub Total**	**3141**	
4. Hospital facility & provision of 10 nos Ambulance as medical aid. (Sri BidyadharDhuria, Tikiri Sri Bhagaban Majhi, Kucheipadar Sri JoshephBhadra, D.KorolSmt. ChampaMuduli, Bagrijhola)	A modern 25- bedded hospital with secondary health care facilities will be operational at Oshapada village within the next few months, wherein, local community will be provided with best in class health care. Already six numbers of Ambulances are available for the local community. Four more new ambulances will be provided for the community. Four more new ambulances will be provided for the community	Construction of Utkal Hospital at Oshapada : Hospital Assets and equipment's Four ambulances **Sub Total**	100 440 40 **580**	By April 2018 (Approvals awaited). (In addition to this, Rs. 376 Lakhs towards operational cost every Year) By March 2020
5. Development of Road from Doraguda to Baphlimali & provision of 02 nos of Student Bus from Dongasil to Kashipur. (Sri. BhubaniGauda, Luchuguda Sri Bhabagrahi Naik, Kashipur Sri Stephan Bagh, Paikupakhal)	i) Road work has been undertaken by the Govt. ii) Provision of 02 nos of student buses will be done.	Two buses	30 Annual operation-al cost	One bus has been provided. Second Bus by FY20
6. Provision of Drinking water facilities at Hadiguda Panchayat. (Sri Ram Shankar Naik, Kendukhunti Sri. Sanjib Kumar Bagh, Badlijharan Sri Haladhar Naik, D.Korol Sri Bhabagrahi Naik, Kashipur)	Drinking water facility has been provided fully by the company in 3 villages (2 villages through overhead water tank and 1 village through Spring based water supply system) of the Hadiguda Gram panchayat. These villages are also provided with hand pump bore wells for ensuring drinking water supply at all the times. Along with this, hand pump bore wells have been provided in 5 other villages of Hadiguda Gram Panchayat. Repair and maintenance of hand pumps is done by the company as and when required. This support will be extended to rest of the villages after due consultation with the Govt.	Additional drinking water facility in the villages of Hadiguda GP and other villages of nearby GPs	648	6 years

7. Permanent Identity Card for Land Losers (Sri Haladhar Naik, D.Korol Sri JoshephBhadra, D.Korol)	As committed during the PH, Permanent Identity Cards for Land losers will be provided within the next three months.	Identity cards	6	May 2018
8. DP status for Dwimundi & D Korol village. (Sri Haladhar Naik, D.Korol Smt. Kunti Naik, D.Korol Sri. SarbodhanTakiri, D.Korol)	This issue comes under the purview of the RPDAC and the Govt.			

F. Revised Enterprise Social Commitment is as follows:

Sl. No	Enterprise Social Commitment Activities	Year 1 (FY18)	Year 2 (FY19)	Year 3 (FY20)	Year 4 (FY21)	Year 5 (FY22)	Year 6 (FY23)	Total
1	Education	8	705	550	298	100	75	1736
2	Health & Hygiene	500	114	20	146	183	355	1318
3	Village Infrastructure	86	399	296	571	682	800	2834
4	Skill development	0	300	190	530	485	0	1505
5	Livelihood & Entrepreneurship	0	90	0	2390	2090	1640	6210
	Total	594	1608	1056	3935	3540	2870	13603

All figures above are in Rs Lakhs

ENTERPRISE SOCIAL COMMITMENT (ESC)

Sl	Project	Village	Type of intervention	Budget (in lakhs)						
				FY18	FY19	FY20	FY21	FY22	FY23	Total
1	Construction of School building upto +2 Science.	Oshapada			700	540	220	20	20	1500
2	Infrastructure for Govt. Schools in the periphery									
		Upper Kampore	School boundary wall, Bore well with	2			7	3	8	20

			OHT, Providing Equipments							
		Khotlapadar	School boundary wall, Providing Equipments				6	3	2	11
		Gokulmunda	School boundary wall, Providing Equipments	2				5	3	8
		Kucheipadar	School Painting, Playground development, Kitchen building, Providing equipments, solar lighting system	2	3	3	35	2	6	51
		G.Koral	Bore well with OHT, Boundary wall , Electricity, Providing equipments			2	6	3	4	15
		Kapuguda	School boundary wall					5	3	8
		Thutiber	Toilets & Hand basins, Providing equipments	2	2		3	6	4	17
		Oshapada	Rising height of School boundary wall, Providing equipments				2	4	2	8
		Tikiri	Protection wall in Girls High School						6	6
		Bilamal	School boundary wall, Providing equipments	2			2	5	3	12
		Makapadar	School boundary wall,Playground, Providing Equipments			3	5	3	8	19
		Ratachuan	School boundary wall, Providing Equipments				2	7	2	11
		Jogiparitunda	School boundary wall, Providing Equipments				5	2	2	7
		Dangasil	Solar lighting system					30		

		Dwimundi	School building, Providing equipments, School boundary wall				5	4	2	13
Total			Sub	8	5	10	78	80	55	236
3.	Construction of Hospital Building at Ushapada			100						100
4	Hospital equipment's and assets for Utkal Hospital			350			30	30		440
5	Provision of 4 ambulances									
		Tikiri			10					10
		Dongasil				10				10
		Kucheipadar				10				10
		Chandragiri			10					10
Total			Sub		20	20				40
6	Drinking water facility in the peripheral villages									
		Semiliguda	HandpumpTube well, OHT with borewell	2.5					45	47.5
		Tikiri	HandpumpTube well, OHT with borewell	2.5				3	100	105.5
		Ghuguput	HandpumpTube well					3	4	7
		Lacchuguda	OHT with bore well					40	3	43
		Bhitarmuskuni	OHT with bore well		17			2		19
		Doraguda	OHT with bore well				22		3	25
		Kucheipadar	OHT with bore well				7	40	7	54
		Gokulmunda	OHT with bore well				30			30
		Makapadar	OHT with bore well					35		35
		Ratachuan	OHT with bore well					30		30
		RR Colony I	OHT with bore well	45	40					85
		Dudighat	SwajalDhara, Dugwells		7				9	16
		Karli	SwajalDhara						15	15
		Badlijharan	SwajalDhara, Tubewell				9		3	12
		Ghatiguda	SwajalDhara				12		2	14
		Dwimundi	SwajalDhara				6		4	10

