Ministry of Environment, Forest and Climate Change
Impact Assessment Division
(Industry-1 Sector)

Summary record of the twentieth (20th) meeting of Re-Constituted Expert Appraisal Committee (REAC) held during 25-26th June, 2020 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.

The twentieth meeting of the Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environment Appraisal of Industry-1 Sector Projects was held during 25-26th June, 2020 in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the ongoing Corona Virus Disease (Covid-19) issue. The list of participants is as follows.

S.No.	Name	Position
1.	Dr. Chhavi Nath Pandey	Chairman
2.	Dr. Bipin Prakash Thapliyal, Director, Central Pulp and Paper Research Institute (CPPRI)	Member
3.	Dr. Siddharth Singh, Scientist 'E' Indian Meteorological Department (IMD)	Member
4.	Dr. Jagdish Kishwan	Member
5.	Dr. G.V. Subramanyam	Member
6.	Shri. Ashok Upadhyaya	Member
7.	Shri. Rajendra Prasad Sharma	Member
8.	Dr. Sanjay Deshmukh	Member
9.	Prof. S.K. Singh	Member
10.	Dr. R. Gopichandran	Member
11.	Shri Jagannadha Rao Avasarala	Member
12.	Shri. J.S.Kamyotra	Member
13.	Shri. A.K. Agrawal	Member-Secretary

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 19th meeting held during 20-21st May, 2020 were confirmed by the EAC as already uploaded on PARIVESH.

25th June, 2020

20.1 Expansion of Integrated Steel Plant; Sponge Iron (from 297000 MTPA to 594000 MTPA), MS Billet (from 330000 MTPA to 653400 MTPA), Captive power (from 53 MW to 80.5 MW) and New Pellet plant establishment-792000 MTPA by **M/s. Gallant Ispat Limited** located at AL 5, Sector 23, GIDA Industrial Area, Tehsil Sahjanwa, **District Gorakhpur, Uttar Pradesh**- [Online Proposal No. IA/UP/IND/119401/2016, File No. J-11011/229/2008-IA.II.(I)] – **Re-consideration for grant of Environment Clearance based on ADS reply – regarding.**

20.1.1 The aforesaid proposal was earlier considered in the meetings of the Expert Appraisal Committee held during 21-23rd October 2019, 16-17th January 2020 and 24-25th February 2020. The relevant portion of the minutes of the meeting is given as below:

20.1.2 M/s Gallantt Ispat Ltd has made online application vide proposal no. IA/UP/IND/119401/2016 dated 26th September, 2019 in the prescribed Form -2 along with copies of EIA/EMP report and other documents seeking Environmental

Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

20.1.3 The expansion project proposal of M/s. Gallantt Ispat Ltd located at AL-5, Sector 23, GIDA Industrial Area, Tehsil Sahjanwa, District Gorakhpur, Uttar Pradesh was initially received in the Ministry on 28thJanuary, 2019 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Reconstitute Expert Appraisal Committee (Industry) [EAC (I)] during its 4th meeting held on 20-22nd February, 2019 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry had prescribed ToRs to the project on 27th May, 2019 vide Lr. No. J-11011/229/2008-IA II (I).

20.1.4 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry on 26th September 2019.

Details submitted by the project proponent

20.1.5 The project of M/s Gallantt Ispat Limited, located at AL-5, Sector 23, GIDA Industrial Area, Tehsil Sahjanwa, District Gorakhpur Uttar Pradesh, is for expansion of Integrated Steel Plant; Sponge Iron (from 297000 MTPA to 594000 MTPA), MS Billet (from 330000 MTPA to 653400 MTPA), Captive power (from 53 MW to 80.5 MW) and New Pellet plant establishment 792000 MTPA. The existing project was accorded EC vide Lr.no J-11011/229/2008-IA-II (I) dated 18th October, 2017.

20.1.6 The Status of compliance of earlier EC was obtained from Regional Office, Lucknow vide letter no. IV/Env/UP/Ind-154/459/ 2017/104 dated 19thSeptember, 2019. There are no non-compliances reported by Regional officer. The proposed capacity for different products for site area as below:

Name of Unit	**Existing Capacity and configuration**	**Additional Capacity and configuration**	**Capacity after expansion and configuration**
Sponge Iron Plant	2,97,000 MTPA	2,97,000 MTPA	5,94,000 MTPA
	2 x 450 TPD	1 x 750 TPD & 1 x 150 TPD	2x 450 TPD, 1 x 750 TPD & 1 x 150TPD
M.S. Billets	3,30,000MTPA	3,23,400 MTPA	6,53,400 MTPA
	2 x 20 T* + 2 X 30 T	2x 22.5 T, 2 x 27.5 T	4 x 30 T, 2 x 22.5 T, 2 x 27.5 T
Captive Power Plant	53 MW (35 MW of FBC and 18MW of WHRB)	27.5 MW	80.5 MW (44.5MW of CFBC and 36 MW of WHRB)
Pelletization Plant	-	7,92,000 MTPA	7,92,000 MTPA
*Existing 2 x 20T Induction Furnace will be modified into 2 x 30 T after expansion.			
**MTPA refers to Metric Tons Per Annum			

20.1.7 The total land required for the project is 45.903 ha which is an industrial land. No /forest land involved. The entire land has already been acquired for the project. No 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.

20.1.8 The topography of the area is flat and reported to lie between 26º45'16.12" to 26°45'44.48"N Latitude and 83°11'37.63" to 83°12'15.71" E Longitude in Survey of India topo sheet No. 63N1, 63 N2, 63 N5 and 63 N6, at an elevation of 84 m AMSL. The ground water table reported to range between 2.5 m to 4.49 m below the land surface during the post-monsoon season and 2.13 m to 6.5 m below the land surface during the pre-monsoon season. The project area falls in Sahjanwa block which falls under Safe Category and stage of ground water development is 68.44%.

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

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

Basic raw materials used in the process:

S. No.	Raw Material	Consumption (TPA)			Source of Supply	Mode of Transport
		Existing	Additional	Total after Expansion		
SPONGE IRON PLANT						
1.	Iron Ore	237600	-	66528	Open market	Rail
2.	Pellets	237600	557172	794772	Self/ Manufacturer	Conveyer/Rail
3.	Coal	267300	267300	534600	Import/ Linkage auction/ Open Market	Rail
4.	Dolomite	14850	14850	29700	Open Market	Road
PELLETIZATION PLANT						
1.	Iron Ore Fines	-	883872	883872	Open Market	Rail
2.	Bentonite	-	6336	6336	Open Market	Road
3.	Lime Stone	-	7920	7920	Open Market	Road
4.	Dolomite	-	3960	3960	Open Market	Road
5.	Coal (for PGP/ mix)	-	43560	43560	Open Market	Rail
STEEL MELT SHOP DIVISION (INDUCTION FURNACE WITH CONTINUOS CASTER)						
1.	Sponge Iron	297000	297000	594000	In House	Conveyers
2.	MS Scraps	109267	91512	200779	Local Market	Road

S. No.	Raw Material	Consumption (TPA)			Source of Supply	Mode of Transport
		Existing	Additional	Total after Expansion		
3.	Ferro Alloy	4950	2891	7841	From Local Manufacturer	Road
CAPTIVE POWER PLANT						
1.	Coal	124740	89760	214500	Linkage auction/open market	Rail
2.	Rice Husk	83160	-	35244	Local Market	Road
3.	Dolochar	41580	38610	80190	In house	Conveyers

20.1.11 The targeted production capacity after expansion will be Sponge iron from 297000 MTPA to 594000 MTPA, MS Billet from 330000 MTPA to 653400 MTPA, Captive Power from 53.0 MW to 80.5 MW. A new pellet plant,792000 MTPA capacity, will be installed. Iron ore fines/ coal for the plant will be procured from Open Market. The major raw materials viz., iron ore, coal is being/will be transported through Rail.

20.1.12 The total water requirement of the project is estimated as 6776 m^3/day (Existing 4254 m^3/ day + Proposed 2522 m^3/ day) which will be obtained from groundwater. Permission for withdrawal of ground water requirement for the existing unit has been obtained by CGWA NOC no. 21-4(161)/NR/CGWA/2008-908 dated 14thMay, 2018. The application for the withdrawal of additional water requirement was submitted to CGWB on 17th June, 2019. As per the current status of the application, the same has been examined & recommended by CGWB to CGWA.

20.1.13 The total power requirement of the project is estimated as 80.5 MW (Existing 53.0 MW + Additional 27.5 MW) which is being / will be sourced from Captive Power Plant, WHRB & D.G. Set (for back-up) and 10.0 MW from Purvanchal Vidyut Vitran Nigam Limited for emergency requirement.

20.1.14 Baseline Environmental Studies were conducted during Summer Season i.e. from March to May, 2019. Ambient air quality monitoring has been carried out at eight locations during March to May, 2019 and the data submitted indicated: PM_{10} (58.3 $\mu g/m^3$ to 93.6 $\mu g/m^3$), $PM_{2.5}$(26.5 to 54.5 $\mu g/m^3$), SO_2 (7.0 to 20.6 $\mu g/m^3$) and NOx (12.9 to 36.7 $\mu g/m^3$). The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 3.65 $\mu g/m^3$ with respect to the PM_{10}, 1.51 $\mu g/m^3$ with respect to the SO_2 and 0.9 $\mu g/m^3$ with respect to the NOx.

20.1.15 Ground water quality has been monitored in eight locations in the study area and analyzed. pH: 7.35 to 8.02, Total Hardness: 164.9 to 414.8 mg/l, Chlorides: 27.07 to 192.47 mg/l, Fluoride: 0.57 to 0.84 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from four locations. pH: 7.45 to 8.08; DO: 5.2 to 7 mg/l and BOD: 2.4 to 14.0 mg/l. COD from 10.8 to 52.4 mg/l.

20.1.16 Noise levels (L_{eq}) are in the range of 52.6 to 68.9 dB(A) for day time and 41.4 to 62.6 dB(A) for Night time.

20.1.17 The expansion project will be executed in the existing plant premises & additional land (industrial) which is already acquired by the company and thus no R &R is involved.

20.1.18 The details of existing and additional solid & hazardous waste generation have been shown in the table below. It has been envisaged that greenbelt has already been developed in an area of 13.41 ha i.e. 33 % of the total plant area. During expansion, additional greenbelt will be developed in an area of 1.88 ha to attenuate the noise levels and trap the dust generated due to the project development activities. Therefore, 15.29 ha i.e. ~ 33.3% of the total plant area (45.903 ha), is being/ will be developed under greenbelt & plantation.

Solid &Hazardous Waste Generation & Management

Solid waste	Existing (TPD)	Total after Expansion (TPD)	Management
Dolochar	126.0	243	Dolochar is being/will be utilized in AFBC boiler for captive power generation and after expansion it would be managed through the same technique.
Slag	111.0	198	SMS Slag is being used in filling of Low-lying area and in road making and after expansion will be utilized in same way.
Ash & Dust	239.0	350	Fly ash from the Boiler and APCS is being/will be sold to Cement industry and brick manufacturing unit
Ash-Pellet plant	-	20	Ash will be sold to cement manufacturers.

20.1.19 It has been reported that the Consent to Operate from the Uttar Pradesh Pollution Control Board (UPPCB) has been obtained for air vide letter no. H12172/C-6/Air Pollution/121/17/GKP dated 17.11.2017 and valid from 01.01.2018 to 31.12.2019 and for water vide letter no. H12171/C-6/Water Pollution- 121/17/GKP dated 17.11.2017 and valid from 01.01.2018 to 31.12.2019.

20.1.20 The Public hearing of the project was held on 22nd August, 2019 at 04:00 pm at plant site under the chairmanship of Shree Rakesh Kumar Shrivastav (Additional District Magistrate City, Gorakhpur) and Shree Pankaj Yadav (Assistant Environmental Engineer, UPPCB, Gorakhpur, UP forexpansion of Integrated Steel Plant; Sponge Iron (from 297000 MTPA to 594000 MTPA), MS Billet (from 330000 MTPA to 653400 MTPA), Captive power (from 53 MW to 80.5 MW) and New Pellet plant establishment 792000 MTPA. The issues raised during public hearing are employment and environmental pollution. An amount of ₹ 452 Lakhs (of total capital cost i.e. ₹. 602.53 Cr) has been earmarked for Enterprise Social Commitment based on public hearing issues.

20.1.21 The capital cost of the project is INR 602.53 Cr and the capital cost for environmental protection measures is proposed as INR 35.44 Cr. The annual recurring cost towards the environmental protection measures is proposed as INR 4 Crores/annum. The detailed CSR plan has been provided in the EMP in its page No. 197 to 199. The total employment generation from the expansion is 405 persons (Existing 720 persons, Total employment after expansion will be 1125 persons).

20.1.22 About 13.41 ha i.e. ~33% of the existing plant area (40.5 ha) has already been developed under greenbelt & plantation. An additional area of 1.88 ha will be developed under greenbelt & plantation. Therefore, 15.29 ha i.e. ~ 33.3% of the total plant area (45.903 Hectare), is being/ will be developed under greenbelt & plantation. A 10 m wide greenbelt, consisting of at least 3 tiers around plant boundary has been/ will be developed as greenbelt and green cover as per CPCB/ MoEF&CC, New Delhi guidelines. Presently 15026 trees are planted in the existing plant premises and as a part of expansion additionally 21319 trees will be planted. After expansion the density of plantation with the trees will be 2377 trees/ ha.

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

20.1.24 The Project Proponent and the accredited Consultant M/s. J.M. EnviroNet Pvt. Ltd. (Serial. No. 88) made presentation.

Observations of the Committee (EAC meeting held during 21-23rd October 2019)

20.1.25 The committee noted that a complaint dated 30.05.2019 against M/s Gallant Ispat Ltd was received in the Ministry related to violation of EC conditions and Consent to Operate and setting up of Joint Inspection Committee by Hon'ble National Green Tribunal (NGT) in the case of Meera Shukla vs Muncipal Corporation, Gorakhpur & Others vide order dated 17.12.2018 in original application No. 116/2014. The Committee examined the complaint.

20.1.26 The Committee observed that as per the declaration submitted in the EIA report, the project proponent stated that "there is no litigation pending against the project and/or any direction/ order passed by any Court of law against the project & land in which the project is set up and that for any such litigation whatsoever, the sole responsibilities will be borne by company".

20.1.27 However, the Committee noted that a case (Original Application No. 116/2014; Meera Shukla *vs* Municipal Corporation, Gorakhpur &Ors.) was filed in Hon'ble National Green Tribunal regarding the contamination of water bodies and ground water, specifically Ramgarh lake, Ami river, Rapti river and Rohani river in and around the District Gorakhpur. In this regard, the Hon'ble Tribunal vide order dated 23/8/2018 constituted a Monitoring Committee. The recommendations of the Monitoring Committee with respect to the existing unit of M/s. Gallant Ispat Limited as narrated in the Tribunal Order dated 17/12/2018 is as below:

i. M/s Gallant Ispat Ltd (Integrated Steel Plant), Gorakhpur may be saddled with exemplary cost of Rs. Fifty lakhs or more for having failed in following the norms provided by law (supra) while running the industry.
ii. M/s Gallant Ispat Ltd (Integrated Steel Plant), Gorakhpur be directed to ensure the compliance of all norms prescribed by law while running the industry within a month so that the citizens of the locality may not suffer any further from variety of problems and health hazards.
iii. A team from the Directorate of Medical Health Services, Government of UP may visit M/s Gallant Ispat Ltd (Integrated Steel Plant), Gorakhpur to make a survey of health problems of the citizens residing within 2 kms surrounding area of the industry and take remedial measures.

iv. The ground water of 2 kms surrounding area of M/s Gallant (spat Ltd (Integrated Steel Plant), Gorakhpur be tested by Ground Water Department of Government of India to find out the level of contamination, if any, within two months and the U.P. Government may take remedial measures as required.

v. M/s Gallant (spat Ltd (Integrated Steel Plant), Gorakhpur be directed to install an ambient air quality monitoring station expeditiously, say within two months.

vi. Let the District Level Environmental Impact Assessment Authority as well as the District Level Expert Appraisal Committee constituted as mentioned in 3(A) of the Notification dated 14.09.2006 as amended by Notification dated 15.01.2016 expeditiously within 3 months, if already not constituted.

Further in the order dated 17/12/2018, it is mentioned that *"…as regards the issue of taking action under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 by way of coercive measures against the industrial units/medical college for violation of statutory provisions and conditions for Consent to Operate, we direct the UPPCB to take appropriate action to ensure compliance and recover damages for the past violations. The amount suggested by the Committee may be treated as a proposal and final amount may be determined after following due procedure within one month. Steps for closure may be considered on merits. A report of compliance in this regard may be furnished to this Tribunal…"*

20.1.28 In this regard, the Committee asked the PP to provide the present status of aforesaid case. In response to this, PP submitted a letter dated 23/10/2019 of Uttar Pradesh Pollution Control Board (UPPCB) wherein it is stated that UPPCB have sent their report of compliance to Hon'ble Tribunal on 2/05/2019 and 8/07/2019. The matter is further posted for hearing on 9/12/2019. However, no record has been made available by the PP regarding the corrective action taken by them on the recommendations of the Monitoring Committee.

Recommendations of the Committee (EAC meeting held during 21-23rd October 2019)

20.1.29 The Committee after detailed deliberations sought for the following additional information for further consideration of the proposal.

i. The PP shall furnish explanations regarding the reasons for not disclosing the case details in the final EIA report submitted to the Ministry.

ii. The PP shall furnish a comprehensive report regarding various corrective actions, with relevant details taken by them on the recommendations of the Monitoring Committee.

The Committee also requested the Ministry to obtain a status report from UPPCB on the aforesaid matter inter-alia a report regarding the status of compliance by M/s. Gallant Ispat Limited on the recommendations of the Monitoring Committee.

20.1.30 The Project Proponent has submitted the reply as below:

1st ADS: The PP shall furnish explanations regarding the reasons for not disclosing the case details in the final EIA report submitted to the Ministry.

Reply: It is a matter of fact that a case bearing Original Application No. 116/2014; Meera Shukla Vs Municipal Corporation, Gorakhpur & Ors.) was filed in Hon'ble National Green Tribunal regarding the contamination of water bodies and ground water, specifically Ramgarh lake, Ami river, Rapti river and Rohani river in and around

Gorakhpur District wherein M/s Gallantt Ispat Ltd was not an impleaded party, thus, we have not mentioned the case details in the final EIA report submitted to the Ministry.

2nd ADS: The PP shall furnish a comprehensive report regarding various corrective actions, with relevant details taken by them on the recommendations of the Monitoring Committee.

Reply: UPPCB issued a letter on 31.12.2018 for clarification regarding violation of the environmental norms as per NGT order dated 17.12.2018. The company submitted an action taken report on 17.01.2019. After Final technical presentation (for EC) of our project in front of EAC, MoEF&CC, New Delhi we again approached UPPCB to intimate us the status of our action taken report. The company again submitted the action taken report on 08.11.2019 and thereafter UPPCB visited our plant for the verification of the submitted action taken report on 11.11.2019. During the visit it was found that the reasons for which the letter was issued to GIL, were resolved. Thus, the letter was revoked on 23.11.2019. Thereafter, renewed Consent to Operate was obtained from U.P.P.C.B. under Section 21/22 of the Air (Prevention & Control of Pollution) Act, 1981 vide letter no. 75100/UPPCB/Gorakhpur(UPPCBRO)/CTO/air/GORAKHPUR/2019 on 11.12.2019 and valid from 01.01.2020 to 31.12.2021 and Consent to Operate for discharge of Effluent under Section 25/26 of the Water (Prevention & Control) of Pollution Act, 1974 75090/ UPPCB/ Gorakhpur (UPPCBRO) / CTO /water/GORAKHPUR /2019 on 02.12.2019 and valid from 01.01.2020 to 31.12.2021.