		D.Koral	OHT with bore well						100	100
Sub Total				50	64	0	86	153	295	648
7	Community Toilet to facilitate SwachataAbhiyan at Nuapada, Tikiri and Kashipur	Nuapada			30					30
		Tikliri					30			30
		Kashipur							30	30
			Sub Total		30	0	30	0	30	90
8	Creation of irrigation infrastructure in the peripheral villages		Check dam/ Irrigation Channel/ DBI etc.							
		Dwimundi	Water Harvesting Structure, Irrigation Channel		8	9	6	6	5	34
		Bilamal	Dam, Irrigation Channel		9	7	5		4	25
		Kodipari	Dam, Irrigation Channel		6	12	4	8	10	40
		Gulmijhola	Dam, Irrigation Channel		10		6		4	20
		Tharli	Water Harvesting Structure, Irrigation Channel	4		5	3		4	16
		Lundrukona	Dam , Irrigation Channel		7				5	12
		G.Koral	Water Harvesting Structure, Irrigation Channel		4	4			6	14
		Makapadar	Water Harvesting Structure, Irrigation Channel			9			7	16
		Sanamatikona	Dam, Irrigation Channel					12	6	18
		Mailiguda	Dam, Irrigation Channel		7				8	15
		Tikirapada	Irrigation Channel						6	6
		Kucheipadar	Irrigation Channel	6	7	4	8	5	4	34
		Bariaguda	Irrigation Channel				4		3	7
		Dongasil	Irrigation Channel		3		5		4	12
		Tikiri	Irrigation Channel		13	14	6	5	5	43

		TalaKampore	Irrigation Channel		4		3	5	6	18
		Upper Kampore	Irrigation Channel			4		6	4	14
		D.Koral	Irrigation Channel					8	5	13
		Mundagaon	Irrigation Channel					4	6	10
		Karli	Irrigation Channel					6	8	14
		Dudukabahal	Irrigation Channel					10	9	19
		Lachhuguda	Irrigation Channel					8	7	15
		Ratachuan	Irrigation Channel					6	4	10
		Badlijharan	Irrigation Channel					4	5	9
		Baliguda	Diversion Based Irrigation	5					2	
		Renganasil	Irrigation Channel					7	4	11
Sub Total				15	78	68	50	100	141	452
9	Construction of Community Centres in peripheral villages	D.Koral	Community Hall			15				15
		Bagrijhola	Community Hall				15			15
		Tikiri	Community Hall		30					30
		Gokulmunda	Community Hall						15	15
		Ratachuan	Community Hall					15		15
		Ushapada	Community Hall						15	15
		Bhitarmuskuni	Community Hall		15					15
		Hadiguda	Community Hall				15			15
		Lacchuguda	Community Hall				15			15
		G.Koral	Community Hall					15		15
		Kucheipadar	Community Hall				15			15
		Sorishapadar	Community Hall					15		15
		Kodipari	Community Hall					15		15
		Semiliguda	Community Hall						15	15
		Bariaguda	Community Hall					15		15

		Karli	Community Hall					15		15
		Dongasil	Community Hall						15	15
		Pandakapadar	Community Hall						15	15
		Sanamatikona	Community Hall						15	15
		Gulmijhola	Community Hall						15	15
Sub Total				0	45	15	60	90	105	315
10	Setting up of Skill building centre (Mobile repairing, bike repairing, vermicomposting, mushroom cultivation, household equipment repairing, applique making, nursery raising, computer training, agricultural training, watch repairing etc.)				200	190	530	485		1405
11	Lemon Grass promotion project	Bagrijhola, Andirakanch, D.Koral, Paikupakhal, etc.			50		50	50	50	200

25.0 During the deliberations, the committee satisfied wtiht the additional details provided in respect of R&D scheme for utilization of Red Mud; Revised land use and land cover study; Revised statement of issues raised during PH along with time bound action plan and budgetary provision; Revised statement of ESC based on the issues raised during PH and need based assessment; Detailed management plan for storm water collection, treatment and disposal including the plant as well as red mud pond. However, the committee sought revised action plan for fly ash utilization since the land filling can not be treated as utilization. Accordingly, the PP submitted revised action Plan for fly ash utilization as follows:

Year	Estimated quantity of Ash generation	Supply to Bricks Manufacturing (MT)	Land fill	Utilization in Embankment/Dyke raising of RMP/Ash Pond (MT)	Mine void filling (MT)	Plantation / Horticulture / Land Development work	Road Making	Export / Supply to domestic Industries as Rawmaterial	Total Ash utilization (MT)	% of utilization	Remarks

2017-18	250019	14232	206171	0	0	0	0	0	220403	88.15	Actual data upto Mar'18
2018-19	250000	30000	0	150000	0	5000	15000	50000	250000	100.0	Estimated
2019-20	250000	40000	0	120000	10000	5000	15000	60000	250000	100.0	Estimated
Considering production 1.8 MTPA & 90 MW											
2020-21	300000	40000	0	100000	50000	5000	15000	90000	300000	100.0	Estimated
Considering production 2.0 MTPA & 90 MW											
2021-22	333000	48000	0	50000	100000	5000	10000	120000	333000	100.0	Estimated
2022-23	333000	50000	0	50000	100000	5000	8000	120000	333000	100.0	Estimated
Considering production 2.5 MTPA & 150 MW											
2023-24	416000	61000	0	50000	150000	5000	0	150000	416000	100.0	Estimated
Considering production 3.0 MTPA (Maximum Capacity) & 150 MW											
2024-25 onwards	500000	65000	0	50000	200000	5000	0	180000	500000	100.0	Estimated

26.0 The committee also deliberated in detail on the reply submiited by the project proponent regarding non-compliances reported by the regional officer. The committee of the opinion that since the plant is operating with ZLD and they are having neutralization pit, sedimentation pit and guard pond for the treatment of waste water, further setting up of ETP may not be required. The PP has submiited the revised action plan for utilization of fly ash. Therefore, the non-compliance reported by RO may be treated as closed.

27.0 After detailed deliberations the committee recommended the instant proposal for environmental clearance with following specific and general conditions:

A. **SPECIFIC 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 implemented for utilising the already generated red mud in a time bound manner.

2. Water spraying of the mud stack shall be arranged to prevent fine dust from being blown off the stack. Longer- term treatment of the mud shall include reclamation of the mud, neutralization, covering with topsoil, and planting with vegetation.

3. 100 % of the fly ash generated shall be utilised.

4. In order to control the fluoride emissions, the PP shall adopt measures to recover fluoride gas from electrolytic cells and recycle the same in the process.