The recommendations of the monitoring committee and the corrective actions taken by PP are as below:-

S. No.	Recommendation in NGT order	Status as on date
1	M/s Gallant Ispat Ltd (Integrated Steel Plant), Gorakhpur may be saddled with exemplary cost of Rs. Fifty lakhs or more for having failed in following the norms provided by law (supra) while running the industry.	As per letter from UPPCB to MoEFCC, New Delhi dated 01.01.2020 an environmental compensation of Rupees 49.5 lakhs has been filed in the Hon'ble Tribunal vide its letter No. H 34466/C-6/Normal-454/OA No. 116/2014/2019 dated 08.07.2019. No order has yet been passed on the said proposal by the Honorable Tribunal. Till date, the company has not been directed to pay any fine. The company has already submitted an undertaking to EAC to pay the fine as imposed by the concerned authority.
2.	M/s Gallant Ispat Ltd. (Integrated Steel Plant), Gorakhpur be directed to ensure the compliance of all norms prescribed by law while running the industry within a month so that the citizens of the locality may not suffer any further from variety of problems and health	The company is complying with all the norms prescribed by the law while running the industry. UPPCB visited plant for the verification of the submitted action taken report on 11.11.2019. During the visit it was found that the reasons for which the notice was issued to GIL, were resolved. Therefore, the notice was revoked on 23.11.2019 and

S. No.	Recommendation in NGT order	Status as on date
	hazards.	renewed Consents issued on dated 11.12.2019 under both the Air (P&CP) Act,1981 and the Water(P&CP) Act,1974 with validity from 01.01.2020 to 31.12.2021. Also, during the visit of the Regional Officer, MoEFCC, Lucknow on 4.09.2019 for issuance of Certified Compliance Report for the conditions stipulated in EC the company was found complying with all the conditions as stipulated in the EC and the RO, MoEFCC, Lucknow issued the Certified Compliance Report on 19.09.2019. The company ensures to comply with all the norms prescribed by the law while running the industry in future as well.
3.	A team from the Directorate of Medical Health Services, Government of UP may visit M/s Gallant Ispat Ltd (Integrated Steel Plant), Gorakhpur to make a survey of health problems of the citizens residing within 2 kms surrounding area of the industry and take remedial measures.	In the letter from UPPCB to MoEF&CC, New Delhi dated 01.01.2020, it is mentioned that the health test of the local residents were conducted and the ground water quality was also examined. As per the report, all the parameters were found conforming with the standards prescribed by the Board.
4.	The ground water of 2 kms surrounding area of M/s Gallant Ispat Ltd (Integrated Steel Plant), Gorakhpur be tested by Ground Water Department of Government of India to find out the level of contamination, if any, within two months and the U.P. Government may take remedial measures as required.	
5.	M/s Gallant Ispat Ltd (Integrated Steel Plant), Gorakhpur be directed to install an ambient air quality monitoring station expeditiously, say within two months.	Four ambient air monitoring stations are installed in the plant premises – one at the main gate, one at the colony, one at the north east boundary and fourth at south west corner. Ambient air quality is regularly monitored by the company and report is submitted to UPPCB on monthly basis.

The points in the order issued by NGT and the status of corrective active taken by GIL as on date is detailed below: -

S. No.	Point as in NGT	Status of Corrective Action as on date
1	The team found that there was an open channel for discharging effluent near a railway track which was going into water body and ultimately joining Ami river. Unit was not operating as ZLD as required in terms of the Consent to Operate.	As on date the company is operating completely on Zero Liquid Discharge. No wastewater is discharged from plant. Wastewater generated from process is treated in neutralization pit and after treatment 100% recycling is done. Domestic wastewater is treated in sewage treatment plant and water is used for greenbelt development.
2	Huge amount fugitive emissions were observed from induction furnace plant.	In SMS unit, induction furnaces are provided with moveable hood and Bag filters. Bag filters limit the particulate emission from the stack within the permissible limit. They are provided at different locations to control fugitive emission within premises.
3	Disposal of iron slag was not satisfactory.	Slag from SMS is processed into magnetic and non-magnetic particles. Magnetic particles are reused in SMS and non-magnetic particles are used as sand in construction activities.
4	Ash was not being disposed of scientifically.	Fly ash is stored in silo and supplied for cement/brick manufacturers. Transportation of Fly ash is done by closed bulkers and loading & unloading is done through pneumatic system. The company has already signed MoUs with Ashok Traders, M/s Arun Kumar Singh, R.V. Trading Company, Rishi Ji Sales Corporation & M/s Agrawal Associates for utilization of fly ash.
5	Green belt was not developed as per norms.	13.41 ha i.e. ~33% of the existing plant area (40.5 ha) is developed under greenbelt & plantation. At present, total numbers of trees planted are 15026 and further 10000 numbers of trees are proposed to be planted within plant.
6	Ambient air quality was not satisfactory.	Four ambient air monitoring stations are installed in the plant premises – one at the main gate, one at the colony, one at the north east boundary and fourth at south west corner. Ambient air quality is regularly monitored by the company and report is submitted to UPPCB on monthly basis.
7	Citizens in the vicinity complained that root tops are	All stacks are connected to pollution control equipment viz., bag filter & ESP.

S. No.	Point as in NGT	Status of Corrective Action as on date
	covered with fly ash causing bronchitis, asthma, etc.	Stacks in Power Plant & Sponge Iron plants are connected to SPCB/ CPCB server and all parameters are within norms. Fly ash is stored in silo and supplied for cement/ brick manufacturing.
8	There was noise pollution.	Noise producing equipment and machineries undergo proper maintenance for oiling, greasing on regular basis. Acoustic enclosures in the turbines are provided. Greenbelt also helps to attenuate the noise level.
9	The Committee recommends recovery of Rs. 50 Lakhs on "Polluter Pays" principle as cost for damage to the environment apart from requisite compliance.	Committee constituted by NGT recommended a fine of Rs. 50 lakh on Gallantt Ispat Ltd on the basis of Polluter Pays Principal. NGT directed UPPCB to take into consideration the recommendation of the above-mentioned committee to determine whether any fine has to be paid by Gallantt Ispat Ltd. Consequently, UPPCB issued notice to Gallant Industries, asking why should fine be not levied on Gallantt Ispat Ltd pursuant to the recommendations of the committee constituted by NGT. Gallant has given its reply to the notice issued by UPPCB stating that it is fully compliant with the applicable environmental norms and that no fine is leviable on it. UPPCB, Lucknow recommended Environmental Compensation of Rs. 49.50 lacs vide their letter 34466 dated 08.07.2019 which is pending before Hon'ble NGT for final decision.

3rd ADS: Committee also requested the Ministry to obtain a status report from UPPCB on the aforesaid matter inter-alia a report regarding the status of compliance by M/s. Gallantt Ispat Limited on the recommendations of the Monitoring Committee.

Reply: On the recommendations of EAC, MoEF&CC, New Delhi wrote a letter dated 12.12.2019 to Member Secretary, UPPCB to obtain a status report from them on the NGT matter and also regarding the status of compliance by GIL on the recommendation of the monitoring committee. UPPCB, Lucknow has sent a letter to your good office vide reference letter no. H45780/C-6/NOC/304/Lok Sunwai/20 dated 01.01.2020.

20.1.31 In the meanwhile, the Ministry has received a complaint against M/s Gallantt Ispat Ltd vide letter dated 20.01.2020 which was put before the Committee.

Observations of the Committee (16-17th January 2020)

The Committee noted that reply to the ADS furnished by the project proponent is satisfactory. However, the Committee felt that the written response from project proponent to the issues raised in the complaint dated 09.01.2020 received by the Ministry is not satisfactory. This included, inter-alia, the operations of rerolling mill, number of trees cut, requisite statutory permissions for tree cuttings, if any.

Recommendations of the Committee (16-17th January 2020)

20.1.32 In view of the foregoing and after detailed deliberations, the Committee deferred the consideration of the proposal cited above and asked the proponent to submit the response to the issues raised in the complaint cited above for further consideration of the proposal.

20.1.33 The Project Proponent replied to the issues raised in the compliant as below:

1st Point: Destruction of already developed greenbelt, cutting of trees in plant premises, inadequate greenbelt area & commencement of construction activity for expansion without obtaining EC.

Reply: Presently, 13.41 ha i.e. ~33% of the existing plant area (40.5 ha) has already been developed under greenbelt & plantation. As on date, total numbers of trees planted are 15026 in the existing plant premises. RO, MoEF&CC, Lucknow has also mentioned in the Certified Compliance Report that 33% area is already under greenbelt & plantation.

An additional area of 1.88 ha will be developed under greenbelt & plantation. Therefore, 15.29 ha i.e. ~ 33.3% of the total plant area (45.903 Hectare) post expansion, is being/ will be developed under greenbelt & plantation as per CPCB/MoEF&CC guidelines. Presently 15026 trees are planted in the existing plant premises and as part of the expansion and minutes of meeting of 15th REAC, additionally 21319 trees will be planted. After expansion the density of tree plantation will be 2377 trees/ ha.

There is a Gazette of Govt. of U.P. dated 31st Oct., 2017 and 7th Jan., 2020 regarding cutting trees on the individual, cultivated and uncultivated holding which states for every tree cut, ten trees have to be planted. 92 numbers of trees were cut and against this 1227 numbers of trees (like Cassiya Siamea, Neem, Sheesham, Karanj, Arjun, Poplar, Shirish, Subabul, Ficus Black) have been planted.

The company has not started any expansion activity (as mentioned in current proposal).

2nd Point: Operating steel rolling mill with reheating furnace of 3,30,000 TPA for more than 10 years without clearance from Ministry.

Reply: Company obtained NoC for 1,44,000 TPA re rolling mill in 2007 from UPPCB as a separate entity and started operations from 2009. NoC for expanded capacity of 3,30,000 TPA was obtained in 2016 and operations were started in 2017 after obtaining CTO.

Consent to Operate issued by UPPCB for the below mentioned 3 units within the premises of complex of Gallantt Ispat Limited: -

- Gallantt Ispat Limited - Unit Re- Rolling Mill

- Gallantt Ispat Limited - Unit Roller Flour Mill
- Gallantt Ispat Limited – Integrated Steel Plant

Thus, they are three separate identities with different nomenclature, separate boundaries and separate Consents. The details are tabulated in table below: -

Name of Unit	**Capacity**	**Operating on the basis of**	**CTO from UPPCB (for Air & Water)**
Gallant Ispat Limited (Unit Re-Rolling Mill)	1,44,000 TPA	NoC from UPPCB vide letter no. 2412/NoC-21/2007/4 dated 29-12-2007	21.04.2009
	3,30,000 TPA	NoC from UPPCB vide letter no. 1364/NoC-270/2016/6 dated 30.12.2016	7.12.2017 and latest 28.11.2019 valid till 31/12/2021
Gallantt Ispat Limited - Unit Roller Flour Mill	600 TPD	NoC from UPPCB vide letter no. 705/NoC-41/08/6 dated 31.03.2008	10.12.2019 valid till 31.12.2024
Gallantt Ispat Limited – Integrated Steel Plant	Sponge Iron Plant - 198,000 TPA, Steel Melting Shop (Induction Furnace) - 216000 TPA, Captive Power Plant -24 MW	EC from MoEFCC, New Delhi vide letter no. J-11011/229/2008-IA II (I) dated 2nd February, 2009	Latest Consent on 11.12.2019 and valid from 01.01.2020 to 31.12.2021
	Sponge Iron- 297000 TPA, M.S Billets - 330000 TPA and Captive power plant - 53 MW	EC from MoEFCC, New Delhi vide letter no. J-11011/229/2008-IAII (I) dated 18thOctober, 2017	

Company obtained statutory permission for rolling mail and is complying all conditions stipulated in the CTO.

The recent order from Honorable NGT (OA No. 55/209(WZ) dated 16.01.2020) regarding regularization of rolling mills, "14.21.20, S. No. 3 reads *"In order to address to instant and similar cases where such re rolling/cold rolling units are*

established or operating with a CTE/CTO from the concerned State Pollution Control Boards, the Ministry may consider directing the State Pollution Control Boards to get a list of all such cases and take further quick actions so that they apply for EC and get covered by the EIA notification 2006. Since, these units are established or operating under the CTEs/CTOs obtained from a statutory authority i.e. the respective State Pollution Control Boards, a period of one year may be allowed for this recommended conversion to EC. This will also ensure that the units remain in operation for the allowed period and closures, unemployment and related social issues/unrests are avoided. During this period of one year, they will have to follow all the conditions imposed under the CTE/CTO."

With reference to the above, the company will also follow the directives for the recommended conversion of NoC/ CTO of rolling mill into EC.

03rd Point: The violation Proceeding against the company going on before the Hon'ble NGT in application no. 116/2014 is still pending and Hon'ble NGT has yet not accepted the compliance report.

Reply: Earlier ADS regarding the same was generated by MoEFCC, New Delhi which was replied by us on 04.01.2020. The same was discussed in 15th EAC meeting on 16th Jan., 2020. As per Minutes of Meeting displayed on the portal, "the Committee noted that reply to the ADS furnished by the project proponent was satisfactory".

Observations and Recommendations of the Committee (EAC meeting held during 24-25th February 2020)

20.1.34 The committee recommended to integrate the existing rolling mill with main plant and advised Project Proponent to revise the EIA report and resubmit the proposal. The Project Proponent may also adhere to the directions given in the order passed by NGT on 16/01/2020 in Original Application No. 55 of 2019.

Revised Project Proposal submitted by project proponent:

20.1.35 The revised proposal was submitted by the project proponent with integrating the rolling mill. i.e. Sponge Iron from 2,97,000 to 5,94,000 MTPA, MS Billets from 3,30,000 TPA to 6,53,400 MTPA; Captive Power from 53 MW to 80.5 MW & establishment of new Pellet plant for the capacity of 7,92,000 MTPA (Metric Tons Per Annum).

20.1.36 The raw material of re-rolling mill i.e. the billets is the product of integrated steel plant. With this integration the process of reheating the billets will be reduced by 90-95 % and direct charging into the Rolling Mill will be encouraged which will reduce reheating of billets which will ultimately result in energy and power saving.

20.1.37 Expansion of Integrated Steel Plant; Sponge Iron (from 297000 MTPA to 594000 MTPA), MS Billet (from 330000 MTPA to 653400 MTPA), Captive Power (from 53 MW to 80.5 MW) & New Pellet Plant establishment-792000 MTPA (Metric Tons Per Annum) and integrating the existing rolling mill (330000 TPA) with main plant at AL – 5, Sector 23, GIDA Industrial Area, Tehsil Sahjanwa, District Gorakhpur, Uttar Pradesh.

Unit	Existing Capacity and configuration	Additional Capacity and configuration	Capacity after expansion and configuration
Sponge Iron Plant	2,97,000 MTPA	2,97,000 MTPA	5,94,000 MTPA
	2 x 450 TPD	1 x 750 TPD & 1 x 150 TPD	2x 450 TPD, 1 x 750 TPD & 1 x 150 TPD
M.S. Billets	3,30,000MTPA	3,23,400 MTPA	6,53,400 MTPA
	2 x 20 T* & 2 X 30 T	2x 22.5 T & 2 x 27.5 T	4 x 30 T, 2 x 22.5 T & 2 x 27.5 T
Captive Power Plant	53 MW (35 MW of FBC and 18 MW of WHRB)	27.5 MW (FBC & WHRB)	80.5 MW (44.5 MW of CFBC and 36 MW of WHRB)
Pelletization Plant	-	7,92,000 MTPA	7,92,000 MTPA
Rolling Mill	3,30,000 TPA	-	3,30,000 TPA

Project Details:

20.1.38 **Total Plant Area -** Total Plant area is 45.903 ha (Existing plant area -40.50 ha and Additional Area - 5.403 ha) which includes both integrated steel plant and re-rolling mill. Expansion in integrated steel plant will be done within existing plant premises. Additional Area adjacent to plant site & already under possession of the company.

20.1.39 **Greenbelt and plantation area -** 15.29 ha (Existing 13.41 ha + Additional 1.88 ha)

20.1.40 Presently 15026 trees are planted in existing plant premises and as a part of expansion and minutes of meeting of 15th REAC, additionally 21319 trees will be planted. After expansion the density of plantation with the trees will be 2377 trees/ ha.

20.1.41 Raw material for re rolling mill – Billets – 3,40,000 TPA

20.1.42 No extra water withdrawal for this integration of units. Requirement will be met from the existing water permission of 6776 KLPD. Permission for withdrawal of ground water requirement has been obtained by CGWA NOC no. 21-4 (161)/NR/CGWA/2008-831 dated 13th Nov., 2019.

20.1.43 Power Requirement – 53 MW Existing for Integrated steel Plant + 27.5 MW additional for proposed expansion of Integrated steel plant = 80.5 MW which will met from Captive power plant. Additional 5 MW power requirement for re-rolling mill is met from Purvanchal Vidyut Vitran Nigam Limited. Thus, after integration of two units power requirement will be 85.5 MW which will be met from Captive Power plant and Purvanchal Vidyut Vitran Nigam Limited.

20.1.44 Manpower Requirement – 720 Existing for Integrated steel Plant + 405 additional for proposed expansion of Integrated steel plant + 140 for re-rolling mill = 1265 persons total after integration of two units and expansion of integrated steel plant

20.1.45 **Positive Impacts Anticipated with Integration of Units:** With this integration the process of reheating the billets will be will be reduced by 90 -95 % and direct charging into the Rolling Mill will be encouraged which will reduce reheating of billets which will ultimately result in energy and power saving: -

20.1.45.1 *Energy Saving:* - Presently, pulverized coal (30000 TPA) is being used in the rolling mill for reheating the billets. After integration of re-rolling mill and

integrated steel plant, suitable conveying system with insulation between Steel Melt Shop and Rolling mill will be installed which will eliminate the process of reheating the billets and direct charging will be practiced. With this there will be 90-95% direct charging and only 5-10% pulverized coal consumption. Thus, usage of pulverized coal will be reduced from 30000 TPA to approx. 3000 TPA which will ultimately result into energy saving and reduction of pollution.

20.1.45.2 *Power Saving:* - Once Rolling Mill is integrated with the steel melt shop, GIL will install suitable conveying system and practice to achieve 90-95% direct charging. As reheating furnace will not be operational 90% of the time, it will also reduce the power consumption by 10 - 15 units per metric ton of rolling mill production, as blowers and other utilities of reheating furnace will be out of service. Currently, GIL consumes 125 units (approx.) of power on per metric ton of TMT bars produced in Rolling Mill. This unit consumption of per metric ton will reduce to 110 units (approx.) thereby saving energy to the extent of 50 lac units (approx.) yearly at current installed capacity of 3,30,000 MT of Rolling Mill.

20.1.45.3 *Reduction in PM emissions*: - With the integration of the two units, 90-95% times the stack in re-rolling mill will not operate due to direct charging, thus with the calculations of impact prediction done through air modeling it was found that there will be 0.25ug/m^3 reduction in PM level in atmosphere from that existing. Moreover, with the practice of direct charging of billets, the usage of pulverized coal will be significantly decreased and with reduced stacking up of pulverized coal, existing emissions will decrease.

Observations of the committee

20.1.46 The committee has discussed the revised proposal considering aspects of integration of the rolling mill, energy savings, additional power requirements, complaint revived in the Ministry related to tree cut, condenser in power plant etc., *vis-a-vis*, impacts of the revised proposal. The committee observed the following:

i. In accordance with decision of EAC, revised proposal by integrating 330000 TPA Rolling mill has been submitted and accordingly the EIA report has been revised.

ii. Hot charging of 90% billets to rolling is proposed with relevant retrofitting /modifications as required for. The existing reheating furnace shall be used only for 10 % time i.e. for remaining billets and proposed to operate with furnace oil.

iii. Coal usage shall be phased out immediately which reduces 27000 TPA coal of coal consumption in turn reduction in pollution load.

iv. Water consumption in furnace will also get reduced.

v. Power consumption shall be reduced by 45000 kwh/year in rolling mill due to hot charging.

vi. Additional plantation is proposed which increases total plantation from 13.41 ha to 15.3 ha.

vii. It is reconfirmed that trees cut reported in the complaint letter is not the part of the old green belt and no new construction has been taken up by them for this project so far.

viii. Railway siding for transport of raw materials and products is available.

ix. During the discussions, project proponent mentioned that no space is available in

the existing layout of the power plant to replace water cooled condenser with air cooled condenser.

Recommendations of the committee

20.1.47 EAC after detailed deliberations recommended the proposal for environmental clearance with the following specific conditions in addition to the applicable general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to integrated steel plants.

i. Air cooled condensers shall be installed in the proposed power plants to reduce water consumption in turn water conservation measure.

ii. Green belt shall be developed in 15.3 ha of land within the plant premises.

iii. Hot charging of billets shall be at least for 90% of quantity in the rolling mill. Reheating furnace shall be for maximum quantity of 10% of billets in rolling mill.

iv. Particulate emissions shall be less than 30 mg/Nm^3.

v. Industrial vacuum cleaners shall be used to clean roads and shop floors regularly to reduce fugitive emissions.

vi. Zero Liquid Discharge (ZLD) shall be maintained. Treated wastewater from STP shall be reused for green belt development.