5. In order to control emissions of tar and volatile organic compounds (VOCs), the PP shall adopt dry scrubbing combined with incineration. The waste heat shall be recovered from the flue gases of incinerator.

6. In order to control emissions, the PP shall practice use of low-sulphur tars for baking anodes.

7. In order to reduce emissions during the lifecycle, the PP shall make efforts to increase the life of pot lining through better construction and operating techniques.

8. The PP shall make arrangements to recycle alumina dust collected in ESPs installed in calciner.

9. In order to control secondary emissions, the pot room roofs shall be designed with louvers and roof ventilators.

10. In-plant control measures for checking fugitive emissions from spillage/raw materials handling etc. should be provided and particulate matter from Bauxite transport and crushing shall be provided with highly efficient bag filters and covered conveyers and adequate water sprinkling shall be done.

11. The company shall construct separate RCC drains for carrying storm water inside the plant. 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.

12. The PP shall take measures to reduce water consumption in bauxite beneficiation and alumina refinery by concentrating the solids in the tailings.

13. All the hazardous waste shall be properly disposed of as per the Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016.

14. The water drawl shall not exceed 20,000 m^3/day (existing and the expansion project put together).

15. An amount of Rs Rs. 135.8 Crores (2.5% of Project cost of Rs. 5432.00 Crore) 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.

16. 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.

17. 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.

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

B. **GENERAL CONDITIONS**:

1. 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 742 (E) dated 30thAugust 1990 and thereafter amended vide G.S.R 46 (E) dated 3rd February 2006; S.O. 3305 (E) dated 7th December 2015) as amended from time to time and connected to SPCB and CPCB online 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 parameters relevant to pollutants released as per National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 (as amended from time to time) within and outside the plant area at least at four locations one within and three outside the plant area at an angle of 120o 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.

2. The project proponent shall (Water Quality Monitoring):
   a. install 24x7 continuous effluent monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 742 (E) dated 30thAugust 1990 and further amended vide G.S.R 46 (E) dated 3rd February 2006; S.O. 3305 (E) dated 7th December 2015) as amended from time to time and connected to SPCB and CPCB online 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 for calibration of CEMS 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.

3. 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. recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration;

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

f. provide covered sheds for raw materials like bauxite, coal, etc;

4. 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.

5. The project proponent shall (Water Conservation):

a. practice rainwater harvesting to maximum possible extent; and

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

6. The PP 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.

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

8. Sufficient number of colour coded waste collection bins shall be constructed at the working area to systematically segregate and store waste materials generated (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.

9. Oily scum and metallic sludge recovered from ETP shall be mixed, dried, and briquetted and reused.

10. The PP shall prepare GHG emissions inventory and shall submit the programme for reduction of the same including carbon sequestration including plantation.

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

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

13. 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.

14. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses.

15. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium Industry 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. The project proponent shall (Post-EC Monitoring):

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

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

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

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

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

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

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

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

30.19 Aluminium Smelter plant (0.72 MTPA) and Cpative Power Plant (1650 MW) at village Lapanga, Rengali, C.D. Block, Dist.Sambalpur, Odisha by M/s Aditya Aluminium Ltd (A division of M/s Hindalco Industries Ltd) – [Proposal No. IA/OR/IND/2726/2012; MoEFCC File No. J-11011/136/2009-IA-I(I)] – Amendment in Environmental Clearance.

1.0 M/s Aditya Aluminium Ltd (A division of M/s Hindalco Industries Ltd) made online application vide proposal no. IA/OR/IND/2726/2012 dated 23th March 2018 seeking amendment in Environmental Clearance issued vide reference no. J-11011/136/2009-IA-II (I) dated 29.11.2012 for process optimization through enhancement of pot line current from 360 to 380 kA and allied activities; Change in Coal Source to CPP as proposed in EC; Sale of baked anodes; sale of bath material; selling of molten metal. The proposed project activity is listed at 1 (d) and3 (a) under category A of EIA notification 2006 and is appraised at Central.

2.0 Details of Earlier Environmental Clearances (ECs) area as follows:

- EC for 0.26 MTPA Aluminium smelter vide Letter No J-11011/142/ 2004-IA.II (I) dated 27 January, 2006

- EC for 650 MW Captive Power Plant vide Letter No J-13011/7/2005-IA.II (T) dated 22 November, 2005

- EC for expansion of aluminium smelter from 0.26 MTPA to 0.72 MTPA and captive coal based power plant from 650 MW to 1650 MW vide letter no J-11011/136/2009-IA.II (I) dated 29 November, 2012 and amendment in conditions vide letter dated 14 June, 2013

3.0 Latest certified Inspection/monitoring report received vide MoEF&CC, RO, Bhubaneswar Office vide letter dated 19 Dec, 2017. The regional officer reported non-compliances regarding treatment of SPL for removal of fluoride and cyanide before its disposal; 100% utilization of the fly ash; and conducting forage fluoride analysis in the trees. Reply to the observations submitted to RO. MOEFCC vide letter no. AA/E&S/EC/2017/310, dated 20.01.2018 by PP.

4.0 Aditya Aluminium, a Unit of M/s Hindalco Industries Ltd (HIL) is operating an integrated Smelter with a Captive Power Plant (CPP) at Lapanga in Sambalpur district of Odisha. The Smelter and CPP are operating at capacities of 0.36 MTPA and 900 MW (6x150 MW) respectively in existing Phase-I and will be ultimately upgraded to 0.72 MTPA and 1650 MW (11x150 MW) in proposed Phase-II. Environmental Clearance (EC) has been obtained for both the Phases.