20.2 Expansion in production capacity of Asbestos & Non Asbestos Cement Sheets and Pressure Pipes from 1,60,000 MTPA to 2,40,000 MTPA by **M/s ARL Infratech Ltd** (Formerly M/s. Ankit Roofings Ltd) located at Location: Khasra Nos. 718, 719, 720, 721, 885/722 & 717(part), Village Dahami Khurd, Bagru, Tehsil Sanganer, District Jaipur, **Rajasthan** - [Online Proposal No. IA/RJ/IND/4374/2007; File No. J-11011/343/2007-IA.II.(I)] **– Re-consideration for grant of Environment Clearance based on ADS reply – regarding.**

20.2.1 The aforesaid proposal was earlier considered in the meeting of the Expert Appraisal Committee held during 24-25th February 2020 and the relevant portion of the minute of the meeting is given as below:

20.2.2 M/s ARL Infratech Ltd. (Formerly M/s Ankit Roofing Ltd.), has made an online application vide proposal no. IA/RJ/IND/4374/2007 dated 5th February 2020 in prescribed Form – 2 along with EIA Report and other documents to seek Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 4 (c) Asbestos Milling & Asbestos based products under Category "A" in the schedule of EIA Notification, 2006 and the project is appraised at the Central level.

20.2.3 The proposal of M/s ARL Infratech Ltd (Formerly, M/s Ankit Roofing Ltd.) for expansion of Asbestos & Non Asbestos Cement Sheets and Pressure Pipes from 160,000 TPA to 240,000 TPA located in Village Dahami Khurd, Bagru, Tehsil - Sanganer, District - Jaipur, State Rajasthan. The proposal was initially received in the Ministry on 31.01.2019 & subsequently, on account of deficiencies, it was resubmitted on 14.02.2019, 19.03.2019 & 06.06.2019 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Reconstituted Expert Appraisal Committee (Industry) [EAC (I)] during its 8th meeting held 26.06.2019 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance Accordingly, the Ministry has prescribed ToRs to the project on 03.02.2020 vide Lr. No. IA-J11011/343/2007-IA.II (I).

20.2.4 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry on 5th February 2020.

20.2.5 The existing project was granted EC to M/s Ankit Roofings Ltd vide lr. No. J-11011/ 343/ 2007 -IA.II (I) dated 27.08.2007. Consequent upon name change of the company, the Ministry changed the name of the company in the EC letter vide letter no. J-11011/343/2007-IA.II(I) dated 24.01.2020.

20.2.6 The Status of compliance of earlier EC through Regional Office, Lucknow vide letter no. IV/Env/R/IND-74/553/2007/172 dated 15.05.2019 and action taken report over non-compliances has been seen.

Details Submitted by the Project Proponent

20.2.7 The proposed capacity for different products for site area is as below:

Name of Unit	**Existing Capacity**	**Additional Capacity**	**Capacity after expansion**
Asbestos & Non-Asbestos Cement Sheets & Pressure Pipes	1,60,000 MTPA	80,000 MTPA	2,40,000 MTPA

20.2.8 The total land area required for the project is 72,263 sq.m (existing: 35,100 sq. m & proposed expansion: 37,163 sq.m). The land for existing project comprising of Khasra Nos. 719, 720, and 721 has been duly converted for industrial use. The land for proposed expansion project comprising of Khasra no. 718 admeasuring 6400 sq.m., Khasra no. 717(part) admeasuring 10,818 sq. m. & Khasra no. 885/722 admeasuring 19,945 sq. m. are duly converted for industrial use. No river or water body passes through the project area. Sadariya Nadi (seasonal) is located at ~1.4 km towards South of the project site and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

20.2.9 The topography of the project area is flat and reported to lie between 26°48’56.11"N” to 26°49’4.95"N Latitude and 75°34’13.60" to 75°34’26.78” E Longitude in Survey of India topo sheet No. 45 N/9 at an elevation of 360 m AMSL. The ground water table reported to range between 27 to 30 m below the land surface during the post-monsoon season and 30 to 35 m below the land surface during the pre-monsoon season. The project area falls in Sanganer block which falls under over exploited and stage of ground water development is 305.42%.

20.2.10 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the study area. The area also does not report to corridor for Schedule-I fauna. *Pavo Cristatus* (Schedule I) i.e. Indian Peafowl is reported from the buffer area. Wildlife conservation plan has been submitted to Dy. Conservator of forest, Jaipur for authentication and the same is under process.

20.2.11 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process are as below:

S. No.	Raw material	Nature	Unit	Consumption (TPD)		Source of Supply	Mode of Transport
				Existing quantity (for asbestos based product)	Proposed quantity (for asbestos & non-asbestos based product)		
Asbestos& Non-asbestos cement sheet & pipe							
1	Asbestos Fibre*	Solid	MTPD	37	55	imported directly from Countries like Russia, Brazil and Kazakhstan, etc.	By ship to the port and by Road from Port.
2	PVA Fibre**		MTPD	-	3.3	Imported	By Ship to port and by road from port.
3	Fly-Ash	Solid	MTPD	119	178	Fly Ash is obtained from Thermal Power Plants in Kota, Suratgarh and Dadri.	By Road
4	Cement	Solid	MTPD	238	358	Cement is purchased directly from manufacturers majorly from Rajasthan only like Wonder, Lafarge & Ultra-tech cement.	By Road
5.	Others (Pulp / Dry Waste etc.)	Solid	MTPD	63	95	Purchased locally from Indian market	By Road
6.	Additives (Performance enhancers) **	Liquid	MTPD	-	0.067	Purchased locally from Indian market	By Road

* used only in asbestos based cement sheet & pipe
** used only in non-asbestos based cement sheet & pipe

Waste generation & management

S.No	Type			Quantity	Management
1.	Liquid	Domestic		18 KLD	Treatment in existing STP capacity. Approximately 11 KLD for process water and 6 KLD for green belt development shall be catered to by the treated domestic wastewater.
		Effluent		No trade effluent generated	-
2.	Solid	Process solid Waste (Broken sheets & pipes)	Existing	1950 TPA	Total waste generated will be 2880 TPA. *Hazardous waste* as per HOWR, 2016. Asbestos containing residues The same are being and will be pulverized and recycled in the closed-circuit process.
			Proposed	930 TPA	The same is being and will be disposed of as per SWMR, 2016
		Municipal Solid waste	Existing	53 TPA	
			Proposed	15 TPA	
		dry waste from APCD	0.5 MT/Month		Mixed with water to form slurry, which will be recycled into the process.

20.2.12 The targeted production capacity after expansion of asbestos & non-asbestos cement sheets & pressure pipes will be 2,40,000 TPA. Also an additional one D.G. Set of capacity 330 KVA is proposed. The majority of raw material for the asbestos & non-asbestos cement sheets & pressure pipes will be sourced from open market and the majority of raw material is being/will be transported through Rail/Road.

20.2.13 The total water requirement of the project is as 90 m^3 /day (No change), out of which 75m^3/day of fresh water requirement will be obtained from the existing borewell and the remaining requirement of 15 m^3 /day recycled water will be met from the STP treated water.

20.2.14 Permission for withdrawal of ground water requirement for the existing unit was obtained vide CGWA NOC no. 21-4(87)/WR/CGWA/2007-372 dated 05.02.2008. The application for the renewal of the NOC has been submitted to CGWA on 24.05.2017. As per the current status of the application, the same is under examination.

20.2.15 The total power requirement of the project is estimated as 1500 kVA (Existing 1500 Kva + Additional Nil) which is being / will be sourced from JVVNL GSS & D.G. Set (for back-up) {existing 660 KVA * 3 nos.; proposed 330 KVA *1 no}

20.2.16 Baseline Environmental Studies were conducted during Winter Season i.e. from December 2018 to February, 2019. Ambient air quality monitoring has been carried out at eight locations during December 2018 to February, 2019 and the data submitted indicated: PM_{10} (47.8 μg/m^3 to 94.7 μg/m^3), $PM_{2.5}$ (26.3μg/m^3 to 51.0 μg/m^3), SO_2 (5.7 μg/m^3 to 11.7 μg/m^3) and NOx (11.8 μg/m^3 to 24.1 μg/m^3) CO (0.7 mg/m^3 to 2.0 mg/m^3). The results of the modelling study indicates that the maximum increase of GLC for the proposed expansion project is 7.20183 μg/$m^3$with respect to the PM_{10}, 0.09227 μg/m^3 with respect to the SO_2, 6.8392 μg/$m^3$with respect to the NOx & 0.00387 mg/m^3 with respect to the CO.

20.2.17 Ground water quality has been monitored in eight locations in the study area and analyzed. pH: 7.34 to 8.24, Total Hardness: 100 to 4250 mg/l, Chlorides: 60 to 5502 mg/l, Fluoride: 0.5 to 1.9 mg/l. Heavy metals are within the limits. Surface water quality of study area could not be assessed as water bodies were found to be dry.

20.2.18 Noise levels are in the range of 51.3 to 68.2 dB (A) for daytime and 39 to 52 dB (A) for nighttime.

20.2.19 The expansion project will be executed in the existing plant premises & additional land which is already acquired by the company and thus no R &R is involved.

20.2.20 It has been reported that a total of 2880 TPA of processed solid waste (Broken sheets & pipes), which will be pulverized and recycled in the closed-circuit process. 0.5 MT/Monty of dry waste from APCD recycled into the process. It has been envisaged that an area of 23,847 sq.m (33.0 %) land 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.

20.2.21 It has been reported that the Consent to Operate from the Rajasthan State pollution Control Board (RSPCB) has been obtained vide letter no. F(MUID)/JAIPUR(Sanganer)/144(1)/2018-2019/7337-7339, validity of CTO is up to 31.01.2023 and Authorization under Hazardous Waste (Management & Transboundary Movement) Rules, 2016, vide letter no. F(HSW) /Jaipur(Sanganer) /6(1)/2009-2010/5389-5391 dated 12.12.2018. The authorization is valid upto 31.07.2021.

20.2.22 The public hearing of the project was held on 06.11.2019 at 11:00 AM at Rajeev Gandhi Sewakendra, Village Dahmikalan, Bagru, Tehsil Sanganer, Jaipur (Raj) under the chairmanship of Shri Beerbal Singh, Additional District Magistrate (A.D.M), Jaipur City (North) for expansion of expansion of Asbestos & Non Asbestos Cement Sheets and Pressure Pipes from 1, 60,000 MTPA to 2, 40,000 MTPA. No written suggestion and/or complaint regarding the public hearing for the proposed expansion project was received either during the public hearing or in the RSPCB Office. The issues raised during public hearing are employment, water, CER and environmental management. An amount of Rs13.0 Lac (of total capital cost i.e. Rs. 13.0 Cr) has been earmarked for Corporate Environmental Responsibility based on public hearing issues.

20.2.23 The capital cost of the expansion project is Rs. 13.0 Cr and the capital cost for environmental protection measures is proposed as Rs. 78 Lac. The annual recurring cost towards the environmental protection measures is proposed as Rs. 9.5 Lac/annum. The detailed CER plan has been provided in the EMP in its page No. 330 to 332. The total employment generation from the expansion is 100 persons (Existing 350 persons, Total employment after expansion will be 450 persons).

20.2.24 About, 11,583 sq.m. of the existing plant area (35,100 sq.m.) has already been developed under greenbelt & plantation. An area covering 23,847 sq.m. i.e. 33 % of the total area after expansion (72,263 sq.m.) will be developed under greenbelt as per CPCB/ MoEF&CC, New Delhi guidelines.

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

20.2.26 Name of the Consultant: Paramarsh Servicing Environment & Development (S.No. 118, List of Accredited Consultant Organizations (Alphabetically) Rev. 83, Jan 20, 2020).

Observations and Recommendations of the Committee (EAC meeting held during 24-25th February 2020)

20.2.27 The Committee after detailed deliberations deferred the proposal and sought the following additional information.

i. Asbestos concentration in the AAQ data to be furnished.

ii. CER list to be revised as most of the activities in CER table are related to CSR.

iii. Water quality data are wrong. PP was advised to redo water quality analysis.

iv. Plant layout is sketchy, and does not properly reflect the details Proper engineering drawing shall be furnished by the Project Proponent.

v. TOR point # 9 needs to be addressed properly as per requirement.

vi. Action Plan to achieve Zero Liquid Discharge shall be furnished.

20.2.28 Point wise reply of Additional details sought by the committee is as below:

***ADS - I:* Asbestos concentration in the AAQ data to be furnished.**

Reply: Asbestos concentration in the ambient air quality at six locations in the study area of project site has been monitored during March, 2020 and the data submitted indicated that asbestos fibre concentration is detectable within the project site (varying between 0.001 -0.002 fibre/cc) and is found to be BDL in the ambient air at the remaining locations in the study area.

ADS - II: CER list to be revised as most of the activities in CER table are related to CSR.

Reply: Revised Corporate Environmental Responsibility (CER) action plan has been prepared and submitted to address the issues raised during public hearing and socio-economic survey carried out for the project in line with the MoEF&CC, Office Memorandum dated 1st May 2018. The activities proposed to be undertaken are to address issues related to scarcity of water resources, Tree plantation outside factory premises and drinking water.

ADS - III: Water quality data are wrong. PP was advised to redo water quality analysis.

Reply: Ground water quality was analysed again through another MoEF&CC recognized and NABL accredited monitoring laboratory and results submitted. Ground water quality has been reassessed at eight locations in the study area and analyzed. pH: 7.36 to 7.65, Total Hardness: 192 to 1015 mg/l, Chlorides: 215 to 4125 mg/l, Fluoride: 0.82 to 1.95 mg/l. Heavy metals are within the limits.

ADS – IV: Plant layout is sketchy, and does not properly reflect the details Proper engineering drawing shall be furnished by the Project Proponent

Reply: Engineering layout of plant showing various components including equipment, machinery and location and dimension of various plant services has been submitted.

ADS – V: TOR point # 9 needs to be addressed properly as per requirement

Reply: ARL Infratech Ltd., to address the conditions of ToR point no. 9 regarding Corporate Environment Policy, has prepared and submitted a comprehensive Corporate Environmental Policy.

ADS – VI: Action Plan to achieve Zero Liquid Discharge shall be furnished.

Reply: There is no effluent generation from the process as the water used in manufacturing process is carried along with the product. Treatment of domestic effluent is done in existing STP and treated water is reused into process and for greenbelt development. No wastewater will be discharged outside and optimum utilization of water resource will be continued action plan to achieve Zero Effluent Discharge (ZLD) along with water balance diagram has been submitted.

Observations of Committee*:*

20.2.29 The proposal was discussed in 16th EAC meeting held during 24-25th February 2020. Reply to all ADS points raised in the meeting are satisfactory except for the asbestos concentration levels in the ambient air.

20.2.30 Asbestos concentration values in the ambient air are very low. Consultant was unable to explain the air sampling and analysis / testing procedure. Further, the laboratory engaged, M/s Enviro-Tech Services, Ghaziabad, is not accredited by NABL for sampling and analysis of asbestos in ambient air.

Recommendations of the committee

20.2.31 In view of the foregoing, after detailed discussions, the committee deferred the proposal and recommended that the project proponent should resubmit the asbestos concentration levels in the ambient air, which shall be tested by NABL accredited laboratory.

20.3 Greenfield integrated clinker/ cement manufacturing unit and captive power plant including waste heat recovery plant and Power generation thorough WHRB and a township of **M/s Jaykaycem (Central) Ltd** located at village Devra, Hardua, Puraina, Sotipura & Madaiyan, tehsil- Amanganj (old Pawai), **Dist. Panna, Madhya Pradesh** [Online Proposal No. IA/MP/IND/127881/2016; MoEF&CC File No. J-11011/224/2016-IA.II(I)] - **Re-consideration for grant of Environment Clearance based on ADS reply – regarding.**

20.3.1 The aforesaid proposal was earlier considered in 18th meeting of Re-constituted EAC (Industry-1) held during 29-30th April 2020 and the relevant portion of the minute of the meeting is given as below:

20.3.2 M/s Jaykaycem (Central) Ltd made online application vide proposal no. IA/MP/IND/127881/2016 on 31.03.2020 in the prescribed Form 2, EIA Report and other documents for seeking Environmental Clearance (EC) for the project mentioned in the subject. The proposed project activity is listed at Sl. No. 3(b) Cement Plants in the schedule under Category "A" in the EIA Notification, 2006 and the proposal is appraised at Central Level.

20.3.3 The project proposal of greenfield integrated cement plant for production of clinker (5.28 MTPA) and cement (6.0 MTPA) along with captive power plant (80 MW) and waste heat recovery system (30 MW) of M/s Jaykaycem (Central) Limited, is located at villages Harduaken, Puraina, Sotipura & Madayyan, Tehsil Amanganj, District Panna (M.P.). The proposal was initially received in the Ministry on 10th September 2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry-I) during its 11th meeting held on 26 to 27th September 2016 and prescribed ToRs to the project for undertaking detailed EIA study. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR to the project on 18th April 2017 vide letter No. J-11011/224/2016-IA.II (I) .

20.3.4 Based on the ToR prescribed to the project, the project proponent made an application for EC through online application vide proposal no. IA/MP/IND/127881/2016 dated 31.03.2020.

Details submitted by the project proponent

20.3.5 The proposed project of integrated cement plant by M/s Jaykaycem (Central) Ltd will be implemented in two equal phases. The proposed configuration and capacity of integrated cement plant are as given below:

Name of Unit	No of Unit	Capacity of each Unit	Production Capacity
Clinker Production Unit	02	2.64 MTPA	5.28 MTPA
Cement Production Unit	02	3.00 MTPA	6.00 MTPA
Captive Thermal Power Generation Unit	02	40 MW	80 MW
WHRS	02	15 MW	30 MW
DG Set	01	500 kVA	500 kVA

20.3.6 The total land required for the project is 199.84 ha. out of which 191.90 ha. is private land, and 7.94 ha. is government land. No forestland is involved.

20.3.7 Total area of ~155 ha. land has been acquired till date. Ken River passes 900 mtrs. away from the project area. It has been reported that for water bodies nearby viz., Ken River, Sonar River, Devra Nala, Jonaro Nadi, Karhawani Nala. Modification/ diversion in the existing natural drainage pattern around the project at any stage has not been proposed.

20.3.8 The topography of the area is flat and reported to lies between latitude 24°19'2.99"N - 24°20'2.02"N and Longitude 79°57'30.02"E - 79°58'42.25"E in Survey of India topo sheet No. 54 P/15 & 63D at an elevation of 308-318m AMSL. The ground water table reported to ranges between 12 meters below the land surface during the post-monsoon season and 24 below the land surface during the pre-monsoon season. Based on the hydro-geological study the stage of groundwater development is reported to be 27 %. and thereby the area was designated as safe area.

20.3.9 No National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve etc. are reported to be located in the study area of the project. Schedule-I species of fauna in Amanganj Range are found in the study area, viz., Black Buck, Indian Gazelle, Sloth Bear, Panther or Leopard, Jungle Cat & Indian Pangolin for which Wildlife Conservation Plan was prepared and was also approved by Chief Wildlife Warden of the Govt. of MP. (Annexure C of EIA report)

20.3.10 Proposed plant will be sustained on Kakra-Panna limestone mining lease admeasuring 1,594.34 ha. (Production Capacity 4.08 MTPA). The northern boundary of proposed site of the plant adjoins the southern boundary of granted Limestone mining lease. The required fuel Coal/ Pet Coke (0.7/0.3 MTPA) will be procured from Linkage/e-auction/ purchase. It is dry process which involve crushing of limestone, pre-blending, drying-cum-grinding of raw materials, homogenization, clinkerisation in a rotary kiln with pre-heater and pre-calciner, clinker grinding, cement storage and packing.

20.3.11 Targeted production capacity of cement is 6.0 MTPA in two phases. The limestone for the cement plant would be procured from the Kakra - Panna limestone mining lease and ore transportation will be done through OLBS system

20.3.12 Water requirement of the project is estimated as 5826 KLD for both phases. The water requirement for phase-I is 2875 KLD out of which domestic water requirement of 195 KLD will be met through ground water abstraction, whereas the industrial water requirement of 2680 KLD will be met from Mine Water Storage Tanks (MWST). The permission for drawl of groundwater water is obtained from CGWA vide Letter. No. CGWA/NOC/IND/ORIG/2020/7350 issued by CGWA, New Delhi.

20.3.13 The power requirement of the project is estimated as 86 MW, out of which will be obtained from the captive power plant (CPP) of 80 MW and Waste Heat Recovery System (WHRS) of 30 MW.

20.3.14 Baseline environmental studies were conducted during summer season i.e. from March 2017 to May 2017. Ambient air quality monitoring has been carried out at sixteen locations and the data submitted indicated as: PM_{10} (98^{th} percentile) concentrations are reported in the range of 44.3 to 60.0 µg/m^3; that of $PM_{2.5}$ (98^{th} percentile) in the range of 20.4 to 35.7 µg/m^3 ; that of SO_2 (98^{th} percentile) in the range of 10.0 to19.9 µg/m^3 and that of NOx (98^{th} percentile) in the range of 15.1 to 32.1 µg/m^3. Results of the prediction modeling study indicates that the maximum incremental concentrations of GLC for the proposed project is 19.74 µg/m^3 with respect to the PM_{10}, 1.97 µg/m^3 with respect to the $PM_{2.5}$, 14 µg/m^3 with respect to the SO_2 and 34.7 µg/m^3 with respect to the NO_X.

20.3.15 Ground water quality has been monitored at sixteen locations in the study area and analysed as pH: 6.9 to 7.7 pH, Total Hardness: 72.0 to 688 mg/l, Chlorides: 6.0 to 91.3 mg/l, Fluoride 0.3 .to. 0.7 mg/l, Heavy metals are within the limits. Surface water samples were analyzed from eleven locations for pH: 7.0 to 8.1 pH; DO: 5.4 to 6.8 mg/l and BOD: 2.0 to 10 mg/l. COD: 4 to 30 mg/l.

20.3.16 Noise levels are in the range of 41.8 to 49.4 dBA in daytime and 39.4 to 42.8 dBA in nighttime.

20.3.17 No habitations are in the project area. Thus, R&R is not applicable for the project. However, project proponent made provision for compensation and other benefits for 898 project affected families in terms of land losers {(764 (mines) + 134 (Plant)} in line with LARR 2013 which cost around Rs. 470.92 Cr.

20.3.18 It has been reported that a total of 240 TPD of fly ash in each phase will be generated which will be recycled within the process. Other solid waste will be stored in scrap yard and will be disposed of to a scrap vendor. The Hazardous waste shall be disposed of at TSDF or to authorized recyclers. It has been proposed that an area of 66 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.

20.3.19 Consent to Establish/Consent to Operate shall be obtained from State Pollution Control Board / Pollution Control Committee after obtaining EC for the project.

20.3.20 Public hearing of the project was held on 17.07.2019 at village Devra, Tehsil Amanganj, Dist. Panna (MP) under the Chairmanship of Shri JP Dhurwe (ADM-Panna) for production of 5.28 MTPA clinker and 6 MTPA cement along with 80 MW captive power plant and 30 MW waste heat recovery system. The issues raised during public hearing are employment, drinking water facility, land compensation and land rate issues, development aspects of the area, development of green belt, pollution control, displacement of people and compensation package, hospital and medical assistance and health related issues. An amount of Rs 30.80 Cr has been earmarked for Corporate Environment Responsibility (CER) based on public hearing issues.

20.3.21 The capital cost of the cement plant is Rs. 5586.95 Cr (for Phase-I Rs. 2774.34 Cr & Phase-II Rs. 2812.61 Cr) and the capital cost for environmental protection measures for Cement, TPP & WHRB is proposed as Rs. 199.56 Cr for both phases. The annual recurring cost towards the environmental protection measures is proposed as Rs. 11.92 Cr for both phases**.** Detailed CER plan has been provided in the EMP in its page No. 10.58.

20.3.22 Direct employment generation from the proposed project is envisaged as 820 during operation stage.

20.3.23 Greenbelt will be developed in 66 ha. which is about 33% of the total acquired area. A 10 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 1500 trees per ha. Total Nos. of 99,000 saplings will be planted and developed in 66 ha in 4 years.

20.3.24 A litigation is pending towards the proposed project and land at Lok Adalat, Panna (MP) in notice dated 09.08.2019, through Public Court, Panna (MP) from local person, challenging the Public hearing dated 17.07.2019, conducted by RO – MPPCB, Sagar and ADM, Panna. Notice served to MPPCB, DM-Panna & PP. Copies of replies by MPPCB, DM & PP available for ready reference.

Observations of the Committee (EAC meeting held during 29-30th April 2020)

20.3.25 The committee made the following observations during discussions.

i. A trial case is pending in Lok Adalat of Panna regarding compensation paid to landowners that is hindering further land acquisition.

ii. Required land for the project is199.84 ha. Project proponent has been procured 155 ha (77.5%) so far.

iii. Water is proposed to be abstracted from groundwater, while Ken River is flowing only 900 m away from project site.

iv. Total project cost including mining is Rs 6160 Cr. CER expenditure is not in accordance with the Ministry's OM dated 1st May 2018, i.e., Rs. 38.8 Cr. The activities suggested are not based on the SIA recommendations (Page 130/131 of SIA Report) and public hearing proceedings. Activities envisaged under the CER are mostly related to CSR/ Philanthropy. Project proponent should have included the activities related to COVID-19 also on priority.

v. Specific energy consumption in the proposed plant (725 Kcal/kg of Clinker; OPC - 95 kwh/t and PPC- 70 kwh/t) is very high compared to other cement plants in India (670 kcal/kg; OPC- 85 kwh/t and PPC- 65 kwh/t).

vi. Only 99000 Nos of trees have been considered for plantation in 66 ha land.

vii. Project proponent did not furnish the information related to SO_X and NO_X generation and their control in the process description.

viii. There is no commitment to use alternate fuels in the proposed Plant.

Recommendations of the committee (EAC meeting held during 29-30th April 2020)

20.3.26 In view of the foregoing, and after detailed deliberations, the Committee sought the following additional information for further consideration of the proposal.

i. Current status of the pending case at Lok Adalat, Panna shall be furnished.

ii. Project proponent should submit documents in support of 100% land acquisition, i.e, for 199.84 ha, in accordance with this Ministry's Office Memorandum vide F.No. 22-76/2014 –IAIII dated 07.10.2014.

iii. Project proponent should submit action plan to draw water from Ken River which is 900 m away from project site.

iv. CER shall be revised in accordance with the observations and its implementation mechanism also be furnished.

v. Project proponent shall furnish action plan for optimization of specific energy consumption for production of both clinker and cement. Process plant design parameters shall be revisited, and energy balance shall be furnished.

vi. Recharge water calculations indicate that the amount of rainwater harvested is less than 100 % of the annual consumption. The recharge shall be minimum 100 % of the annual consumption.

vii. Use of Alternate Fuel and Raw Materials (AFR) and corresponding project design and provisions shall be included in the EIA report.

viii. AAQ modelling for accidental releases shall also be carried out. Based on the results, emergency response shall be furnished.

ix. Details of process to control SO_2 and NO_x and corresponding APCD to meet latest emission standards for cement and power plants shall be furnished. .

x. CEMS shall be included in the Environment Management Plan (EMP) to integrate with main plant control center for process as well as emission control as per CPCB Norms.

xi. Scheme for railway siding and the status of the same shall be furnished.

xii. For greenbelt development, 2500 trees per ha shall be taken into consideration in accordance with CPCB guidelines.

20.3.27 Project proponent has replied to ADS on 4th June on PARIVESH portal. the reply is as given below:

i. Current Status of the pending cases at LokAdalat Panna shall be furnished.

Reply:

Background of the Case: A Mediation Proceeding has been initiated by Advocate Chandrabadan Tiwari of Village Devra, Tehsil Amanganj, District Panna (MP) before the Permanent LokAdalat, Panna against (i) the District Collector, Panna, (ii) R.O., MPPCB, Sagar, (iii) The Member Secretary, MPPCB and (iv) Project Proponent.

The Petitioner alleged that Proper procedure was not followed by the Member Secretary and RO of MPPCB while conducting Public Hearing. He alleged that no intimationwas given for the Public hearing and coercion was used during the public hearing, as well as there is a differentiation in the land rate.

All the Non-Applicant Parties (Respondents) have filed their replies before the Permanent LokAdalat and rebutted all allegations with the contention that Prescribed procedure has been followed at all stages for conducting the Public Hearing on 17.07.2019 after giving intimation of Public Hearing. The Public Hearing was conducted by the Additional Collector of Panna and RO, MPPCB. Total 222 number of persons, out of which 157 were land sellers,actively participated in the Public Hearing and shared their appreciation, comments, requirements and concerns. Further, no coercion was used and every participant presented his views freely. It is pertinent to mention that except the Petitioner, no other Participant / Land seller has expressed any kind of grievance. In fact, the Petitioner had also welcomed the Project during hismore than 1 hour long speech, at the Public Hearing. In short, all allegations are frivolous and intended for extracting undue benefits from the Project Proponent.

Current Status: The Mediation Proceeding is pending before the Permanent LokAdalat, Panna presided by the Additional District Judge (Chairperson), Panna and lastly the matter was listed/fixed for Mediation on 28.03.2020. However, the proceedings could not be taken up till date due to COVID-19 pandemic precautions being followed by the Courts/Permanent Lok Adalat. The next date of hearing has not been fixed as yet and will be notified once the Lok Adalat resumes its functioning. We are confident that this case will be decided in our favor during next hearing as this matter is devoid of any merit.

ii. Project proponent should submit documents in support of 100% land acquisition, i.e. for 199.84 ha in accordance with this Ministry's Office Memorandum vide F.NO 22-76/2014-IA III dated 07.10.2014.

Reply:

Very humbly, we would like to submit that the Cement Plant project area of 199.84 ha. comprises of township area 44.122 ha. and open land area 15.98 ha. The land deciphered for plant & colony is being purchased through direct negotiation from land owners. Before the declaration of the Lockdown due to Covid-19 Pandemic, about 155 ha. i.e. 77% of land had been purchased/ allotted. During the period of Lockdown, Consent Letters have been provided by the owners of most essential land making it a contiguous block, on which the Plant can be constructed. List of Khasra numbers for which consent letters have been obtained, making the purchased land contiguous are submitted. With this, the total land purchased / secured is approx. 161 ha. i.e. 81% of

the total land required. The purchase process would have been completed if the current Lock down situation, due to COVID 19 pandemic, would not have been necessitated and the process is at stand still since March 2020.

It is to mention that the land use breakup of the project site wherein about 60 ha. is designated to township and open land area. Town ship of the project area will be constructed a year after the date of start of the construction and further open land of 15.98 ha. will remain open in near future.

As the Bundelkhand region is industrially very backward, people of the area are supportive of the project for their livelihood and to secure a better future for their families.

Considering these facts, the purchased / secured land of 161 ha. will not be a constraint for the construction of the plant. We request the committee to recommend for grant of EC and we wish to assure that -

"We shall start plant construction activity only after 100% land is purchased by us after duly informing the Ministry. This may take 4 to 6 months from the date of start of land registration by Registrar office, with no restriction on age limit for land sellers visiting Registrar's office (Covid-19 guidelines)".

Plant Layout super imposed on Khasra map showing the Purchased / Secured Land and yet to be Purchased Land is submitted.

iii. Project proponent should submit the action plan to draw the water from Ken River which is 900 m away from the project site.

Reply:

Kindly recall the discussion held during the presentation of case before the committee, wherein we had explained the following:

A. The project is integrated project along with the limestone mining project over 1594 ha. of lease area. The mining operation will intersect the water table during 2nd year of operation and the same will have to be dewatered to carryout mining operations. We shall use this water for industrial use in Plant and Mines, for which we have already obtained NOC from CGWA.

B. Further, no extraction of ground water is proposed for any industrial use. The ground water extraction of 195 KLD is proposed for domestic use only, for which CGWA has granted permission.

C. Water is available in KEN River for about 6 months only. Also a dam is constructed approx. 50 km upstream of the plant location and one more dam is also proposed on the upstream side. **Considering that surface water from Ken River is available for a limited period and the fact that seepage water has to be dewatered from the mines, we have not considered use of surface water**.

The above explanations were submitted by us before the committee during our presentation on 29th April'20 and thereafter committee has given consent for withdrawal of ground water for domestic use purposes only.

iv. CER shall be revised in accordance with the observation and its implementation mechanism also be furnished

Reply:

A. The activities covered in revised CER budget presented below, are based on recommendations of SIA report (Page130/131) and public hearing proceeding. As advised by the Committee, budget has been created for activities related to Covid-19 also.

B. The activities involving recurring expenditure e.g. Mobile Clinic, Medical Camps, Maternal and Child health, Skill training, Revolving fund for SHGs, Agriculture extension services, Awareness programs etc. have been separately budgeted under CSR head, over and above the CER budget of Rs. 38.80 Cr.

C. Proposed Capital Budget for Corporate Environment Responsibility (CER) of Cement Plant & Mines (Amount in Rs. Lakhs) On the basis of Public Hearing (PH) Issues, Need Based Assessment (NBA) & Recommendations in SIA Report as given below:

S. No.	Activities	Total (in Rs.Cr)
1.	Health (infrastructure for primary health center, mobile health clinic, veterinary hospitals/ dispensaries)	**4.65**
2.	Actions for COVID-19 (supply of hospital beds, ventilator, sanitation equipment, ppe kits, body temperature scanner, etc.).	**3.50**
3.	Education (construction/ extension/ additional facilities e.g. laboratory, library, computer class, toilets, drinking water facilities etc. for village schools)	**3.88**
4.	Drinking water facilities (hand pumps, wells, tap water, water storage tanks, deepening & cleaning of ponds, roof top rain water harvesting structure, promoting drip irrigation etc.)	**4.27**
5.	Sanitation (construct community toilets, construct drainage system, solid waste management etc.).	**4.27**
6.	Activity Centre for SHGs. SHGs planned for tailoring, production of daily need items, etc. Same facility shall be used for Skill Development Training for women as well. e.g. beautician course, handicraft etc.	**2.72**
7.	Infrastructure (concrete roads, electrification including solar power, panchayat bhawan, community centers, etc.)	**6.98**
8.	Greenery Development Nearby Area -Free distribution of Saplings or seedlings for fruit or non-fruit bearing trees. Community Plantation drive in surrounding villages and schools. Expert guidance to local farmers for adoption of improved agriculture practices to increase of yield of crops & Fodders, Cattle Farming etc.	**2.72**
9.	Others Local Social Needs	**5.82**
Total		**- 3880**
Note: Total Project Cost Plant & Mines is Rs. 6160 Crores, on which the above CER budget has been prepared common for Plant & Mines		

Mechanism of Implementation:

To execute the CER activities, the District Collector, Panna will be requested to constitute the committee comprising of suitable members of the project affected villages along with the representative of Jaykaycem management. The Jaykaycem management shall release the CER funds in coordination with District Collector Panna.

v. Project proponent shall furnish action plan for optimization of specific energy consumption for production of both clinker and cement. Process plant design parameters shall be revisited, and energy balance shall be furnished.

Reply:

Energy consumption on production of Clinker, OPC, PPC and heat consumption on clinker production mostly depends on the quality of various inputs like limestone, fly ash, coal etc. Heat of reaction, chemical composition and grindability of the raw material have a large impact on total fuel and power consumed in producing clinker and cement**.**

With an aim to produce cement with low specific power consumption, selection of technology and equipment shall be done with energy consumption as one of the major deciding factors. Efficient pyro system for clinker production, roller presses and vertical grinding mills for raw material, coal and cement grinding, high efficiency fans, high efficiency HT & LT motors and energy conserving devices such as SPRS and variable frequency drives shall be deployed to reduce the energy consumption.

With the above, we are committed to a specific power consumption of 55.0 Kwh/MT for clinker, 65.0 Kwh/MT for PPC and 85.0 Kwh/MT for OPC and a specific fuel consumption of 705 Kcal/kg clinker. Efforts shall be made to further optimize the energy requirements.

The specific power consumption for the main sections is expected to be as under:

Clinkerization Section		
S.No.	**Area**	**Sp. Power Consumptionin kWh/t Clinker**
1.	Mines & Crusher	2.5
2.	Raw Material Grinding & Aux.	23.0
3.	Pyro-Section & Aux.	21.0
4.	Coal Mill & Aux.	5.0
5.	Misc. (Utilities & Lighting)	3.5
	Total	**55.0**

Cement Grinding & Packing Section			
S.No	**Raw Material**	**Cement Grinding (in %)**	
		OPC	**PPC**
1.	Clinker	95	65
2.	Gypsum	5	5
3.	Fly Ash	-	30
	Total	**100**	**100**

S.No	Area	Sp. Power Consumption in kWh/t	
		OPC	**PPC**
1.	Clinkerisation	52.0	36.0
2.	Cement Mill with auxiliaries	30.0	26.0
3.	Packing Plant including conveying & other misc.	3.0	3.0
	Total	**85.0**	**65.0**

vi. Recharge water calculation indicate that the amount of rain water harvested is less than 100% of the annual consumption. The recharge shall be minimum 100% of the annual consumption.

Reply:

The total fresh water requirement for the proposed project is

Industrial use in Plant = 2174 m^3/ day

Industrial use in Mines = 210 m^3/day

The water requirement for industrial use will be met from dewatering of mines.

Domestic use in Plant = 195 m3/day

Domestic use in Mines = 20m3/day

The water requirement for domestic use will be sourced from proposed bore wells (3 nos. in Plant + 1 no. in Mines)

Thus, annual requirement for industrial and domestic is **948,635 m^3 / Annum**

Ground Water Recharge Arrangement					
S.No	**Recharge Structure Description**	**Nos.**	**m^3/ Day**	**m^3/ Year**	**Remarks**
1.	Recharge through borewells (all proposed borewells will have a filter pit)	3	259	31,104	Considering 40 Raining days. Rain water falling on roof tops will be collected in drains which are directed to filter pits of the bore wells.
2.	Recharge through recharge pits (3.0 m x 3.0 m x 2 m filled with filter media of coarse sand, gravel and pebble)	12	259	124,416	40 Rainy days considered. In the open areas and paved areas rain water will be drained through lined drains and collected in the pit to recharge aquifer.
3.	Constructed Pond Bore recharge (1 in Plant area + 2 in Mines Area) 1. MWST -1 (Area -	3	259	31,104	Ponds get filled during rainy days by rain water runoff from its catchment area and

Ground Water Recharge Arrangement					
S.No	**Recharge Structure Description**	**Nos.**	**m^3/ Day**	**m^3/ Year**	**Remarks**
	66616.46 m^2) Near plant boundary in mines 2. MWST-2 (Area 26860.86 m^2) - Mines 3. MWST-3 (Area 25514.39 m^2) - Plant				mine seepage water through pipeline from mine pit to pond. Each pond shall also be drilled with a bore well of 30-35 m depth for the recharge of deeper aquifer in the rainy season.
4.	Constructed 2 Rain water harvesting ponds 1. RWHP -1 (Area 50,000m^2) - Plant area 2. RWHP -2 (Area 50,000m^2) - Mines area	2	1,603	585,000	Total reservoir volume is 900,000 m^3 cumulative for both RWHP considering 3 m head and water penetration to ground considered 65%
A.	**Total Rain water recharge in Plant**	**20**		**771,624**	Adding 1+2+3+4
5.	Constructed 4 Rain water harvesting ponds in mines 1. RWHP -1 (Area 82,555.23 m^2) 2. RWHP -2 (Area 51,956.29m^2) 3. RWHP -3 (Area 51,956.29m^2) 3. RWHP -4 (Area 9,968. 04 m2)	4		943,262	Same is mentioned in CGWA permission
6.	Mine Water recharge pond MWRP-1	1	1,562	570,259	Available mine water after industrial use
B.	**Total Rain water recharge through recharge ponds in mines**	**5**		**1,513,521**	
C.	**Total rain water recharge plant and mines (A+B)**	**25**		**2,285,145**	
D.	**Total fresh water required for industrial and domestic use**		**2,599**	**948,635**	
Hence, We are recharging 2.4 times i.e. 240% of the water that will be used from ground water					

Therefore, total water consumption is estimated as 9,48,635 m^3 / annum and total recharge is projected as 22,85,145 m^3 / annum which is 240% of the fresh water requirement.

vii. Use of alternate fuel and raw material (AFR) and corresponding project design and provisions shall be included in EIA report.

Reply:

Use of high calorific hazardous waste in proposed cement plant has been mentioned in EIA/ EMP Report Chapter-2, Para No. 2.12.

Experience of using AFR at group's existing cement plants at Rajasthan and Karnataka, wherein, the company currently using various types of solid and liquid wastes, shall be greatly beneficial in utilizing AFR at the proposed project at Panna. The company currently using RDF from nearby municipal bodies, at our integrated Plants located in Rajasthan and Karnataka. In addition, the company also procuring other solid and liquid industrial wastes from pharma /fast moving commodity goods/chemical industries, through designated waste collection & disposing agencies, under a long term agreement, at a negative cost. Covered storage& conveying as well as calibrated dosing facilities have been installed to use different types of such wastes for co-processing.

Based on the above mentioned experience, the proposed project has already been envisaged to co-process various solid as well as liquid wastes, as per their availability, in the nearby areas of the project. The plant has been conceptualized with proper AFR storage, handling, conveying, dosing and firing of AFR in calciner. Facilities shall be created for storage and consumption of AFR material such as spent sludge, waste polythene, RDF etc. All necessary safety guidelines shall be followed for AFR handing, storage and conveying inside the plant.

viii. AAQ modeling for accidental release shall also be carried out. Based on the result emergency response shall be furnished.