<table>
<tr><td rowspan="2">S. No</td><td rowspan="2">Product</td><td colspan="2">EC Obtained for 0.72 MTPA Aluminium Smelter & 1650 MW CPP</td></tr>
<tr><td>PHASE-I
(presently under operation)</td><td>PHASE-II
(to be implemented)</td></tr>
<tr><td rowspan="5">1</td><td>Aluminium Smelter</td><td>0.36 MTPA (360 KTPA)</td><td>0.72 MTPA (720 KTPA)</td></tr>
<tr><td colspan="3">Products: Pig ingot, Sow, Al Slab</td></tr>
<tr><td>a) Pig ingots</td><td rowspan="2">360 KTPA</td><td rowspan="3">720 KTPA</td></tr>
<tr><td>a) Sow</td></tr>
<tr><td>b) Al Slab Production</td><td>0 KTPA</td></tr>
<tr><td>2</td><td>CPP-Electricity</td><td>900 MW
(6x150 MW from Unit-1,2,3,4,5,6)</td><td>1650 MW
(11 x 150 MW)</td></tr>
</table>

5.0 Meanwhile, Aditya Aluminium has identified few process optimization options which lead to marginal enhancement (5.5%) in production capacity. Further, change in coal sourcing has been proposed based on the coal availability. Though, minimal environmental impacts have been identified due to the proposals, implementation of the same requires an environmental clearance and thus, amendment in EC has been proposed. Aditya Aluminium is seeking an amendment in EC as follows:

5.1 Enhancement of Pot Amperage from 360 kA to 380 kA:

- Enhancement of input amperage will result into marginal increase (5.5%) in Aluminum Production Level, to the tune of 20 KTPA
- The enhancement in Pot Production will be implemented by considering the below mentioned aspects:
    - By increasing the Pot line operating Current
    - Optimizing Process Parameters to increase Current Efficiency
    - Optimizing the average Pots in Operation
    - Improving pot TAT and improvement in energy efficiency of pots
    - Less consumption in Sp. DC Energy Consumption from 13420±150 kWh/MT to 13060±150 kWh/MT for production of liquid aluminium
    - Increase in current is to be done as per Technology Supplier recommendations including compliance to applicable safety standards
- Resource Requirement & Impact Analysis- Pot rating enhancement:

S.No	Item	Resource Requirement/Identified Change

1	Additional Cost	No additional requirement
2	Additional Land	No additional requirement
3	Manpower/ Equipment	No additional requirement
4	Change in Product	Increase by 5.5% of Aluminum Production to the tune of 20 KTPA
5	Water Requirement	No additional requirement. Water consumption will be within the approved limit of 52.73 cusecs
6	Additional Resources	No changes in Sp. Alumina and Carbon consumption, however, additional alumina and Carbon to meet this enhanced volume • Alumina - Specific Alumina consumption will remain same, however, AA will require 36,394 MTPA of additional alumina to meet this enhanced volume. • Carbon - Additional Carbon requirement of 7,772 MTPA to meet this enhanced volume without any change in Specific Consumption. • Aluminium Fluoride - Plant's Fluoride Consumption will remain within approved limit of 10 kg/MT of Aluminium (CREP Guidelines)
7	Energy Requirement	Reduction in Sp. energy consumption
8	Source emissions	No change in specific emission • Fluoride Level – Since the increase in production capacity is very marginal (5.5%), with the existing Gas Treatment Centre, we will be able to maintain Fluoride Emission within approved limit of 0.8 kg/T, mentioned in the EC.
9	Material Handling System	No significant change
10	Solid Waste Generation	No change • Spent Pot Lining – No additional generation, as there is no increase in number of Pots
11	Wastewater	Since there is no additional requirement of water, no change in Water Pollution Load
12	Noise levels	No significant change
13	Operating Safety	Well laid EHS practices by the Unit

5.2 Change in the coal source to CPP:

Existing Practice/ as per EC	Proposal for EC Amendment	Remarks

EC: Coal from captive Talabira-II & III coal block of Ib valley and imported coal Existing practice: Coal is being procured from captive Gare Palma mines in Chhattisgarh State, Long term linkages, through e-auctions, from Washeries in the market and import as & when necessary	Coal mix options proposed: • 80-100% Indian domestic coal (from own mines, linkage & e-auction coal, coal from Washery) • 0-20% imported,	• No increase in power generation • Additional expense for transport of coal for around 100 Km Incremental environmental impacts due to usage of proposed coal mix option, specifically transportation impacts have been discussed

- Talabira-II&III coal block was jointly allocated to MCL, HIL and NLC in 70:15:15 share holding pattern and was cancelled by Hon'ble Supreme Court along with other coal blocks.

- HIL is seeking amendment in EC for change in Coal source and fuel mix for 900 MW (6x150 MW) Captive Power Plant as HIL became successful bidder and Gare Palma IV/4 and IV/5 coal mines were allocated jointly to Aditya Aluminium and Hirakud Power Plant. Allocation for Aditya 11.58 lacs TPA; and HIL has signed long-term FSA for coal linkage from MCL/CCL/SECL for 28 lacs TPA.

- Due to cancellation of coal blocks and unable to lift coal from the allocated coal mines, Aditya Aluminium (Unit of HIL) is proposing to procure 28 lacs TPA from other sources namely Domestic coal, Linkage coal, e-auction coal, from washeries in open market,, and imported coal as & when required.

- Coal source plan is as follows:

Mines	Coal Quantity Planned in LTPA	%
OWN Gare Palma	11.58	29.4
Linkage By Rail	17.19	43.6
Linkage By Road	9.76	24.8
E-Auction (Road & Rail)	0.47	1.2
Open Market(Rail & Road)	0.40	1.0
Total Coal (in lacs MT)	39.40	100.0

- Plan of action for rail and road transport of the planned coal:

Road to Rail Conversion														
	FY 2017 - 2018		FY 2018 - 2019		FY 2019 - 2020		FY 2020 - 2021		FY 2021 - 2022		FY 2022 - 2023		FY 2023 - 2024	
	MT	%	MT	%	MT	%	MT	%	MT	%	MT	%	MT	%
by Rail	1770514	44	2366000	60	2514000	64	2714000	69	3793000	96	3793000	96	3952400	100
by Road	2216016	56	1586400	40	1438400	36	1238400	31	159400	4	159400	4	0	0
	3986530		3952400		3952400		3952400		3952400		3952400		3952400	

- Proposed efforts for reduced dependence on Road transport
    - Loadability of trucks enhanced 16 mt to 25 mt (Multiaxle)
    - Increased lifting of Coal from 157 to 400 rakes in FY 2017-18
    - Approx. 21 Kms electrified rail net work inside the plant
    - Installation and commissioning of Wagon Tippler
    - Aditya owned siding is within 500 mtrs from railway main line
    - Capable to accommodate 6 –7 rakes operational at a time within plant, inclusive of BOXN, BTAP and Container rakes
    - One unit of Bucket Wheel Stacker Reclaimer commissioned for safe high stacking of coal
    - Two units of dedicated locomotive engine for daily rail operations having a capacity of 800 HP each
    - Rs 150 Cr CAPEX taken to install Track hopper for handling BOBRN rakes and to be installed soon
- Summery of existing traffic is as follows:

S. No	Monitoring Location	Road	Vehicle Count (to & fro)					IRC (IRC-64-1990) Recommendations (PCUs / day)	Existing V/C Ratio	*Level of Service (LoS)
			2/3-Wheeler	4-Wheeler (LMV)	HMV Single Axial	HMV Multi Axial	Total PCUs/ day			
1	Kirei	SH10	1782.5	2175	1971	10122	16061	35,000	0.5	C
2	Badmal	SH10	1905.5	2411	2832	9645	16803	35,000	0.5	C
3	Raigarh	NH-49	876	1450	1858.5	4089	8286	15,000	0.6	C
4	Kadamdih	NH-49	622.5	1003	1447.5	4098	7183	15,000	0.5	C
5	Sambalpur	SH10	1297.5	2307	3178.5	4749	11547	35,000	0.3	B
6	Hukra Deepa Chowk (near Garepalma mines)	Road from GP Mines to Raigarh	741.5	885	408	2901	4948	15,000	0.3	B

5.3 Sale of Baked Anodes

- Existing Practice/as per EC: As per the EC letter, Baked Anode will be manufactured in the Carbon Plant and Anode butts generated from the pots shall be cleaned and recycled to the Carbon Plant.

- Proposal for EC Amendment: Anode is generated due to less rejection after plant stabilization and optimization; No additional capital investment; Propose to sell approx. 5,000 nos. of the baked anode per annum to private parties.

5.4 Sale of Bath material

- Existing Practice/as per EC: In-house consumption and excess bath material to bestored and for selling outside Parties

- Proposal for EC Amendment: Propose to sell 1,500 TPA of the generated bath material to private parties. These are generated during Pot operation as per original design and no capital investment

5.5 Sale of Molten Metal:

- Existing Practice/as per EC: In-house use in Casthouse for manufacturing Pigs and Sow Ingots/Slab.

- Proposal for EC Amendment: As per Aditya Aluminium Project planning, it is proposed to sell about 75 KTPA Molten metal to M/s APAR Industries who has proposed to set up their factory for manufacturing downstream products, close to the plant boundary. Proposed facilities involve dedicated RCC road construction (road & lighting) & Crucibles inside the Plant premise. Capital investment – Rs 3.9 Crores(Rs 3.1 Crores for road laying/civil and infrastructure facilities and remaining Rs 0.8 for other facilities)

- CPP Emissions: The incremental load due to the proposed change in coal mix will result in reduction of SO_2 emissions by 20.8 g/s (0.9%). Hence, there will be reduction in AAQ impacts due to stationary SO_2 load generation due to the proposed proposal.

- Fluoride Level: Since the increase in production capacity is very marginal (5.5%), with the existing Gas Treatment Centre, we will be able to maintain Fluoride emission within approved limit of 0.8 kg/T, mentioned in the EC.

- PAH Level : No change. It will remain within the approved limit with existing Fume Treatment Centre.

- Due to additional road traffic:Increase in vehicular emissions and fugitive dust due to vehicular load on approach roads. The maximum impact of road traffic is limited to 300 m from the centre of the road only, which is generally away from sensitive receptors (settlements, etc.).The resultant air quality will confirm to the stipulated standards.

- **Road Adequacy:**

The estimated peak traffic in terms of PCUs are compared with the stipulated standards by IRC for traffic capacity of the existing road network. The existing road network is found adequate for the present traffic scenario. However, the roads may not be adequate with increase in population over the coming years (20-25 years). Thus, Aditya Aluminium proposes coal transport for the operating CPP capacity to be 100% by rail within next 6 years. The same

arrangement will be extended further, for future expansion for 1600 MW, for which EC has already been obtained.

- **Solid Waste Generation:**
- Spent Pot Lining: No additional generation, as there is no increase in number of Pots.
- Ash Generation:Aditya Aluminium is committed to comply the Fly Ash Utilization Notification. Ash utilization is being achieved through supplying to Cement Plants, road making, low lying area filling and ash bricks manufacturing units.

- **Wastewater Generation:**
- Since there is no additional requirement of water for this enhanced production capacity, no change in Water Pollution Load.

- **Energy consumption:**
- Enhanced production capacity will resultin slight reduction in specific energy consumption. Energy conservation measures have been proposed.

Hence, from the above points, it is evident that Aditya Aluminium can implement all proposed amendment without any negative impact to environmental systems.

6.0 Observations of the committee:

The committee observed that the regional officer reported non-compliances regarding treatment of SPL for removal of fluoride and cyanide before its disposal; 100% utilization of the fly ash; and conducting forage fluoride analysis in the trees. Reply to the observations submitted to RO. MOEFCC vide letter no. AA/E&S/EC/2017/310, dated 20.01.2018 by PP. However reply submitted by the PP was not examined by the Regional office. The committee opined that the PP shall obtain the comments of the Regional officer on the reply submitted by PP regarding observations made by RO during his inspection.

7.0 Recommendations of the committee:

After detailed eliberations, the committee desired to submit closure report of non-compliances of earlier EC from the regional officer of MoEFCC.

30.20 Integrated Limestone Mine Area 251.9 Ha, Clinkerization Plant (3X3.3 MTPA), Cement Plant (3 MTPA), Captive Power Plant (99 MW) including coal based Thermal Power Plant & Waste Heat Recovery System), Berthing Jetty of length 820mx28m (Capacity 15 MTPA) and conveyor corridor (10.2 Km.) of M/s Lakhpat Cement Works Ltd at Villages Koriyani, Kapurasi, Maldo, Mudhvay, Taluka Lakhpat, District Kutch, Gujarat - [Proposal No. IA/GJ/IND/69706/2017; File No. IA-J-11011/494/2017-IA-II(I)] – Further consideration for ToRs based on site visit report.

1.0 M/s Lakhpat Cement Works has made online application vide proposal no. **IA/GJ/IND/69706/2017** dated **26th September 2017** along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposal involved multi sectoral components such as activities listed in 3(b) Cement Plants; 1(a) Mining of Minerals; 1(d) Thermal Power Plants; 7(e) Berthing Jetty with anchorage under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 M/s Adani Cementation Limited proposed to install a new manufacturing unit for Cement, Clinker, captive power generation and their transportation through a berthing jetty. It is proposed to setup the plant for 3 MTPA Cement; 10 MTPA clinkerization; 99 MW Captive Power; and of 15.0 MTPA; Berthing Jetty in phase wise manner based on VRM/Ball Mill (Cement) and Coal/WHRB (Power) technology. The details of proposed plant along with capacities are given below:

Sl. No	Plant / Activity	Area	Commodity	Capacity
1	Limestone Mine	251.9 Ha	Limestone	12 MTPA
2	Captive Jetty (820m x 28m)	4.05 Ha (Backup Storage Area)	Clinker	8 MTPA
			Cement	3 MTPA
			Lime Stone	1 MTPA
			Coal / petcoke	3 MTPA
3	Cement Plant + Conveyor Corridor	198.32 Ha	Clinker	10 MTPA
			Cement	3 MTPA
4	Captive Power Plant (TPP & WHRB)	Within Cement Plant	Power	99 MW

3.0 The proposed project will be located in Koriyani, Kapurashi, Maldo&Mudhvay, Taluka: Lakhpat, District: Kutch, State: Gujarat. The terrain of the proposed plant land is generally flat with minimum undulations. The project site is covered in Survey of India toposheet No. 41A/10. The details of plant location along with geographical coordinates are given below:

Sl. No	Plant / Activity	Location	Latitude	Longitude
1	Limestone Mine	Village Mudhvay, Taluka: Lakhpat, District:Kutch, State: Gujarat.	23º 43’ 59.93” N	68º 41’ 51.66” E
			23º 44’ 04.90” N	68º 42’ 08.92” E
			23º 42’ 52.44” N	68º 42’ 40.94” E
			23º 42’ 43.64” N	68º 41’ 53.25” E
2	Cement Plant	Village Koriyani, Taluka: Lakhpat, District:Kutch, State: Gujarat	23º 43’ 42.76” N	68º 40’ 26.67” E
			23º 43’ 54.26” N	68º 39’ 46.54” E
			23º 44’ 35.90” N	68º 39’ 42.44” E
			23º 44’ 45.52” N	68º 40’ 11.01” E
			23º 44’ 28.97” N	68º 40’ 44.72” E
3	Conveyor Corridor	Villages Koriyani, Kapurashi, Maldo&Mudhvay, Taluka: Lakhpat, District:Kutch, State: Gujarat	23º 44’ 05.63” N	68º 41’ 33.34” E
			23º 44’ 20.04” N	68º 38’ 46.29” E
			23º 44’ 15.09” N	68º 36’ 56.19” E
4	Berthing Jetty (Water front)	In Kori Creek with anchorage in Gulf of Kutch and	23º 44’ 50.99” N	68º 34’ 41.81” E
			23º 44’ 36.93” N	68º 34’ 50.69” E
	Backup storage area	Near Village near Kapurashi of Taluka: Lakhpat, District:Kutch, State: Gujarat	23º 44’ 00.99” N	68º 36’ 53.51” E
			23º 43’ 53.51” N	68º 36’ 51.63” E

4.0 The land area to be acquired for the proposed clinker / cement plant, conveyor corridor and backup area near jetty is 202.3352 Ha out of which 46.8008 ha is an agricultural land, 1.7235 ha is grazing land, 151.1545 ha is others (151.1545 Government Land) and 2.6564 ha forestland. The entire land is under acquisition for the project. Of the total area ~67 Ha (~33%) land will be used for green belt development. The breakup of land requirement for different activities area as give below:

Sl. No	Plant / Activity	Area in Ha
1	Limestone Mine	251.90
2	Backup storage near Jetty	4.05
3	Cement Plant	190.23
4	Conveyor Corridor	8.09
	Total	454.27

5.0 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core zone of the project. However, Narayan Sarovar Wildlife Sanctuary is located at about 4 km south of the project site (Buffer Zone). The area also does not report to form corridor for Schedule-I fauna.

6.0 Total project cost is approx. Rs. 5330 Crore Rupees (including mining). Proposed employment generation from proposed project will be 150 direct Employment and 450 indirect Employment during operation.

7.0 The targeted production capacity of the Clinker and Cement is 10 Million and 3 Million TPA respectively. The ore for the plant would be procured from (linkages Mudhvay Limestone Mine Block 'C' and GMDC Mine Block). The ore transportation will be done through Conveyor (Rail/Road/Conveyor/Slurry Pipeline). The details of material transportation along with source, distance and mode of transport is given below:

Sl. No	Material		Source	Distance in Km	Mode of Transport
1	Clinker		From Jetty to Plant	~ 8 Km	By conveyor
2	Fuel	Coal (imported)	From Jetty to Plant	~ 8 Km	By conveyor
		Lignite (Domestic)	GMDC Mine	~ 20 Km	By Road
3	Silica Sand		From Mundra to Plant	~ 210 Km	By Road
4	Gypsum	Imported	From Jetty to Plant	~ 8 Km	By conveyor
		Domestic	From Village Ler to Plant	~ 160 Km	By Road
5	Lime stone	High grade	From Mine to Plant	~ 2 Km	By conveyor
		Low grade	From GMDC Mine to Plant	~ 12 Km	By Road
6	Cement		From Plant to Jetty	~ 8 Km	By conveyor

9.0 The total power requirement will be 125 MVA, of which 99 MW will be met from the CPP and remaining from the GUVNL/Solar Power Plant.

10.0 Total water requirement is estimated as 9000 m^3/day will be sourced from Sea by desalination. A desalination and RO water plant shall be installed at about 4.7 km distance from plant on the way to jetty. From here, desalinated RO water shall be pumped to plant treated water tank. Waste water generationwillbe around 300m^3/day.Domestic wastewater willbe

treated in STPand industrial waste watergenerated will be treated through Neutralization Tankand reused.

11.0 The proposed kiln system shall be designed with emphasis to minimize emissions to < 30 mg/Nm3 to the atmosphere. Modern technology burners, dosing systems (fuel and kiln feed), emissions monitoring and kiln control systems shall be considered to minimize gaseous emissions from combustion processes (e.g. NOx, CO, SO2) Integrated pollution measurement and monitoring shall consider gaseous effluents and dust emissions measurement to verify and ascertain the limits of pollution standard.

12.0 The proponent has mentioned that there is no court case against the proposed site or related activity.

13.0 The project proponent along with EIA Consultant M/s Greencindia Consulting Private Limited (NABET/EIA/1619/RA0058, Rev. 58 October 16, 2017) have made detailed presentation on the proposal.