Reply:

Accidental release of pollutant may be attributed to the following scenarios which may be considered as **worst** case scenario as detailed below:

1. Raw Mill + Kiln Bag House (RMBH) - Although there are enough safety interlocks, still the Worst case will be an explosion due to CO. In that case, the RMBH fan will trip instantaneously, say after 10 Sec. of event occurrence and finally come to a standstill in 2 minutes. The dust load in the BH will be equivalent to max 4 minutes of normal operational dust load. This is the quantity that will get released to atmosphere through damaged casing and not through main stack.
2. Coal Mill Bag House - Although there are enough safety interlocks, still the Worst case will be an explosion. In that case, the BH fan will trip instantaneously, say after 10 Sec. of event occurrence and finally come to a standstill in 2 minutes. The dust load in the BH will be equivalent to max 4 minutes of normal operational dust load. This is the quantity that will get released to atmosphere through damaged casing and not through main stack.
3. CPP ESP - Although there are enough safety interlocks, still the worst case will be an Explosion. In that case, the ESP fan will trip instantaneously, say after 10 secs of event occurrence and finally come to a standstill in 2 minutes. The dust load in the BH will be equivalent to max 4 minutes of normal operational dust load. This is the quantity that will get released to atmosphere through damaged casing and not through main stack.

4. Cement Mill Bag House- No possibility of accidental release of dust and hence not to be considered in modeling. In Cement Mill Bag filter, very few bags can fail leading to higher emission. This is sensed by CEMS and immediately corrective action taken after stopping the Cement Mill.
5. Limestone Crusher Bag Filter - No possibility of accidental release of dust and hence not to be considered in modeling. In Limestone Crusher filter, very few bags can fail leading to higher emission. This is sensed by CEMS and immediately corrective action taken after stopping the Limestone crusher.
6. Apart from above, two accident scenarios can take place in storage silos –
   a) Collapse of Clinker Silo roof - This has happened in few Plants due to faulty erection / overheating of structural roof members etc. However, no dust escapes to atmosphere and hence there will not be any effect on AAQ.
   b) Collapse of Blending silo - This has also happened in few cases, the only reason being faulty construction of silo. Silo being a concrete cylindrical tank, if this happens, then the stored raw meal powder material which in our case will be around 12,000 MT, drops and disperses in an area of around 300 to 500 mtrs. all around the silo. Thus, this also remains confined to a large extent in Plant area only.
7. On the basis of that total dust load to disperse has been calculated and modeling has been done through AERMOD. The situation considered for this AAQ modeling is with the assumption that all major pollution control equipment will totally fail at once during full production of the Plant. This is a hypothetical situation and can occur only in a natural calamity. **However, in such a situation the whole plant will in any case be stopped immediately and hence, these emission levels will never occur.** All the major stacks of the plant are provided with CEMS. CEMS of all the stacks are connected to plant central control room for online display of emission values and alert messages. **Suitable interlocks will be provided for tripping of the Plant in case emission values exceed pre-set values.**

ix. Details of process to control SO2 and NOx and corresponding APCD to meet latest emission standards for cement and power plants shall be furnished

Reply:

A. Cement Plant:

To control the NOx emission in the cement plant, following technologies shall be used:

i. Low NOx Burner - To control the thermal NOx, Low NOx burner utilizes very less amount of primary air, thus reducing the availability of N2 for converting to NOx.
ii. Pre Heater with Low NOx Calciner - The NOx concentration generated through fuel& thermal NOx are reduced through creating localized reducing zone in the Calciner with the help of air split & secondary burner location.
iii. Meal Split - A small amount of un-calcined material from upper stages of Pre-heater is diverted to specific temperature zone at kiln riser & Calciner to convert NOx back to N2 with the help CO2.
iv. The Maximum daily mean concentration of NOx, expressed as NO_2 will not exceed **600 mg/Nm^3** in the main stack.
v. To control the SOx emission following shall be used:

vi. Fuel SOx - It will be minimized with proper raw mix design to control the sulphur & alkalies present in the raw material. Additional alkali source may be used if in case raw material is in-efficient to provide control in the desirable range.

vii. The Maximum daily mean concentration of SOx, expressed as SO_2 will not exceed **100 mg/Nm^3** in the main stack.

B. Captive Power Plant:

i. The Circulating Fluidized Bed Combustion (CFBC) boilers are the most advanced steam generator technology. Among many distinguishable advantage of CFBC boilers, they achieve low NOx & SOx emission by capturing Sulphur contents of the Fuel during the burning process.

ii. The high concentration of bed material in CFBC boilers along with staged air supply ensures that bulk combustion temperature do not exceed 850-900 ^{0}C making it environment friendly (lesser production of NOx) means of utilizing coal.

iii. The Maximum daily mean concentration of NOx, expressed as NO_2 will not exceed **95 mg/Nm^3**in the main stack.

iv. Flue gas desulphurization (FGD) is the process where SO_2 gases are absorbed from the exhaust gases by using alkali reagent & clean gases are exhausted from chimney into atmosphere.

v. Limestone/lime powder shall be injected into combustion furnace and/or in the conversion zone of the boiler for SO_2 absorption. Limestone/lime powder reacts with SO_2 and forms a mixture of calcium sulphites, calcium sulphates and reacted reagents.

vi. The Maximum daily mean concentration of SOx, expressed as SO_2 will not exceed **100 mg/Nm^3** in the main stack.

x. CEMS shall be included in the environment management plan to integrate with main plant control center for process as well as emission control as per CPCB norms.

Reply:

It has already been provisioned and further assured that CEMS shall be integrated with main Plant control center for process as well as emission control as per CPCB norms.

xi. Scheme for railway siding and the status of the same shall be furnished

Reply:

Presently Amanganj does not have any railway connectivity. However, the development of new Railway Line between Jabalpur – Damoh – Amanganj – Panna having approximate distance of 120 km is in the future plan of Indian Railways. Once this proposed Railway Line between Jabalpur – Damoh – Amanganj – Panna is developed, our Company will also get connected with Railway network, through its Railway Siding in accordance with its business requirement.

xii. For green belt development 2500 trees per Ha.shall be taken into consideration accordance with CPCB guideline.

Reply:

It is submitted that the soil of the area is sandy loamy type. Therefore, plantation at the rate of 2,500 number per ha. is difficult. After the detailed discussion in the previous EAC meeting, Honorable Chairman has permitted the green belt plan with 2,000 Number per ha., and therefore, we hereby provide our commitment that instead of 99,000, we shall develop the green belt with 1,32,000 number over 66 ha.of area.

Green Belt Development			
Year	**Area in ha.**	**%**	**Number @ 2000**
1st	15	22.73	30,000
2nd	20	30.30	40,000
3rd	20	30.30	40,000
4th	11	16.67	22,000
Total	**66**	**100.00**	**132,000**

Observations of the committee

20.3.28 During discussion on the ADS reply, the committee made the following observations.

i. The court case before Lok Adalat is still pending.

ii. The complete land, 199.84 ha has not been acquired. Out of total land, 160.99 ha (approx.80.5) land is available (purchased land 155ha + obtained consent from farmers for land 10.99ha). Several land patches adjacent to the plant, which are owned by farmers, are yet to be acquired or to be obtained consent.

iii. Rs. 38.8 Cr is allocated for CER activities based on issues raised in the public hearing and need based social assessment. District collector will be requested to constitute the committee for implementation.

iv. Optimization of plant and process parameters for minimizing the specific power consumption is satisfactory.

v. Rain Water Harvesting plan is satisfactory.

Recommendations of the committee

20.3.29 In view of the foregoing, after deliberations, the committee deferred the consideration of the proposal in view of (i) non-availability of part of the project land to the project proponent in compliance with the Ministry's OM dated 7th October 2014 and (ii) pending court case in Lok Adalat, Panna.

20.4 Capacity expansion from 4,20,000 TPA to 5,04,000 TPA in Hydro-I and Hydro-II Zinc Smelter through debottlenecking of **M/s Hindustan Zinc Ltd**., located at Chanderiya Lead Zinc Smelter, P.O: Putholi, **District Chittorgarh, Rajasthan**- [Online Proposal No. IA/RJ/IND/124999/2019; File No. J-11011/279/2006-IAII(I)] **– Re-consideration for grant of Environment Clearance under Para 7(ii) of EIA Notification, 2006 based on ADS reply – regarding.**

20.4.1 The proposal was considered in the Reconstituted EAC (Industry-1) meeting held during 23-24th December 2019 and the relevant portion of minutes are given below:

20.4.2 **M/s Hindustan Zinc** Ltd has made application vide online proposal no. IA/RJ/IND/124999/2019 dated 12/12/2019 along with the application in prescribed format (Form-I) seeking Environmental Clearance under para 7(ii) of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

20.4.3 Existing EC obtained is vide F. No: J - 11011/158/2003/IA-II (I)) dated 31st March, 2004 for Hydro Plant - I (from 1,70,000 TPA to 2,10,000 TPA) &F. No: J-11011/279/2003/IA-II (I)) dated 6th December, 2006 for Hydro- II (2,10,000 TPA).

20.4.4 Total area existing of both Hydro Plants – I & II: 20 ha + 26.5 ha = 46.5 ha out of total area of CLZS complex: 335.89 ha. No additional area is required for proposed enhancement of zinc production capacity for both Hydro Plants–I & II. The status of production details in accordance with consent is as below:

i. Hydro-I Zinc Production: 2,10,000 TPA as per CTO vide letter no: F F(CPM)/Chittorgarh(Gangrar)/2(1)/2016- 2017/6058-6060 Dated 25th August 2016; CTO Renewal is under process at RSPCB; application was submitted vide Application ID: 213271 dated 27/04/2018 to RSPCB.

ii. Hydro-II Zinc Production:2,10,000 TPA as per CTO vide letter no: F (CPM)/Chittorgarh (Gangrar)/2(1)/2016-2017/3302-3305 dated 18th December 2019 valid upto 31st January 2024.

20.4.5 The summary of proceedings of earlier Public consultation conducted on 29.06.2006 as given below.

S.No	Issues raised	Response to Public Hearing	Status	Budget & Time frame
1.	Industry will provide job as per their eligibility.	Already 80% job is been provided to locals of nearby villages by company	As per requirement /it is in process. Preference is given to locals.	Continuous
2.	Industry will participate in development of chittorgarh district in social and economic respect.	Company have Carried out various CSR activities in consultation with villagers and locals of chittorgarh.	Regular involvement carried out in various activities with Local administration.	Continuous
3.	Industry will incorporate effective pollution control measures in upcoming project.	Company have adopted world class techniques for Pollution control measures specially for air (we installed 5 CAAQMS stations, online stack analysers attached to RSPCB /CPCB directly, for acid plant company have adopted state of art like technology like DCDA (Double conversion and double air and TGT Plant with super CGM catalyst which add to controlled emission levels much below the specified norms. For	Completed	Involvement in continuous improvement.

S.No	Issues raised	Response to Public Hearing	Status	Budget & Time frame
		waste water management company have two centralised ETP followed by RO and tertiary RO. For HW management company practice secured landfill as per guideline of CPCB. More than 33% plantation is developed within the plant premises.		
4.	Vedanta university should start in Chittorgarh.	Company have started Vedanta college in Sikar and also various education programs is been conducted under CSR activities.	Completed No of educational programmes carried out by HZL in collaboration with government /NGO.	Continuous.
5.	Environmental funds shall be created for any disaster in air, water, HW.	Already company have environment fund which is covered in public liability insurance act 1991.	Completed	Continuous
6.	Reduce SO2 emission.	Company is maintaining emission much below statutory norms with latest Technology. (Statutory norms of SO_2 emission is decreased from 4kg/ton of total production to 2kg/ton). (1) After PH we installed Tail gas treatment plant in our Pyro Plant(2) Used high grade catalyst with Cesium coated for best conversion(3) Change heat exchanger etc(4) Online analyzer installed ,which was connected with RSPCB/CPCB.	Emissions are maintained well within norms, regular monitoring is been done as per statutory requirement and results submitted time to time to authorities.	Continuous
7.	Greenbelt development in periphery	Greenbelt is already developed all along periphery with about 33% green area already covered with fast growing local species by company.	Already more than 33% area is covered as green and gap filling is continuous process at site.	Continuous

S.No	Issues raised	Response to Public Hearing	Status	Budget & Time frame
8.	Zero discharge standard to be maintained by industry.	Company is already Maintaining Zero discharge at site and is in process of installing Multi effect evaporator to support this Zero discharge ambition	ZLD is maintained at site and to strengthen 600 KLD MEE/MVR is under construction at site.	Continuous

20.4.6 The Certified compliance report of existing environmental clearances [J-11011/158/2003-IA II(I) dt. 31.03.2004; J-11011/279/2006-IA II(I) dt. 06.12.2006] from the Regional Office of the MoEF&CC, Lucknow was obtained vide letter File No: IV/ENV/R/Ind- 29/285/2004(285-371)/395 dated 15.11.2019. All non-compliances have been complied. Reply with photographs is already been submitted to MOEF RO vide HZL/CLZS/ENV/33 dated 7.12.2019.

20.4.7 Environmental Baseline studies have been carried for a month from 1st October to 31st October 2019. The ambient air quality levels has been measured in 10 locations as per the NAAQ 2009 are carried out. The major parameters PM_{10}, $PM_{2.5}$, SO_2, NOx and other parameter are found to be within the prescribed limits the ranges are given below:

Sr.No	Parameters	Range (µg/m^3)	Limits (µg/m^3)
1	PM_{10}	65-95	100
2	$PM_{2.5}$	25-58	60
3	SO_2	10.2-22.3	80
4	NO_2	15.3-32.2	80

20.4.8 The Proposed Enhancement of Zinc Production Capacity (from 4,20,000 TPA to 5,04,000 TPA) of both Hydro Plants – I & II under 7 (ii) clause of EIA notification, 2006 (20% onetime capacity expansion). Existing Unit is based on roast leach electro-winning technology. Now, it is proposed to increase the capacity from 4,20,000 TPA to 5,04,000 TPA (20%) in its Zinc Smelter I & II on combined basis by improving the current efficiency in cell house from 89% to 93%, increasing current input in cell house from 190 Ka to 200 kA, Debottlenecking and increasing the number of cells from 124 to 132 in Hydro-I cell house.

20.4.9 Proposed resources requirement (Land/raw materials/water/power) vis-à-vis with granted Environmental Clearance:

Unit	As per EC (Dec'2006)	Existing Status	Additional Proposed Capacity	Total Capacity After Proposed Enhancement
Hydro Smelter	420000 TPA	420000 TPA	84000 TPA	504000 TPA (20% Expansion)
Land Requirement	335.89 ha	335.89 ha	-	No Change
Water Requirement	30670 cum/day	30670 cum/day	-	No Change
Source of	Gosunda Dam (Captive)/STP Udaipur/Proposed STP of			

Water	Chittorgarh/Bhilwara/Other Proposed STPs			
Power Requirement	220 MW	220 MW	20 MW	240 MW
Power Source	Captive Thermal Power Plant / WHRB (18.8 MW)/ Captive Solar Power Plant/ Rooftop Solar Panels/Floating Solar Panels/ AVVNL (4.59 MW DG Sets for Emergency Purpose)			
Raw Material Concentrate:	677177 TPA	677177 TPA	21282 TPA	698458 TPA
Calcine	206000 TPA	206000 TPA	131990 TPA	337990 TPA
Employment	5141	5141	-	No Change
Project Cost (Rs in Cr)	2647	2647	138.5	2785.5
Environment Protection cost (Rs in Cr)	190.1	190.1	48.5	238.6
• No Change in existing Process Technology (roast leach electro-winning Technology). • No Change in land & Water requirement. • 20% Expansion in Hydro Plant by improving the current efficiency, 8 new cells installation & Debottle necking project.				

20.4.10 Pollution load quantification (Air/Water/Solid & hazardous waste/traffic) vis-à-vis with granted Environmental Clearance after enhancement of hydro plants – I & II.

Name of the Unit	**Stack Emission**	
	Stack Connected to	**PM Norms (mg/Nm^3)**
Hydro Plant (H-I)	Acid plant-Mist	50
	Bag house attached to melting furnace no. 1 (a)	50
	Bag house attached to melting furnace no. 2 (a)	50
	Bag house attached to dross milling	50
	Bag house attached to Zinc Dust	50
Hydro Plant (H-II)	Acid plant-Mist	50
	Bag house (a) & (b) attached to melting furnace No. 1	50
	Bag house attached to dross milling	50
	Bag house attached to Zinc dust plant	50

SO_2 Emission from Acid Plant	
Acid Plant	**SO_2 Norms Emission Factor (kg/Tonne of acid Production)**
Acid plant-(Hydro-I)	2
Acid plant-(Hydro-II)	2

20.4.11 The proposed project is within the existing leaching circuit of Hydro Plants I & II

complex. The proposed enhancement project will not have any additional air pollution source. The pollution load after proposed enhancement of Hydro Plants will be well within the norms by existing pollution control measures and stacks. The impact of the existing plant has been covered in the baseline environmental monitoring studies.

Solid Waste Generation & Management Details Of Hydro Plants -I & II

Sr. No.	Type of Waste Quantity (Units)	Granted Quantity (Units)	Additional Quantity (Units)	Total (After Enhancement)Quantity (Units)	Method of Treatment and Disposal
1	Cooler cake (MTPA)	5,000	1000	6000	Reuse/Recycle/Sale to registered recycler/Co-processing/ Disposal in SLF
2	Anode mud (MTPA)	2,200	0	2200	Reuse/Recycle/Sale to registered recycler /Disposed in SLF
3	Used/Spent oil (KLPA)	80	16	96	Reuse/ Sale to registered recycler
4	Waste oil (KLPA)	270	0	270	Reuse/Sale to registered recycler
5	Cobalt cake (MTPA)	1,000	0	1000	Reuse/Recycle/Sale to registered recycler /Disposed in SLF
6	Purification cake / Enrichment cake (MTPA)	12,520	0	12520	Reuse/Recycle/Sale to registered recycler /Disposed in SLF
7	Mercury and Mercury compounds	22 MTPA	-22 MTPA	0	Reuse/Recycle/Sale to registered recycler /Disposed in SLF
8	Spent catalyst in KL	60	0	60	Sale to registered recycler/disposed in SLF
9	Non-ferrous Sludge from ETP and scrubbers	9,600 MTPA	4,000	13,600	Reuse/Recycle/Sale to registered recycler /Disposed in SLF/Co processing in Cement industries
10	Discarded containers/barrels /liners used for Haz. Waste/chemicals	1,400 No's/Y	0	1,400 No's/Y	Reuse/Recycle/Sale to registered recycler /Disposed in SLF
11	Flue gas cleaning residue	2.0 MTPA	0	2.0	Reuse/Recycle/Sale to registered recycler /Disposed in SLF

Sr. No.	Type of Waste Quantity (Units)	Granted Quantity (Units)	Additional Quantity (Units)	Total (After Enhancement)Quantity (Units)	Method of Treatment and Disposal
12	Spent ion exchange resin containing toxic metal	1.0 MTPA	0	1.0	Sale to registered recycler/disposed in secure land fill
13	Water purification Resin	2.0 MTA	0	2.0	Sale to registered recycler/disposed in secure land fill
14	Filter and Filter material which contain organic compound	100 MTA	0	100	Sale to registered recycler/disposed to secure land fill/approved Incinerator
15	Oil Soaked Jute/cotton waste/Used PPE's	-	10.0	10.0	Sale to registered recycler/disposed to secure land fill/approved incinerator
16	Jarosite cake*	3,00,000	-1,00,000 (after Fumer)	2,00,000	Utilization in Cement Manufacturing/ Road/Rail embankment/Concrete construction/ disposal in Lined Jarofix yard
17	MEE Salt	-	5000	5000	Recovery of Glauber Salt/ Disposal in SLF

**Jarosite has been excluded from the schedule 1 of the Hazardous Waste Management Rules 2016 as the high volume low effect waste.*

*** As per latest CPCB Guideline Calomel is now been reclassified as by product.*

20.4.12 Air modeling has been carried out for PM (cumulative) and also for other criteria pollutants such as SO_2 and SO_3/acid mist. Acid plants in Hydro-I and Hydro-II will generate SO_2 and SO_3/acid mist during operation. The emissions from acid plants (existing and operating unit) along with additional load has been considered for estimation of net pollutant load of Zinc Smelter. The details of predicted incremental concentrations (GLCs) of PM, SO_2 and SO_3/acid mist are as below:

i. Predicted 24 Hourly Short Term Incremental Concentrations (GLCs) for Particulate Matter:

Parameters	Concentration (µg/m^3)	Distance (km)	Direction
Proposed capacity enhancement of zinc producción activities			
PM	0.58	1.0	SW

The PM Concentration will not exceed the Prescribe limit of 50 mg/Nm^3

ii. Predicted 24 Hourly Short-Term Incremental Concentrations (GLCS) (SO_2, SO_3 / Acid Mist)

Parameters	Existing		After Expansion		Distance/ Direction
	ppm/mg/Nm3	(µg/m^3)	ppm/mg/Nm3	(µg/m^3)	
Proposed capacity enhancement of zinc production activities					
SO_2	180 ppm	1.55	200 ppm	1.74	1.0 km, SW
SO_3 / Acid Mist	32.4 mg/Nm^3	0.10	38.9 mg/Nm^3	0.12	1.0 km, SW

Note: Emission Source: Acid Plant Main Stack; Source: CLZS -HZL

The SO_2 Concentration will not exceed the Prescribe limit of 2.0 kg/metric ton of acid produced and SO_3/acid mist limit of 50 mg/Nm^3

20.4.13 The net increase in SO_2 concentrations is about 0.19 µg/m^3 which is insignificant due to capacity expansion from 4,20,000 TPA to 5,04,000 TPA (20%) of Zinc Smelter-I & II on combined basis. Hence, there will be no significant impact on air quality due to the proposed expansion.