14.0 After detailed deliberations, the committee observed the following:

- Multi sectoral components such as activities listed in 3(b) Cement Plants; 1(a) Mining of Minerals; 1(d) Thermal Power Plants; 7(e) Berthing Jetty etc.;
- Involvement of forest land in the proposed conveyor corridors;
- Proposed berthing jetty falls in the CRZ area;
- Desalination plant and deposition of the salt on the seabed over the period of time;
- The land required for depositing the sludge during the regular dredging operations;
- Presence of Narayansarovar Bird Sanctuary is at distance of 2.0km from mine and 4.0 Km cement plant;
- Proposed coal-based power plant units (25 MW) is very small;
- Impact of fugitive dust on the creek and marine ecosystem needs to be evaluated;
- Presence of international boarder at a distance of 24 km;
- Hydrology of the area needs to be studied in view of the ingress of the migrated population; and
- The location of the plant is in high seismic zone – V.

15.0 In view of above, the Committee is of the opinion to pay a site visit by constituting a sub-committee to ascertain the ground situation before considering the proposal for prescribing ToRs.

16.0 The Committee also advised the PP to approach the Non-coal mining, Infrastructure – II and CRZ committees for prescribing respective sector specific ToRs.

17.0 A sub-committee of EAC was constituted to visit the site in order to appreciate the site settings and relavent site specific environmental aspects. Accordingly, the sub-committee visited the site on 9th March 2018 and submitted its report to the main committee during the meeting on 10th April 2018.

Recommendations of the sub-committee as follows:

18.0 After the site visist, the committee recommended for prescribing the 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.

19.0 The Expert Appraisal Committee endorsed the recommendations made by the sub-committee.

20.0 After detailed deliberations and based on the site inspection report, the committee recommended the ToRs alongwith the following specific ToRs for conducting EIA study:

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 as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and Enterprise Social Commitment (ESC) related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
4. Certificate of compliance of earlier EC from the Regional office of MoEFCC shall be submitted along with EIA/EMP.
5. Detailed study of community dependence on the existing land use including grazing, crop productivity and measure for its sustenance shall be conducted.
6. 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.
7. 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.
8. 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.
9. 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.
10. Detailed study including remediation plan for salinity management of the area due to mining operations below water table shall be under taken.
11. Detailed Emergency Response Management Plan including security issues for the Integrated Cement Plant shall be prepared.
12. A detailed management plan for top soil and over burden shall be prepared.
13. A detailed survey shall be conducted to identify the employable youth and provide adequate training for employment in the proposed project.
14. A detailed plan for 100% utilisation of fly ash from the captive power plant shall be prepared.

15. Cumulative Air Quality Assessment/Modelling shall be conducted for the proposed mines and plant including existing power plant in the study area.
16. Based on the actual sulphur content in the lime stone and coal, plans for desulfurization of the flue gases shall be prepared.

30.21 Increase in clinker production from 3 MTPA to 4 MTPA and cement production from 5 MTPA to 6 MTPA through up-gradation and optimization of plant parameters/capacity utilization Located at Sonwari, Sarla Nagar, Tehsil-Maihar Dist Satna (MP)by M/s Maihar Cement Ltd (A Division of Century Textile & Industries Limited)- [Proposal No. IA/MP/IND/73253/2018]- Prescribing Terms of Reference.

1.0 M/s Maihar Cement Ltd (A Division of Century Textile & Industries Limited) has made online application vide proposal no. IA/MP/IND/73253/2018 dated **28thFebruary 2018** along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) cement Plants under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

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

2.0 M/s Maihar cement Sarlanagar, Tehsil-MaiharDist Satna (MP) proposes capacity expansion in production of clinker (from 3 million TPA to 4 Million TPA) & production of cement (from 5 million TPA to 6 Million TPA) through up-gradation and optimization of plant parameters/capacity utilization in pyro processing section and cement mill section. The project proponent submitted an application in the prescribed format along with form-1 and other reports to the ministry on line on 28.02.2018.

3.0 The project is in operation prior to EIA notification 2006 and 1994. The consent to establish for capacity enhancement from 3 MTPA to 5 MTPA in cement production was accorded by MP State Pollution Control Board vide number 18718 dated 03.10.2005 and Consent to Operate under Air and Water act was accorded by MP State Pollution Control Board vide number 7214 & 7216 dated 12.09.2007. The Validity of existing CTO is up to 30.09.2018.

4.0 The unit is located at Khasara No 2141, Sonwari, Sarla Nagar, Tehsil-MaiharDist Satna (MP).

5.0 The unit is already acquired land of 477.36 acres through lease deed made between Governer of Madhya Pradesh & M/s. Maihar Cement. Green belt has been developed over 149 acres of land with 11,00,000 trees.

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

7.0 The existing project cost is Rs 989.11 crores which will be increased by Rs 80 crores for modernization of the project. The direct employment has been reported as 340 and indirect employment generation is about 2000 no. The direct employment generation will be increased by 10-15 number with the expansion of the project.

8.0 The targeted production capacity of clinker is from 3 million TPA to 4 million TPA & cement is from 5 million TPA to 6 million TPA. The limestone ore for the plant is procured through captive limestone mines located near to the cement plant. The ore transportation is done through conveyor. The existing and proposed capacity for different unit to produce desired volumes of products is as below:

Units	**Existing Capacity**	**Proposed Capacity**
Clinker Production Capacity	3 Million TPA	4 Million TPA
Cement production capacity	5 Million TPA	6 Million TPA
Captive Power Plant	2 x 15.7 MW	Remain same

9.0 The electricity load of 47 MW is being procured from MPSEB and two Captive Thermal Power Plant of 15.7 MW each.

10.0 The requirement of major raw material i.e. limestone will be met from existing mines. The present requirement of limestone for the plant is about 14500 metric MTPD, which is sourced from the captive mines at Bhadanpur&Tiloura. The upgraded requirement will be around 18500 MTPD. The existing fuel Coal/Pet Coke (4.74/2.9625 LMT) have been procured from Linkage/e-auction/purchase and same sources shall be applicable for expansion also.

11.0 Water Consumption for the existing project (Cement plant, Colony and Mines) is 3200 KLD, which will be increased by 25 KLD and waste water Generation will be approx. 400 KLD. The domestic waste water is being treated at STP and industrial waste water from captive TPP is also treated in existing STP after providing treatment at neutralization tank. Treated waste water are being recycled and used for in coal /ash quenching, dust suppression and green belt development.

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

13.0 The consultant engaged is M/s Creative Enviro Services, Bhopal (MP) having accreditation from QCI with serial no. of 29.