Parameter	Incremental GLC µg/m^3	Background Level (max) µg/m^3	Resultant concentration µg/m^3	NAAQS µg/m^3
PM_{10}	0.58	79	79.58	100
SO_2	0.19	17.3	17.49	80
SO_3/Acid mist	0.12	-	-	-

20.4.14 The estimated cost of the proposed enhancement of zinc production capacity will be Rs. 138.5 Cr (for Hydro-I Plant & Hydro –II Plant) including the proposed Environmental budget is about Rs. 48.5 Cr for proposed enhancement of zinc production capacity.

20.4.15 The details of proposed CER activities are as given below:

Area of Intervention	Expenditure Rs. in Lakhs
Microenterprise development	50
Skilling of local youths	40
Drinking water and pipeline	30
Plantation of saplings in villages and community land	10
Total	**130**

20.4.16 No litigation is pending in any court related to project or activity. No show cause notices/direction has been issued under Air Act, Water Act and Environment (Protection) Act, 1986.

20.4.17 Name of the consultant: M/s. Vimta Labs [S.No.162, List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019].

Observations of the Committee (EAC meeting held during 24-25th December 2020)

20.4.18 The Committee noted that the project proponent has not submitted the proper justification for considering the proposal under clause 7(ii) of EIA Notification, 2006. Further, pollution load assessment for pre and post-expansion is required.

Recommendations of the Committee (EAC meeting held during 24-25th December 2020)

20.4.19 After detailed deliberations, the Committee recommended to seek the following additional information for consideration of the proposal further.

i. Justification for considering the proposal under clause 7(ii) of EIA Notification, 2006 shall be provided.

ii. Pollution load assessment for pre and post-expansion shall be furnished.

20.4.20 Project proponent replied additional details sought (ADS) by committee on 7th March 2020 on portal. The details are as given below:

i. Justification for considering the proposal under clause 7(ii) of EIA Notification, 2006 shall be provided.

Submission: Proposal is for Enhancement of Zinc Production capacity from 4,20,000 TPA to 5,04,000 TPA (20%) of Zinc Smelter Hydro-I (8 cell addition Project) & Hydro-II on combined basis under clause 7 (ii) (a) of EIA notification, 2006.

- No Change in the existing manufacturing process consists of Roast Leach Electro-Winning Technology, Land use, Water usage and Manpower.
- Existing other plant facilities are sufficient to enhance the production.
- Environment Impact Assessment Study has been submitted to MOEF&CC along with Proposal.

ii. Pollution load assessment for pre and post-expansion shall be furnished.

Project proponent submitted the following details:

Parameter	Pre-expansion (420000 TPA)	Post-expansion (504000 TPA)	Remarks
Air Environment			
SO_2	2 kg/ton of Sulphuric Acid Produced	1 kg/ton of Sulphuric Acid Produced	**To increase** • FAT pump circulation from 570 M3 /Hr to 620 M3 /Hr (Including crossing) to improve absorption efficiency. • IAT pump circulation from 982 M3 /Hr to 1032 M3 /Hr (Including crossing) to improve absorption efficiency. **To Replace** • FAT & IAT irrigation system with improved design to improve adsorption efficiency. • IAT & FAT candle filters with collection efficiency of >1 micron to 100% and >0.5 micron to 96%
SO_3/Acid Mist	50 mg/Nm^3	30 mg/Nm^3	
PM	50 mg/Nm^3	30 mg/Nm^3	• Upgradation of Bag House • Bag Fabric: -

			Polypropylene will replace by PTFE.
Water Environment			
Water Requirement	30,670 (26 KL/Ton)	30,670 (22KL/Ton)	• No additional water required. Further, planning to reuse the treated sewage from Proposed STP of Chittorgarh/Bhilwara City to reduce freshwater requirement. • Strengthening of Recycling System with recovery of additional 580 m^3/day water from MEE/MVR. • Zero Liquid discharge being maintained.
Resource Requirements			
Land	335.89 ha	335.89 ha	No additional land required
Power Requirement	220 MW (4588.6 KWH/Ton)	240 MW (4171.4 KWH/Ton)	Additional 20 MW power will be sourced from Renewable Energy.
GHG Emission Reduction in tCO2e/T	1792296 (4.27 tCO2e/T)	1792296 (3.55 tCO2e/T)	No Change.

20.4.21 Project proponent uploaded on portal the certified compliance by Regional Office Lucknow, MoEF&CC along with other details vide letter No. HZL/CLZS/ENV./51/2020 dated 15.06.2020 in reply to another ADS.

20.4.22 The proposal was reconsidered in the Expert Appraisal Committee (EAC) (Industry-1) meeting held during 25-26th June 2020.

Observations of the committee

20.4.23 During discussions, the committee made the following observations in the up-gradation of the plant.

i. CTO for existing operations of both Hydra I and II have been obtained. CTOs are valid till 31.8.23 for Hydra I and 31.1.24 for Hydra II.

ii. Treated sewage water from STPs of Chittorgarh and Bhilwara is proposed to bring to Chanderia for use in the plant processes.

iii. Project proponent proposed to reduce SO_2 emissions from H_2SO_4 plant from 2 kg/t of acid to 1 kg/t of acid, that of acid mist from 50mg/Nm^3 to 30mg/Nm^3 and that of particulate matter (PM) from 50mg/Nm^3 to 30mg/Nm^3 in the upgradation of the plant.

iv. It is proposed to strengthen the ETP to recycle additional 580 Cum/day of effluents by installing MEE for RO rejects.

v. Additional 20 MW power required for the additional load shall be procured from Renewable resources.

20.4.24 Further, the committee asked the project proponent to furnish the details of process optimization and addition of eight nos. of cells. Project proponent submitted the details through email on 26.06.2020 and the details are as given below:

I. Upgradation of Rectifier Rating from Existing 192 kA to 200 kA:

i. Presently there are four rectifier units (Two in each hydro) having 96 thyristors in each rectifier

ii. 1 KA running Current in each thyristor

iii. Design capacity in each thyristor: 3KA

iv. To enhance current input from 192 KA to 200 KA, study conducted by OEM (M/s ABB) and following actions will be done as per recommendation

v. To Increase each thyristor current from 1 KA to 1.04 KA

vi. Increase number of plates in PHE to compensate extra heat load in thyristors

vii. Installation of addition Oil cooler to compensate extra heat load in transformer winding

viii. Existing busbar system is capable to operate cellhouse at 212 KA pas per design. The following are the design details and operability of Thyristor.

Thyristor Rating as per design	Load / thyristor @ 192 kA	Load / thyristor @ 200 kA
3 kA	1 kA	1.04A

II. Upgradation of Purification & Cell House to operate Cell house from 190 to 200 KA

i. **Spent Cooling Tower**: There are 26 Cooling towers in Plant. 14 No's in Hydro-1 and 12 No's in Hydro-2. Installation of two additional spent cooler in each cell to maintain the spent temperature less than 42 Degree Celsius in both cell house.

ii. **Spent Circulation Pump:** Installation of two addition pumps along with cooling tower in both hydro to increase the spent flow according to current

iii. **Cathode Stripping Machine:** Upgradation of stripping conveyor, receiving conveyor, returning conveyor, wagon hoist motor, hydraulic pump flow and machine encoders is required for cathode stripping machine to increase speed from 300 cathode/hr to 400 cathode/hr.

iv. **Intermediate Bus Bar cooling system:** Upgradation of PHE and its pumps to increase the surface area and DM water flow to bus bar to maintain the temperature owing to increase in current flow through bus bar. Replacement of all the piping header to sustain the increased flow rate of DM water.

v. **Cell Area**: Increase the electrolyte feed pipe size from 125 NB to 200 NB to accommodate the increased flow of electrolyte flowing to the cells.

vi. **Purification area**: Installation of three new automatic filter press in Purification plant to improve supply solution flow. Installation of one addition supply pump with discharge line up to cell house.

III. Current Efficiency Improvement Plan for Hydro Plant

To improve production capability with change in concentrate quality, a study was conducted by Technical Experts to freeze optimal process parameters and to evaluate the impact of current in Leaching-Electrolysis process. Effect of process parameters at Leaching-Electrolysis for the electrode position of zinc has been carried out & Influence of current density on the deposition process was also investigated. As per study, efficiency of zinc deposition was affected by calcine quality, zinc concentration in electrolyte, condition of electrodes, neutral leaching parameters & Purification operation etc. Following actions are proposed based on technical study to Improve current efficiency from 89 to 93%.

i. **Sulphur Sulphide less than 0.4%:** To maintain ferrous in desire range in leaching plant, sulphur Sulphide value in calcine must be less than 0.4%. Excess ferrous generation in leaching circuit will increase Iron impurities in supply solution and have high impact on the current efficiency in cell house.

   Following actionable to control Sulphide sulphur in Roaster:
   a) Preparation of two blend mixture for controlling the s/s.
   b) Increase the cooling tower fan blade angle.
   c) Throughout cleaning of system to reduce the pressure drop during the shutdown
   d) Schedule repair/replacement of all equipment during the shutdown.
   e) Oxygen Enrichment in roasting process
   f) Micro palletization in Roaster

ii. **Leaching process Optimization:** Leaching operating parameters to be controlled as below:

   a) Neutral leaching head tank T/Fe at 1.3 +/- 0.2 gpl
   b) Neutral Leaching First reactor pH 3.0 +/- 0.05 by feed forward control
   c) Neutral Leaching Second Reactor pH 4.7 +/- 0.1
   d) Pre-Neutralization Overflow pH at 4.8 to 5.0 with Fe++ 50 - 100 PPM
   e) Use of low pressure compressed air (1.7 Kg) in neutral Leaching & Pre-Neutralization for oxidation
   f) Magnesium removal section overall efficiency at > 80% to reduce magnesium impurities in supply solution.

iii. **Purification Operational Excellence**

   a) Efficient Zinc Dust dosing
      - Automation of Zinc Dust dosage & solution flow
      - Online calibration of Loss in weight
      - lining of bins to ensure continuous & free flow

   b) Installation of High RPM agitator

   c) Installation of online monitoring of PAT Dosage & automation with flow

   d) Introduced acid dilution tower to get uniform temperature and acidity for cloth regeneration

   e) Filter press Operation at < 2Kg feed pressure

   f) Process capability monitoring & control in HOT Purification stage

   g) Improvement in supply solution quality
      - Installation of Fully automatic filter press in place of current manual filter press.

- Replacement of filter cloth from polyester cloth to polypropylene cloth.
- Fully automatic cloth cleaning system to avoid manual intervention.
- Installation of low retention reaction tank in Leaching.

h) Reduction of Magnesium impurities from supply solution

- Installation of addition lime storage silo to avoid stoppage due to low bin level.
- Installation of addition filter press to improve capacity from 6.5 m^3/hr to 8.0 m^3/hr.
- Replacement of fresh water with MR overflow for lime slurry preparation unit.

iv. Cogent Headers Replacement: The cathode header quality with respect to resistance is some most important criteria to ensure the healthiness of the header bars. At present the cathode header bars are rejected on physical damages, assumption basis or according to the number of years of use. We are planning to use a megger Instrument for testing of the headers, the standard testing procedure will be developed which depend on the Millivolts drop at 400Amp.

Headers having voltage drop > 1.5 mV are being rejected

v. Electrode Management:

Electrode Alignment: The electrodes in the cell house are supposed to be in a face to face exposure to each other, any deviation in the position called misalignment of the electrode leads to generation of the dendrites on the edges of the cathode, it has impact on quality of the product, higher chances of short circuit. Electrode alignment to be monitored regularly

Anode Grading: The physical condition of anode along with its dimension to be classified in three categories A, B & C grade.

A grade anode - 100 % physical dimension as compared to new one
B grade anode - 95 % physical dimension as compared to new one
C grade anode - 90 % physical dimension as compared to new one

A grade anode is to be maintained >95% % by replacing C grade anode on schedule basis.

Improvement in Anode Wash Quality: During study, it was appraised, anode wash had significant effect on zinc deposit rate. To improve the anode wash quality instead of washing pressure from 90-125 bar, high pressure system need to be upgrade by constant pressure washing of anode at 180 bar. pump model 400 ARP (2 no's) is to be replaced by Model 250 ARP (4 no's).

vi. Electrolyte Management:

Zinc in Electrolyte: The Zn deposit on the cathode varies under different Zn concentrations. Generally, the current densities have a strong effect on the Zn deposit on the cathode and at higher current density, high zinc concentration is favourable for current efficiency. Based on higher input current, spent zinc to be increased from 48-52 gpl to 52-55 gpl

IV. Addition of Eight nos. of Cells in Hydro-I:

CLZS has proposed to enhance the Zinc production capacity of CLZS Hydro Plant from 420 to 504 KTPA by Cell Operation from 190 KA to 200 KA Power Load & Current

Efficiency from 89% to 93% with addition of eight nos. of cells in Hydro-I without addition of transformers and rectifiers

Recommendations of the committee

20.4.25 In view of foregoing, after deliberations, the committee recommended the proposal for expansion of the project by upgradation of plant and addition of eight nos. of cells under the provisions of para 7(ii) of EIA Notification, 2006 with the following specific conditions along with sector specific general conditions.

i. SO_2 emissions from H_2SO_4 plant shall be less than 1 kg/t of acid.

ii. Acid mist from H_2SO_4 plant shall be less than 30 mg/Nm^3 .

iii. Particulate matter levels from the stacks shall be less than 30 mg/Nm^3.

iv. Treated sewage from STP of Chittorgarh and Bhilwara shall be used in the plant processes.

v. Existing ETP shall be strengthened to recycle additional 580 Cum/day of effluent by installing MEE for RO rejects.

vi. Additional 20 MW power required for the additional load shall be procured from renewable energy sources to reduce GHG emissions. Records of renewable energy purchased shall be maintained and submitted to RO along with EC Compliance report.

vii. Plant shall be operated on Zero Liquid Discharge (ZLD).

viii. Additional 100000 trees shall be planted to improve greenery in the plant premises.

ix. Solar energy shall be generated at the roof tops of the plant and office buildings.

x. RWH and Recharge shall be done to recharge 200 % of the water consumed annually.

xi. All CER projects should be completed within 3 years.

20.5 Setting up of 2 MTPA pellet plant by **M/s KIOCL Ltd.,** in the premises of Rashtriya Ispat Nigam Limited (RINL) at **Visakhapatnam, Andhra Pradesh** [Proposal No. IA/AP/IND/158255/2020; MoEF&CC File No. J-11011/160/2019-IA.II(I)] – **Amendment in Terms of Reference - regarding.**

20.5.1 M/s. KIOCL has made an online application vide proposal No. IA/AP/IND/158225/2020 dated 17.06.2020 in the prescribed Form -3 along with other reports to the Ministry for seeking amendment in Terms of Reference (ToR). The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

20.5.2 The proposal of M/s KIOCL was initially received in the Ministry vide proposal No. IA/AP/IND/99687/2019 dated 18.03.2019. The proposal was considered by the Reconstitute Expert Appraisal Committee (EAC) (Industry-1) meeting during 29-30th April 2019 for prescribing TOR. Accordingly, the Ministry issued prescribed ToR vide letter no. IA-J-11011/160/2019-IA.II(I) dated 20.05.2019 for undertaking detailed EIA study.

20.5.3 The location of the proposed pellet plant is changed by a distance of 1.5 km from the earlier location for which TOR was issued. An application for amendment in TOR was submitted vide proposal no. IA/AP/IND/133773/2019. EAC in its 15th meeting of reconstituted committee held on 16.01.2020 directed to amend the EC of RINL and earmark the area allotted for pellet plant. The area earmarked for pellet plant in RINL layout has been accepted for amendment by MOEF&CC in 16th meeting of reconstituted EAC held on 24.02.2020.

Details submitted by the project proponent

20.5.4 Consequent to amendment in RINL EC, an application in the prescribed format for amendment in TOR was submitted vide online application no. IA/AP/IND/158255/2020 on 17.06.20. The following amendment is sought by PP on the issued TOR:

Reference of approved TOR	Description as per approved TOR	Description as per proposal	Remarks
Clause no. 2	The proposed unit will be located within existing premises of M/s. Rashtriya Ispat Nigam Limited, Village: Kanithi (part), Pegantayada (part), Nellimukkee (part), Taluka: Visakhapatnam, District: Visakhapatnam, State: Andhra Pradesh	The proposed unit will be located within existing premises of M/s. Rashtriya Ispat Nigam Limited, Village: Kanith,Taluka: Gajuwaka, District: Visakhapatnam, State: Andhra Pradesh	Change in location
Clause no. 3	The land area identified for the proposed plant is 92 acres which is an industrial area and is located within the premises of RINL. The entire land has already acquired by RINL for the project. Of the total area of 92 acre about 37 acre of land (40.2% of the total area) is planned for green belt development.	The land area identified for the proposed plant and railway siding is 92 acres which is an industrial area and is located within the premises of RINL. The entire land has already been acquired by RINL for the project. Of the total area of 92 acre about 30.5 acre of land (33.1% of the total area) is planned for green belt development.	Change in area
Clause no. 5	Total project cost is approx. Rs 1032.8 Crore (INR). Proposed employment	Total project cost is approx. Rs 1027.6 Crore (INR). Proposed	Change in project cost

	generation from proposed project will be 197 no.s direct employment.	employment generation from proposed project will be 197 no.s direct employment.	
Clause no.7	The ore transportation is planned through rail upto Gangavaram	The ore transportation is planned through ships/rail upto Gangavaram	

20.5.5 The proposed unit will be located within existing premises of RINL. Village: Kanith Taluka: Gajuwaka, District:Visakhapatnam, State: Andhra Pradesh

20.5.6 The revised land area identified for the proposed plant and railway siding is 92 acres which is an industrial area and is located within the premises of RINL. Of the total area of 92 acre about 30.5 acre of land (33% of the total area) is planned for green belt development.

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

20.5.8 The revised project cost is approx. Rs.1027.6 Crore (INR). Proposed employment generation from proposed project will be 197 nos. direct employment.

20.5.9 The targeted production capacity of the pellet plant is 2 MTPA. The iron ore fines and other raw materials for the plant would be sourced from following locations:

	Raw material	**Quantity (T/Year)**	**Source**
1	Iron ore fines	20,65,380.4	Indigenous(NMDC, Chhattisgarh and other sources from Odisha)
2	Limestone	59,098.21	Indigenous (Nearby locations)
3	Coke breeze	28,859.63	Indigenous (From RINL and other sources)
4	Bentonite	13,592.59	Indigenous (From Kutch)

20.5.10 The ore transportation is planned through port/rail upto Gangavaram. The list of facilities is same as in the earlier proposal and are given as below.

SI. No.	**Unit name**
1	Iron ore day bin building
2	Iron ore grinding building
3	High rate thickener
4	Slurry storage tank
5	Filter feed pump house
6	Filtration building
7	Storage shed for filter cake
8	Storage shed for bentonite

SI. No.	Unit name
9	Storage shed for coke breeze
10	Additive grinding building
11	Mixing & balling building
12	Induration building for straight grate machine
13	**ESPs & process fans**
14	**Process chimney**
15	Central control room
16	Hearth layer separation building & product screening
17	**Dedusting unit for hearth Layer Separation Building (HLSB) & chimney**
18	**Dedusting unit for Induration discharge end & chimney**
19	Fines bin building
20	Pellet stockyard
21	Furnace oil and Light Diesel Oil (LDO) storage unit & fuel oil pump house
22	Main Receiving Sub Station (MRSS)
23	Diesel generator
24	Load Centre Sub Station (LCSS)
25	Central laboratory
26	Compressed air station
27	Water pump house and soft water treatment plant

20.5.11 The estimated power requirement of the proposed plant is 20 MVA. A new transmission line is proposed for drawing power from Gangavaram port grid sub-station of APTRANSCO, through double circuit 132 kV overhead transmission line.

20.5.12 Proposed raw material requirement is given in Table 01 and fuel requirement for project are Furnace oil - 30,928 m^3/yr (from nearest oil storage company), LDO and LPG. Fuel consumption mainly is LDO for pelletisation process and LPG is planned for initial startup of the project.

20.5.13 Water consumption for the proposed project will be 84 m^3/hr and effluent generation is not expected as complete recirculation of waste water generated from the plant is envisaged. Domestic waste water will be treated in MBR based sewage treatment plant and treated water will be reused.

20.5.14 The proponent, M/s KIOCL Limited has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

Observations of the committee

20.5.15 TOR was issued for a pellet plant to be installed by KIOCL in RINLs premises at Vishakhapatnam.

i. Location of the project site has been changed and necessary amendment in EC of RINL have been recommended during EAC meeting in Jan 2020.
ii. Changes requested are for location change and the project cost etc.

Recommendations of the committee

20.5.16 In view foregoing, after deliberations, the committee recommended to amend TOR with the following additional ToR:

i. Revised location shall be within the coordinates as specified in PFR.
ii. Raw material transport shall be carried out by rail and ship. Road transport is permitted from port to the plant.
iii. Action plan for Rainwater Harvesting (RWH) and Recharge shall be carried out to recharge 100% of the water consumed annually.
iv. Green belt in 37 acres as committed earlier shall be planted.

20.6 Expansion of Integrated Cement Plant - Clinker (2.4 to 4.5 Million TPA), Cement (4.0 to 6.0 Million TPA), Waste Heat Recovery Power Generation (30 to 35 MW), Residential Colony (400 to 535 households, buildup area 119776 sq. meter) along with Installation of Captive Power Plant (2 x 25 MW), Synthetic Gypsum Plant (1560 TPD) and D.G. Set (2000 KVA) **by M/s. Shree Cement Ltd.** at Village: Benkanhalli, Taluka: Sedam, District: Kalaburagi, **Karnataka** [Proposal No. IA/KA/IND/149260/2020; MoEF&CC File No. J-11011/458/2008.IA.II(I)] – **Amendment in Terms of Reference and validity extension of ToR - regarding.**

20.6.1 M/s. Shree Cement Ltd made an online application vide proposal No. IA/KA/IND/149260/2020 dated 17.03.2020 in the prescribed Form -6 along with other reports to the Ministry for seeking extension of validity of Terms of Reference (ToR). The proposed project activity is listed at S. No. 3(b) Cement Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

20.6.2 M/s. Shree Cement Ltd., (SCL) Unit: Karnataka Cement Project has an existing Integrated Cement Plant of Clinker 2.4 MTPA, Cement 4.0 MTPA, at Village: Benkanhalli, Taluka: Sedam, District: Kalaburagi (Karnataka).

20.6.3 Environmental Clearance for Clinker 2.4 MTPA, Cement 4.0 MTPA and Captive Power Plant 44 MW has been obtained from MoEFCC, New Delhi on 19th Sept., 2012; amended vide same letter no. dated 9th Feb., 2018 and 15th June, 2018.

20.6.4 Thereafter, Company has proposed Expansion of Integrated Cement Plant - Clinker (2.4 to 4.5 Million TPA), Cement (4.0 to 6.0 Million TPA), CPP (2 x 22 MW to 2 x 25 MW), Waste Heat Recovery Power Generation (20 to 35 MW), Synthetic Gypsum Plant (1560 TPD), D.G. Set (2000 KVA), and Residential Colony from (400 to 535 households build up area 119776 sq. Meter) for ToR was granted by MoEFCC, New Delhi vide their letter no. J-11011/458/2008 dated 28th March, 2017 and was valid upto 27th March. 2020.

Details submitted by the project proponent

20.6.5 In view of above, Company has proposed validity extension in ToR Letter as the company could not implemented the said project within stipulated timeframe due to the delay in obtaining ToR letter for Captive Limestone Mine as the amalgamation of mining leases was in process and company had planned composite Baseline Study for Integrated Cement Plant and Captive Limestone Mine.

20.6.6 Company intends to implement the said project with below mentioned proposal and wants extension in validity of ToR Letter along with amendment.

Units	**Capacity as per ToR granted**	***Capacities after Proposed amendment***	***Remark***
Clinker (MTPA)	2.4 to 4.5 Million TPA	2.4 to 4.5 Million TPA	Same as ToR
Cement (MTPA)	4.0 to 6.0 Million TPA	4.0 to 6.0 Million TPA	Same as ToR
Waste Heat Recovery Power Generation (MW)	20 to 35 MW	30 to 35 MW	The Capacity of WHRS mentioned in ToR Letter is 20 to 35 MW; Company has obtained amendment / corrigendum in the existing EC dated 19th Sept., 2012, for capacity expansion from 20 MW to 30 MW vide letter dated 15th June 2018. In view of above, it is proposed an expansion in WHRS from 30 MW to 35 MW. However, WHRS installation is exempted from obtaining EC.
Residential Colony (Nos. of households)	400 to 500 Household	400 to 500 ousehold	Same as ToR
Captive Power Plant (MW)	2 x 22 to 2 x 25 MW	2 x 25	As per the ToR issued on 28th March, 2017; expansion of EC Capacity in Captive Power Plant from 2 x 22 MW to 2 x 25 MW was proposed. As CPP has not yet been installed and existing EC has been expired on 18th Sept, 2019. Thus, it is proposed an amendment in ToR Letter for new installation of CPP (2 x 25 MW).
Synthetic Gypsum Plant (TPD)	1560	1560	Same as ToR
D.G. Set (KVA)	2000	2000	Same as ToR

20.6.7 Also, as per the earlier EC and in ToR Letter; the source of water is typographically mentioned as ground water only. In view of above, it is proposed to amend the source of water from the both ground water and Kagina river. As the company has already obtained permission for 1500 KLD from Kagina River.

20.6.8 ***Status of Implementation of the earlier ToR*** - Baseline study for the project has been carried out during Winter Season (Dec., 2018 to Feb., 2019) and public hearing documents have been submitted on 06th March, 2020.

20.6.9 ***Schedule of completion of balance activities -***

S. No.	Activity description	Cumulative Duration (Months)
1.	Submission of PH documents to SPCB	Already submitted on 06.03.2020
2.	Conducting Public Hearing	Within 45 Days
3.	Appraisal from EAC	60 Days
4.	Grant of EC by MOEF&CC	60 days
Note: Time schedule has been taken as per EIA Notification, 2006.		

20.6.10 There is no court case or litigation under EIA Notification to the project or related activity.

20.6.11 *Name of* Consultant - *J.M. EnviroNet Pvt. Ltd. S. No. in QCI List - "98" (as updated on 10th June, 2020)*

Observations of the committee

20.6.12 During discussions, the committee made the following observations on the revised proposal.

i. The proposal includes the construction of colony having 535 houses in the plant premises.

ii. WHRS is proposed to enhance from 30 MW to 35 MW.

iii. Amendment sought in ToR for water drawl from Kagina river as well as ground water.

iv. Scope of the proposal has been increased as under;

v. CAPEX needs to be revised in accordance with revised project proposal.

Recommendations of the committee

20.6.13 In view of foregoing, after deliberations, the committee recommended the following amendments along with extension of validity of ToR.

i. Action plan to reduce groundwater drawl by using mine pit water in next three years of operation with detailed hydro-geological assessment.

ii. Action plan for Rainwater Harvesting more than consumption.

iii. Project shall be designed to achieve emissions levels, viz., Particulate matter concentrations less than 30mg/Nm^3 and SO_x and NO_x less than existing norms.

20.7 Green field Cement Plant for production of Clinker (2.00 MTPA), Cement (3.23 MTPA) and coal based Captive Power Plant (50 MW) **by M/s. Gulbarga Cement Limited** at village Kirangi, Taluk and **District Kalaburagi, Karnataka** [Proposal No. IA/KA/IND/154327/2020; MoEF&CC File No. J-11011/538/2007-IA.II(I)] –**validity extension of EC- regarding.**

20.7.1 M/s. Gulbarga Cement Ltd made an online application vide proposal No. IA/KA/IND/1543277/2020 dated 25.05.2020 in the prescribed Form -6 along with other reports to the Ministry for seeking extension of validity of Environmental Clearance (EC). The proposed project activity is listed at S. No. 3(b) Cement Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

20.7.2 Environmental Clearance (EC) has been awarded to M/s. Gulbarga Cement Ltd for the project vide F. No. J-11011/538/2007-IA.II(I) dated 22.07.2013.

Details submitted by the project proponent

20.7.3 As per the Ministry's Notification S.O 1141(E) dated 29.04.2015, the tenure of EC of the Projects which had not completed 5 years on the date of publication of the said Notification i.e. 29.04.2015, stood automatically extended to 7 years [OM F. No. 22-27/2015.IA.III dated 12.04.2016 & S.O 2944 (E) dated 14.09.2016]. Thus, the awarded EC for the aforesaid Project has validity of 7 Years i.e. up to 21.07.2020.

20.7.4 Consent for Establishment (CFE) has been issued for the Project by the Karnataka State Pollution Control Board (KSPCB) vide its Order PCB/HPI/241/2013-14/1134 dated 30.10.2013 with 5 years validity. KSPCB has also extended the Validity of Consent for Establishment till 21.07.2020.

20.7.5 Karnataka Industrial Area Development Board (KIADB) has acquired the land for the project and handed over the same to GCL on 03.09.2014. GCL was not in a position to do any site works due to following:

i. Some Land Owners owning about 92 acres (37.23 Ha) of land approached Hon'ble High Court of Karnataka, Gulbarga Bench and obtained Stay Orders against the acquisition of their land with the Rate fixed by the Special Land Acquisition Officer, KIADB. They demanded 3-4 times more Rate than the Land Rate fixed by the SLAO, KIADB.

ii. Hon'ble High Court of Karnataka, Gulbarga Bench Writ Petition Nos. 203349-353/2014, 207129-30/2014 and 201643 & 202597 of 2015 dated 18/06/2014, 05/12/2014 and 27/02/2015 through Stay Orders / Interim Orders passed on 03/07/2014, 27/04/2015 and 17/06/2015 respectively). The Stay Order states "There shall be stay of dispossession of the petitioners from the lands in question until further orders".

iii. GCL along with KIADB jointly contested and vacated the Stay Orders in the Hon'ble High Court of Karnataka, Gulbarga Bench vide WP no. 203349-353/2014 & WP No. 207129-30/2014 on 07/03/2017 and WP No. 201643 & 202597 of 2015 on dated 15/04/2019.

iv. The Project was approved by the State High Level Clearance Committee (SHLCC), Government of Karnataka vide Govt. Order No.CI 79 SPI 2008 Bangalore dated 03.05.2008. The validity of the extended SHLCC approval was completed on 23.10.2018 and the extended approval received only on 04.02.2020 although the application was made on 21.05.2018.

20.7.6 Thus, with all statutory approvals are in hand, GCL shall start establishing the industry which will be completed in about 48 months. Accordingly, GCL has submitted the application for extension of validity of EC online on 25.05.2020 within the EC Validity period.

20.7.7 **No** change in Land Area, Production Quantities, Plant & Machineries, Lay-out, Water demand, Wastewater generation & disposal and Solid Waste Generation & disposal, etc.

Product/Activity (Capacity/Area)	**Quantity**	**Unit**	**Mode of Transport/ Transmission of Product**
Clinker Mfg.	2.00	MTPA	Limestone by Conveyors. Coal by Rail Mode. Other Raw Materials by Road. Cement Despatch by both Rail & Road
Cement Production	3.23	MTPA	

			Modes.
Captive Thermal Power Generation	50	MW	Captive Consumption

20.7.8 The Project Cost, proposed, is Rs.1900.0 Cr. An EMP Budget of Rs.81.0 Cr. as Capital Cost and Rs.80.00 Lakhs/Annum as Operating Cost has been proposed. Awarded EC stipulates 5% of the total project cost to be spent as Enterprise Social Commitment (ESC) Budget for addressing Public Hearing Issues and locals need. Additionally, GCL is also committed to allot 0.50% of the Project Cost viz. Rs.9.50 Cr towards the Corporate Environment Responsibility (CER) Budget which will be spent within 2-3 years during the Establishment of the Project.

20.7.9 In the present situation, it will take 4-5 years further for carrying out the Constructions at the site as well as re-issuing of tenders, ordering, receiving & installing the machineries, etc.

Observations of the committee:

20.7.10 During discussions, the committee made the following observations.

i. EC for the project was granted on 22nd July 2013 and shall expire on 21st July 2020.

ii. The Project got delayed due to court stay on land acquisition. Stay has been vacated on 7.3.2017.

iii. PP has revised the schedule for implementation of the project to thirty six months and furnished the revised schedule on 26th June, 2020 through email. The project completion is now indicated as July 2023.

iv. All permissions taken earlier for water withdrawal, CTE and the EC are valid as informed by PP.

Recommendations of the committee:

20.7.11 In view of foregoing, after deliberations, the committee recommended the proposal for extension of validity of EC till 21th July 2023.

20.8 Proposed expansion of cement plant capacity (4.0 MTPA to 8.6 MTPA) and clinker plant capacity (3.5 MTPA to 7.5 MTPA) **by M/s Sanghi Industries Ltd.,** located at Sanghipuram, village Motiber, Taluka Abdasa, Dist Kutch, **Gujarat** [Proposal No. IA/GJ/IND/155707/2020, F. No. J-11011/337/2006- IA-II(I)] **Amendment in EC condition pertaining to CER -regarding.**

20.8.1 M/s. Sanghi Industries Ltd made an online application vide proposal No. IA/KA/IND/1543277/2020 dated 04.06.2020 in the prescribed Form -4 along with other reports to the Ministry for seeking amendment in Environmental Clearance(EC). The proposed project activity is listed at S. No. 3(b) Cement Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

20.8.2 EC for expansion of cement plant capacity (4.0 MTPA to 8.6 MTPA) and clinker plant capacity (3.5 MTPA to 7.5 MTPA) located at Sanghipuram, village Motiber, Taehsil: Abdasa, District: Kutch, Gujarat was accorded to M/s Sanghi Industries Ltd vide File No. J-11011/337/2006-IA-II(I) on 1st May, 2018

Details submitted by the project proponent

20.8.21 **Reason for seeking amendment:** The Ministry of Environment, Forest & Climate Change (MOEF&CC) has issued Office Memorandum dated 1st May, 2018 regarding Corporate Environment Responsibility (CER) guideline for CER Expenditure on Capital Investment of the Project. The said Office Memorandum is in suppression of all earlier OMs and guidelines issued in this regard.

20.8.22 While granting Environment Clearance to our project, it appears that cognizance of OM regarding CER dated 1st May 2018 for expenditure based on the capital investment of the project has not been taken into account.

20.8.23 Our project is a brownfield project as an expansion of the existing project and Capital cost of the expansion project is Rs. 1049.95 Crores and falls under S.No. 4 slab of capital investment i.e. >from 1000 Crores to ≤ 10000 Crores as per the Office Memorandum F.No.22-65/2017-IA.III dated 01/05/2018. Hence, the 0.25% of the capital investment should be allocated for CER which comes Rs. 2.62 Crores.

20.8.24 Hence, the specification condition no. 6 of the EC granted with respect to CER requires correction based on the capital investment of the project. Hnece, changes are proposed as below.

Reference of approved EC	Description as per approved EC	Description as per proposal
Specific Condition No. 6 of Environment Clearance granted vide File No. J11011/337/2006-IAII(I) dated 1st May, 2018	An amount of Rs. 26.25 Crores proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of scheduled rate	0.25% of project (Brownfield) capital cost should be utilized towards Corporate Environment Responsibility (CER) as capital expenditure in project mode as per Point No. 6 of OM F.No.22-65/2017-IA.III dated 1st May, 2018

20.8.25 **Status of Implementation of the earlier EC facilities:** The erection work of the project has started from December 2018 and expected commissioning was May 2020. However, due to Covid-19 pandemic, commissioning is now expected by November 2020. The company has so far spent about 237 lacs on ESC related activities like health improvement, education facility, community welfare, water conservation, rainwater harvesting and afforestation.

Observations of the committee

20.8.26 During discussions, the committee has made the following observations.

i. EC was granted for an expansion project on 1st May 2018.
ii. CER calculation given as 2.62Cr for a Capex of 1949.95 Cr which is not correct. It should be slab wise as per the MoEF&CC O.M. dated 1/05/2018.

Recommendations of the committee

20.8.27 In view of the foregoing, after deliberations, the committee referred the matter to the Ministry for taking decision.

20.9 Proposed Integrated Steel Plant (Iron ore Beneficiation & Pellet Plant-1.2 MTPA; DRI Plant - 0.6 MTPA; Blast Furnace - 0.4 MTPA; SMS-Steel Billets- 0.7 MTPA; Rolling Mill - 0.65 MTPA; Coke Oven- 0.2 MTPA; Sinter Plant - 0.4 MTPA; Oxygen Plant- 400 TPD) along with 100 MW Captive Power Plant [25MW – FBC based power plant, 4x12.5MW – WHRB and Turbine, 13MW using BF gas and 12 MW using Coke Oven Gas] **by M/s. Jayaswal Neco Industries Limited located** at villages Dagori, Ameri Akberi and Udgaon, Tehsil Bilha, **Dist Bilaspur, Chhattisgarh** [Proposal No. IA/CG/IND/153687/2020; MoEF&CC File No. J-11011/302/2011-IA.II(I)] –**validity extension of EC- regarding.**

20.9.1 M/s. Jayaswal Neco Industries Limited has made online application vide proposal no. IA/CG/IND/153687/2020 dated 21/05/2020 along with Form 6 and sought for validity extension of the Environment Clearance accorded by the Ministry vide letter no. J-11011/302/2011- IA-II(I) dated 6/6/2013.The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

20.9.2 M/s. Jayaswal Neco Industries Limited has been granted Environment Clearance by the Ministry for a project titled *"Proposed Integrated Steel Plant (Iron ore Beneficiation & Pellet Plant-1.2 MTPA; DRI Plant - 0.6 MTPA; Blast Furnace - 0.4 MTPA; SMS-Steel Billets- 0.7 MTPA; Rolling Mill - 0.65 MTPA; Coke Oven- 0.2 MTPA; Sinter Plant - 0.4 MTPA; Oxygen Plant- 400 TPD) along with 100 MW Captive Power Plant [25MW – FBC based power plant, 4x12.5MW – WHRB and Turbine, 13MW using BF gas and 12 MW using Coke Oven Gas] at villages Dagori, Ameri Akberi and Udgaon, Tehsil Bilha, District Bilaspur, Chhattisgarh"* vide letter no. J-11011/302/2011-IA-II(I) dated 06/06/2013.

20.9.3 The units along with its production capacity envisaged in the EC dated 06/06/2013 is furnished as below:

S.No.	Name of the Unit	Capacity	Products
1.	Iron ore Beneficiation and Pellet Plant	1.2 MTPA	Iron ore pellets
2.	Blast Furnace	0.4 MTPA	Hot metal/ Pig iron
3.	DRI Plant	0.6 MTPA	Sponge iron
4.	Coke Oven (non-recovery type)	0.2 MTPA	Metallurgical Coke
5.	Sinter Plant	0.4 MTPA	Sinter
6.	Steel Melting Shop	0.7 MTPA	Steel
7.	Rolling Mill	0.65 MTPA	Steel Products
8.	Oxygen Plant	400 TPD	Oxygen
9.	Captive Power Plant	100 MW#	Electricity

[25MW – FBC based power plant, 4x12.5MW – WHRB and Turbine, 13MW using BF gas and 12 MW using Coke Oven Gas]

20.9.4 JNIL Obtained Permission to Establish from Chhattisgarh Environment Conservation Board vide letter no. 3538/TS/CECB/2013 dated 10.10.2013.

20.9.5 The project is being established in phase manner. In first phase 2x500 TPD DRI for manufacturing 0.3 MTPA sponge iron and 2 x 12.5 MW WHRB Power Plant work has been undertaken and the same is likely to be commissioned by December 2020. M/s. Jayaswal Neco Industries Limited obtained the water permission from Water Resource Department for withdrawal of 7 MCM water from Shivnath River. Around Rs. 497 Crores have been incurred on the project so far.

20.9.6 The remaining project activity is yet to commence the construction because of the change in various policy of the Government on land acquisition, financial constraints, and the banks had kept on hold all the funding for the company due to cancellation of coal block. In light of this, the project could not be implemented within the validity period of seven years. Hence, validity period of the EC dated 6/06/2013 may be extended for a period of five years beyond 05/06/2020.