Observations and recommendations of the committee

14.0 After detailed deliberations and based on the site inspection report, the committee recommended the ToRs alongwith the following specific ToRs for conducting EIA study:

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 as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and Enterprise Social Commitment (ESC) related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

4. Certificate of compliance of earlier CTO from the Regional office of SPCB shall be submitted along with EIA/EMP.
5. The PP shall explore the possibility of utilizing the vant land for solar energy generation and the same shall be included in the EIA/EMP.
6. The Action plan for upgrading the pollution control equipment fitted with theexisting plant to meet the existing norms.
7. No petcoke shall be used in thermal power plant.
8. PP shall explore the possibility of utilizing the alternate fuels.
9. The production achived since inception vis -a-vis consent from the SPCB shall be furnished for justifying that there is no expansion was made earlier without obtaining environmental clearance.
10. The greenbelt shall be planned within 33% of the total plant area.

ANNEXURE –I

GENERIC TERMS OF REFERENCE (ToR) IN RESPECT OF INDUSTRY SECTOR

1. Executive Summary
2. Introduction
   - i. Details of the EIA Consultant including NABET accreditation
   - ii. Information about the project proponent
   - iii. Importance and benefits of the project

3. Project Description
   - i. Cost of project and time of completion.
   - ii. Products with capacities for the proposed project.
   - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
   - iv. List of raw materials required and their source along with mode of transportation.
   - v. Other chemicals and materials required with quantities and storage capacities
   - vi. Details of Emission, effluents, hazardous waste generation and their management.
   - vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
   - viii. The project proponent shall furnish the requisite documents from the competent authority in support of drawl of ground water and surface water and supply of electricity.
   - ix. Process description along with major equipment and machineries, process flow sheet (Quantative) from raw material to products to be provided
   - x. Hazard identification and details of proposed safety systems.
   - xi. Expansion/modernization proposals:
     - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB/PCC shall be attached with the EIA-EMP report.
     - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4. Site Details

i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
iii. Co-ordinates (lat-long) of all four corners of the site.
iv. Google map-Earth downloaded of the project site.
v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
vii. Landuse break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
ix. Geological features and Geo-hydrological status of the study area shall be included.
x. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
xii. R&R details in respect of land in line with state Government policy

5. **Forest and wildlife related issues (if applicable):**

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).
ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha).*
iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.
v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.
vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife

6. **Environmental Status**

i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
ii. AAQ data (except monsoon) at 8 locations for PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
vi. Ground water monitoring at minimum at 8 locations shall be included.
vii. Noise levels monitoring at 8 locations within the study area.
viii. Soil Characteristic as per CPCB guidelines.
ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
xi. Socio-economic status of the study area.

7. Impact Assessment and Environment Management Plan

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme

of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards.

vi. Measures for fugitive emission control

vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

xii. Action plan for post-project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. Occupational health

i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre-designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analysed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

iii. Annual report of health status of workers with special reference to Occupational Health and Safety.

iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

9. Corporate Environment Policy

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. Enterprise Social Commitment (ESC)

i. To address the Public Hearing issues, 2.5% of the total project cost of (Rs. .....crores), amounting to Rs. .....crores, shall be earmarked by the project proponent, towards Enterprise Social Commitment (ESC). Distinct ESC 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 ESC 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 ESC budget

12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

13. A tabular chart with index for point wise compliance of above ToRs.

14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

<u>The following general points shall be noted:</u>

i. All documents shall be properly indexed, page numbered.
ii. Period/date of data collection shall be clearly indicated.
iii. Authenticated English translation of all material in Regional languages shall be provided.
iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.

v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.

vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report

vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.

viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCl)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.

ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCBshall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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ANNEXURE-2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
5. PM (PM_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

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ADDITIONAL ToRS FOR PELLET PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. PM(PM_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

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ADDITIONAL ToRs FOR CEMENT INDUSTRY

1. Limestone and coal linkage documents along with the status of environmental clearance of limestone and coal mines
2. Quantum of production of coal and limestone from coal & limestone mines and the projects they cater to;
3. Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. If the raw materials used have trace elements, an environment management plan shall also be included.
5. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.
6. Energy consumption per ton of clinker and cement grinding
7. Provision of waste heat recovery boiler
8. Arrangement for co-processing of hazardous waste in cement plant.
9. Trace metals in waste material especially slag.

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

i. A note on pulp washing system capable of handling wood pulp shall be included.

ii. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln

iii. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.

iv. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.

v. A commitment that no extra chlorine basebleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills.Plan for reduction of water consumption.

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LEATHER/SKIN/HIDE PROCESSING INDUSTRY

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

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COKE OVEN PLANT

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

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

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ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

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INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE

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

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METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)

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

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Executive Summary

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

i. Project name and location (Village, Dist, State, Industrial Estate (if applicable)

ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.

iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)

iv. Process description in brief, specifically indicating the gaseousemission, liquid effluent and solid and hazardous wastes. Materials balance shall be presented.

v. Measures for mitigating the impact on the environment and mode of discharge or disposal.

vi. Capitalcost of the project, estimated time of completion

vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of is acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest, eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)

viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population

ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.

x. Likely impact of the project on air, water, land, flora-fauna and nearby population

xi. Emergency preparedness plan in case of natural or in plant emergencies

xii. Issues raised during public hearing (if applicable) and response given

xiii. CSR plan with proposed expenditure.

xiv. Occupational Health Measures

xv. Post project monitoring plan

LIST OF PARTICIPANTS OF EAC (I) IN 30TH MEETING OF EAC (INDUSTRY-I) HELD ON 09th to 10th April, 2018

S. No	Name and Address	Position	Attendance		Signature
			09th	10th	
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P	
Members					
2.	Dr. Nitin Endaly Representative of Central Pulp and Paper Research Institute	Member	A	A	
3.	Director, Central Leather Research Institute	Member	A	A	
4.	Dr.Siddarth Singh, Representative of Indian Meteorological Department	Member	P	P	
5.	Representative of Central Ground Water Board	Member	A	A	
6.	Dr. G. Bhaskar Raju	Member	P	P	
7.	Prof. Naresh Chandra Pant	Member	A	A	
8.	Dr. Jagdish Kishwan, IFS(Retired)	Member (Chairman on 15th)	P	P	
9.	Dr.G.V.Subrahmanyam	Member	P	P	
10.	Prof.Arun Pandey	Member	A	A	
11.	Shri Santosh Raghunath Gondhalekar	Member	A	A	
12.	Shri Ashok Upadhyay	Member	P	P	
13	Mr. R.P. Sharma	Member	P	P	
14.	Shri Sharath Kumar Pallerla, Scientist 'F' / Director, MoEF&CC	Member Secretary	P	P	
15.	Shri RajasekharRatti, Scientist 'C', MoEF&CC	Dy. Director	P	P	