20.9.7 The implementation schedule of various units envisaged in the EC dated 6/6/2013 is given as below:

(i) For the units to be commissioned by December, 2020

Sr. No.	Name of the Unit	Capacity	Expected date of Commissioning
1	2x500 TPD DRI	0.3 MTPA	December-2020
2.	2 x 12.5 MW WHRB Power Plant	25 MW	December-2020

(ii) For the remaining units

S.No.	Name of the Unit	Capacity	Products	Implementation schedule
1.	Iron ore Beneficiation and Pellet Plant	1.2 MTPA	Iron ore pellets	June 2025
2.	Blast Furnace	0.4 MTPA	Hot metal/ Pig iron	June 2025
3.	DRI Plant	0.3 MTPA	Sponge iron	June 2025
4.	Coke Oven (non-recovery type)	0.2 MTPA	Metallurgical Coke	June 2025
5.	Sinter Plant	0.4 MTPA	Sinter	June 2025
6.	Steel Melting Shop	0.7 MTPA	Steel	June 2025
7.	Rolling Mill	0.65 MTPA	Steel Products	June 2025
8.	Oxygen Plant	400 TPD	Oxygen	June 2025
9.	Captive Power Plant	1*25 MW AFBC 2x12.5 MW-WHRB	Electricity	June 2023 June 2025

S.No.	Name of the Unit	Capacity	Products	Implementation schedule
		BF GAS -13 MW Coke Oven Gas – 12 MW		June 2025 June 2025

Observations of the Committee

20.9.8 The Committee noted the following:

i. Project proponent was unable to implement the facilities envisaged in the EC dated 06/06/2013 due to change in various policy of the Government on land acquisition, financial constraints, and the banks had kept on hold all the funding for the company due to cancellation of coal block.

ii. Current status is that only 2x500 TPD DRI Kilns and WHRB of 2x12.5 MW shall be commissioned by Dec 2020. 25 MW AFBC CPP shall be ready by June 2023. Work on remaining units started as yet.

iii. The entire land envisaged in the EC dated 06/06/2013 is still not under the possession of project proponent.

iv. The validity period of the EC dated 06/06/2013 can be extended only for a period of three years beyond 05/06/2020 as per the provisions of the EIA Notification, 2006. Validity of EC cannot be extended beyond ten years as requested by the project proponent.

v. The committee was of the view that balanced facilities envisaged in the EC dated 6/06/2013 may not be able to be commissioned by the proponent with the validity period of 5/06/2023.

Recommendations of the Committee

20.9.9 In view of above and after deliberations, the Committee deferred the consideration of the proposal and sought following additional information for further consideration of the proposal:

i. The land details under the possession of project proponent shall be furnished.

ii. Revised implementation bar chart containing time schedule for the units which can be commissioned within the available land and the EC validity period i.e, 5/06/2023 shall be submitted. Request for dropping of remaining units shall also be submitted.

iii. Action plan for utilization of dolochar to be generated in the DRI plant shall be submitted.

26th June, 2020

20.10 Expansion of Integrated Steel Plant from 6 to 8 MTPA Crude Steel and 9 MTPA Finished Steel by **M/s. Tata Steel Limited** located at Kalinganagar Industrial Complex, Duburi, **District Jajpur, Odisha** – **Environmental Clearance –reg** - [Online Proposal No. IA/OR/IND/128148/2016, File No. J-11011/7/2006-IA-II(I)] **– Environment Clearance - regarding.**

20.10.1 M/s. Tata Steel Limited has made an online application vide proposal no. IA/OR/IND/128148/2016 dated 13/06/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

20.10.2 The project proponent originally submitted the application for EC for the project cited above through PARIVESH on 19/12/2019. Subsequently, Essential Details were sought by the Ministry on 8/01/2020. In response to this, project proponent resubmitted their application on 13/06/2020 along with essential details sought by the Ministry.

20.10.3 Before considering the instant expansion proposal under consideration, the EAC asked the representatives of M/s. Tata Steel Limited and their EIA consultant namely M/s M. N. Dastur & Co. (P) Limited to present on the existing EC granted and its implementation status as the project proponent has stated in their records submitted to the Ministry that some construction activities are still ongoing at the project site.

20.10.4 In this regard, the details furnished by the project proponent are summarized as below:

A. The existing project of M/s Tata Steel Limited for setting up of 6 MTPA Integrated Steel Plant located at Kalinganagar located in Duburi Village, Sukinda Tehsil, Jajpur District, Odisha was originally accorded EC vide letter no. J/11011/7/2006 – IA.II (I) dated 07/11/2006 under the provisions of the EIA Notification, 2006

B. The project proponent intended to execute the 6 MTPA Integrated Steel Plant in two phases.

C. Following EC amendments and validity extension of EC was obtained from MoEF&CC subsequent to the grant of EC dated 7/11/2016.

S.No.	Date of letter	Details
i.	10/10/2012	Amendment in the EC dated 7/11/2006 was accorded for change in configuration of blast furnace/coke oven battery/lime calcining plant/captive power plant, conversion of 2 nos of sinter plant into 1 no of sinter plant & 1 no. of pellet plant and addition of Cold Roll Mill.
ii.	13/05/2015	Amendment in the EC dated 7/11/2006 was accorded for (i) installation of 24x7 air and water monitoring devices to monitor the air emission and effluent discharge; (ii) Use of wet quenching till the CDQ is stabilized by June, 2016 and thereafter maintain wet quenching as standby; (iii) Use of LDO for generation of power in power plant and DG sets till the Blast furnace gas is available and thereafter maintain LDO

S.No.	Date of letter	Details
		as standby.
iii.	13/05/2015	The validity period of the EC was extended till 6/11/2016.
iv.	20/12/2016	Amendment in the EC dated 7/11/2006 was accorded for using wet quenching till the CDQ is stabilized by November, 2016 and thereafter maintain wet quenching as standby.

D. The units along with the production capacity envisaged in the EC dated 7/11/2006 and its subsequent amendments is given as below:

Sl.	Production Facilities	6.0 MTPA as per existing EC	
		Phase 1	Phase 2
1	Coke Ovens & Byproducts Recovery Plant COBP)	2 X 88 ovens, 5 m tall	2 X 88 ovens, 5 m tall
2	Sinter/Pellet Plant	1 No. Sinter Plant (496 m^2)	1 No. Pellet Plant
3	Blast Furnace	1 No x 4300 m^3	1 No x 4300 m^3
4	Lime Calcining Plant (LCP)	2 x 600 TPD Vertical Shaft Kiln	1 x 600 TPD vertical shaft kiln
5	Steel Melt Shop (SMS)	2x300 Nos. of Convertors 1x310 t CAS-OB, 1X twin Strand Slab caster	1 x 300 t Converter 1x 310 t twin RH, 1X twin Strand Slab caster
6	Mills	Hot Strip Mill 5.5 MTPA-1 No	Cold Rolling- 1 No 2.2 MTPA
7	Captive Power Plant	2 x 67.5 MW byproduct gas based	1 X 67.5 MW byproduct gas based

E. Project proponent has started commercial production in June 2016 based on completion of Phase 1 facilities, planned as part of 6 MTPA Crude Steel Plant. Phase 2 of 6 MTPA crude steel capacity is under implementation.

F. Since the Phase 2 of 6 MTPA crude steel capacity was under implementation and further intended to expand the ISP capacity, project proponent submitted an online application vide proposal no. IA/OR/IND/53158/2016 dated 21/09/2016 seeking the following:

   i. Extension of the validity of the existing EC dated 7/11/2006 so that construction of auxiliary and balance facilities can continue and

   ii. Prescribed ToR for the expansion to 8 MTPA crude steel capacity.

G. The aforementioned proposal was considered in the 12th meeting of EAC held on 27-28th October, 2016 and the EAC has recommended for grant of ToR for the following unimplemented portion of the work along with the proposed expansion. Accordingly, the ToR was accorded by the Ministry on 14/03/2017.

S.No.	Production Facilities	6.0 MTPA as per existing EC		Final Configuration at 8 MTPA Crude Steel & 9 MTPA Finished Steel
		Phase 1 (Operational)	Phase 2 (Balance)	
1	Coke Ovens & Byproducts Recovery Plant	2 X 88 ovens, 5 m tall	2 X 88 ovens, 5 m tall	• 2 X 88 ovens, 5 m tall • 3 X 62 ovens, 6.25 m tall
2	Sinter/Pellet Plant	1 No. Sinter Plant (496 m^2)	1 No. Pellet Plant	• 1 no. Sinter Plant (496m2) • 1 no. Pellet Plant (744m2)
3	Blast Furnace	1 No x 4300 m^3	1 No x 4300 m^3	• Two BF (1x4330m3 & 1x5870m3)
4	Lime Calcining Plant	2 x 600 TPD Vertical Shaft Kiln	1 x 600 TPD Vertical shaft kiln	• 4 x 600 TPD vertical shaft kiln
5	Steel Melt Shop (SMS)	2x300 Nos. of Convertors 1x310 t CAS-OB, 1X twin Strand Slab caster	6.0 MTPA 1 x 300 t Converter 1x 310 t twin RH, 1X twin Strand Slab caster	• 8.0 MTPA Crude Steel • 3 x 310 t BOF converters • 1 x 310 t CAS-OB • 1 x 310 t twin RH • 2 x 310 tons LF • 2 x twin Strand Slab caster • 1 Multi Strand Billet Caster
6	Mills	Hot Strip Mill 1 X 5.5 MTPA	Cold Rolling 1 X 2.2 MTPA	• Hot Strip -1 No. 7 MTPA • Cold Rolling- 1 No. 2.2 MTPA • LP Mill – 2.0 MTPA
7	Captive Power Plant	2 x 67.5 MW by-product gas based	1 X 67.5 MW by product gas based	• 3 x 67.5 MW by product gas based • 1 x 67.5 MW by product gas cum coal tar firing

H. The project proponent has gone ahead with the unimplemented portion of the work i.e., construction of Phase 2 of 6 MTPA crude steel capacity beyond the validity period of the EC dated 7/11/2006 i.e., 6/11/2016 which was also a part of the ToR dated 14/03/2017. Presently the construction of various facilities like CRM, Pellet Plant, Blast Furnace and Coke Plant is underway. The present status of construction is given in the chapter 2 of the EIA report and also furnished as below:

Sl.	Production Facilities	Phase 2	Ongoing construction activities at site at present for balance facilities
1.	Pellet Plant	1 No. Pellet Plant	Area development, foundation and erection in progress.
2.	Blast Furnace	1 No x 4300 m^3	Area development, foundation and erection in progress.
3.	LD Converter	1 x 300 Ton	All facilities are already constructed. Only converter

Sl.	Production Facilities	Phase 2	Ongoing construction activities at site at present for balance facilities
			needs to be erected.
4.	CRM	2.2 MTPA	Foundation and erection in progress.
5.	Lime Calcining Plant (LCP)	1 x 600 TPD vertical shaft kiln	Area development in Progress.

I. The project proponent claimed during the discussion that they have gone ahead with the construction of Phase 2 of 6 MTPA crude steel capacity beyond the validity period of the EC dated 7/11/2006 i.e., 6/11/2016 based on the preamble stated in the EC amendment letter dated 26/12/2016 and the ToR letter dated 14/03/2017 issued by MoEF&CC.

J. The project proponent has requested the EAC to consider the issue in totality and take an appropriate view in the matter.

20.10.5 Besides above, the EAC has gone through the following records:

A. Compliance Status of existing EC from Regional Office, Bhubaneshwar

The status of compliance of existing EC was obtained from Regional Office, Bhubaneshwar vide Lr. No. 101/208/06/EPE, dated 10/12/2019 wherein it is stated that project proponent is in the process of installation of pellet plant and blast furnace.

B. Public representation

The EAC has taken cognizance of the issues raised in the public representation dated 13/11/2019 of Shri.R.Jarika alleging several shortcomings in the aforesaid public hearing inter-alia including non-availability of EIA report for perusal, inadequate publicity of public hearing and non-addressal of queries raised during the hearing by the public etc.,.

C. Report of District Magistrate and the RO factual report on public representation

As per the District Magistrate report dated 5/02/2020, the public hearing for the instant project was conducted on 25/10/2019 as per the procedure laid down in the EIA Notification, 2006. Further, noted from the report that reasonable opportunity was given to the public to express their views and suggestions during the hearing held on 25/10/2019 and no public was prevented to participate in the said hearing. As per the RO factual report dated 18/06/2020, the foundation/RCC construction activities were in progress for the pellet plant and blast furnace. In this regard, the photographs are also submitted.

Observations of the Committee

20.10.6 The Committee noted the following:

i. It is an established fact from the records submitted by the proponent and report of the Regional Office that project proponent has gone ahead with the construction of Phase 2 of 6 MTPA crude steel capacity beyond the validity period of the EC dated 7/11/2006 i.e., 6/11/2016 which was also a part of the ToR dated 14/03/2017 without obtaining prior Environment Clearance as mandated under the provisions of EIA Notification, 2006. Thus, proponent has violated the provisions of the EIA

Notification, 2006.

ii. Claim of the project proponent regarding mentioning of phase 2 facilities under implementation in the EC amendment letter dated 20/12/2016 and the ToR letter dated 14/03/2017 are untenable for going ahead with construction of phase 2 facilities.

iii. As per the Ministry's notification S.O. 804 (E) dated 14/03/2017, the projects or activities requiring prior Environment Clearance (EC) under EIA Notification, 2006 from the concerned Regulatory Authority are brought for EC after starting the construction work, or have undertaken expansion, modernization, and change in product- mix without prior environmental clearance, these projects shall be treated as cases of violations. Further, the projects or activities which are in violation as on date of this notification only will be eligible to apply for EC under this notification

iv. As per the Ministry's O.M. dated 9/9/2019, proposals involving violation can be considered as per the notification no. S.O. 804 (E) dated 14/03/2017 only, if it is applied during the window period 14/03/2017 to 13/09/2017 and 14/03/2018 to 13/04/2018 (or) prior to the violation window period. These proposals were termed as "lateral entry proposals" and considered as per the provisions laid down in the Notification dated 14/03/2017.

v. In the instant proposal under consideration, application for ToR was made on 21/09/2016 which was prior to the violation window period. Hence, this proposal can be referred to EAC – Violation through lateral entry basis for appropriate consideration as per the provisions laid down in S.O. 804 (E) dated 14/03/2017.

Recommendations of the Committee

20.10.7 In view of the foregoing, the Committee after deliberations recommended to laterally refer the proposal to EAC – Violation Sector in accordance with the MoEF&CC O.M. dated 9/9/2019 as the application for ToR was made on 21/09/2016 which was prior to the violation window period.

20.11 Enhancement of production capacity of various Forgings, Machining & Finishing facilities from 80000 TPA to 130000 TPA by addition of forging Press Lines 1 x 2000T,1 x 2500T, 1 x 6300T and Hollow Spindle Line along with improvement in operational parameters **by M/s Ramkrishna Forging Limited (Plant-V)** at Village: Bholadih, P.O: Kolabira, **District: Saraikela-Kharsawan, Jharkhand** [Online Proposal No. IA/JH/IND/156450/2020, File No. J-11011/4/2020-IAII(I)] **Amendment in Terms of Reference regarding categorization of project and waiver of public hearing - regarding.**

20.11.1 M/s Ramkrishna Forging Limited (Plant-V) has made application vide online proposal no. IA/JH/IND/156450/2020 dated 07/06/2020 along with the Form 3, revised Form-I, copy of pre-feasibility report and sought for amendment in the ToR accorded by the Ministry vide letter no. J-11011/4/2020-IA.II(I) dated 24/01/2020.

Details submitted by the project proponent

20.11.2 M/s. Ramkrishna Forging Limited (Plant-V) has obtained Terms of Reference for the project titled "*Enhancement of production capacity of various Forgings, Machining & Finishing facilities from 80000 TPA to 130000 TPA by addition of forging Press Lines 1 x 2000T,1 x 2500T, 1 x 6300T and Hollow Spindle Line along with improvement in*

operational parameters at Village: Bholadih, P.O: Kolabira, District: Saraikela-Kharsawan, Jharkhand" from MoEF&CC vide letter no. J-11011/4/2020-IA.II(I) dated 24/01/2020. The said project is listed under activity 3(a) Metallurgical Industries (Ferrous & Non-ferrous) of EIA Notification, 2006 and falls under Category 'B'. However, due to non-availability of SEIAA at Jharkhand the proposal is being apprised at Central level as a Category 'B' project.

20.11.3 Draft EIA is already prepared and ready for submission to Jharkhand State Pollution Control Board in order to conduct the public hearing as per granted ToR.

20.11.4 The project proponent sought following amendment in the ToR dated 24/01/2020:

i. Inadvertently, in Form-1 it was not mentioned that the project is located within 5 kms of the Severely Polluted Area 'Saraikela' (CEPI score 60.26). As per MoEF&CC office memorandum dated 31.10.2019 any project or activity specified in Category# B1 will be appraised at central level if located in whole or part within 5 km from Severely Polluted area.

ii. MHA guidelines prohibited large Public gatherings/congregations throughout the country in view of present countrywide situation of COVID-19 pandemic, vide lr. No. 40-3/2020-DM-I(A) dated 30.05.2020. The above guidelines are likely to be extending to an estimated time period of 3-4 months or more. Hence, there is no possibility for conducting Pubic Hearing in near future. This will lead to delay in the project implementation which will cause loss to project proponent and also obstruct the socio-economic growth of the region. Therefore, it is request to grant permission for public hearing wavier to the project or alternatively, grant permission for organizing public consultation by inviting written comments, complaints, suggestions, queries via letters, emails, etc. of general public and stakeholders to SPCB and district administration. PP will ensure that all the issues of the general public are duly addressed in our action plan.

20.11.5 Details of proposed amendments in the conditions of granted ToR are provided below:

S.No	Reference of Approved ToR	Description as per Approved ToR	Description as per Proposal
1.	ToR Point no.1	Project falls under category 'B'	The project is located within 5 kms of the severely polluted area 'Saraikela'. As per MoEF&CC office memorandum dated 31.10.2019 the project will be appraised at the Central level.
2.	General ToR point no.(ix)	The SPCB shall conduct the Public Hearing/public consultation, district wise, as per the provision of EIA Notification, 2006.	Public Hearing waiver permission be granted on account of present COVID-19 pandemic situation.

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

20.11.7 Consultant Name: M/s Vardan Environet [S.No. 165, List of Accredited Consultant Organizations (Alphabetically) Rev. 88, June 10, 2020].

Observations of the Committee

20.11.8 The Committee noted the following:

i. The project is located within 5 kms of the severely polluted area 'Saraikela'. As per MoEF&CC office memorandum dated 31.10.2019, any project or activity specified in Category# B1 will be appraised at central level if located in whole or part within 5 km from Severely Polluted area. In light of this, the instant proposal shall be appraised at the central level.

ii. The project proponent is yet to approach the JSPCB for conducting public consultation and not submitted any correspondence of JSPCB regarding the constraints in conducting public consultation.

iii. As per the Ministry's O.M. No. J-11011/321/2016-IA.II(I) dated 27/04/2018, the exemption of public consultation as provided under para 7(i) III stage 3(i) (b) of EIA Notification, 2006 is not applicable for the schedule 3(a) Metallurgical Industries.

Recommendations of the Committee

20.11.9 In view of the foregoing and after deliberations, the Committee recommended for amendment in the ToR dated 24/01/2020 with following specific ToRs:

i. Zero liquid discharge shall be adopted.

ii. Action plan for Green belt development covering 40% of the total area shall be furnished.

iii. Corporate Environmental Responsibility (CER) action plan shall be enhanced 1.5 times of the slabs given in the O.M. dated 1/05/2018 as the project is located in Severely Polluted Area (SPA).

Further, the Committee did not accede to the request of project proponent regarding waiver of public consultation.

20.12 Proposed Expansion of existing Sponge Iron Plant (0.18 MTPA DRI plant; 22 MW CPP) to Integrated Steel Plant (0.554 MTPA steel capacity with 132 MW CPP) in Karakolha Sponge Iron Division of **M/s. Rungta Mines Limited** located at village Karakolha and Karakhendra, **District Keonjhar, Odisha** [Online Proposal No. IA/OR/IND/157071/2020, File No. J-11011/229/2016-IA.II(I)] **Amendment in Terms of Reference regarding involvement of Forest land and revision in production capacities of various process units - regarding.**

20.12.1 M/s. Rungta Mines Limited has made application vide online proposal no. IA/OR/IND/157071/2020 dated 11/06/2020 along with the Form 3, revised Form-I, copy of pre-feasibility report and sought for amendment in the ToR accorded by the Ministry vide letter no. J-11011/229/2016-IA.II(I) dated 18/07/2019.

Details submitted by the project proponent

20.12.2 M/s. Rungta Mines Limited obtained Terms of Reference for the project titled *"Proposed Expansion of existing Sponge Iron Plant (0.18 MTPA DRI plant; 22 MW CPP) to Integrated Steel Plant (0.554 MTPA steel capacity with 132 MW CPP) in Karakolha Sponge Iron Division located at village Karakolha and Karakhendra, District Keonjhar, Odisha"* from MoEF&CC vide letter no. J-11011/229/2016-IA.II(I) dated 18/07/2019. The units envisaged in the ToR dated 18/07/2019 is furnished as below:

Sl. No.	Plant Facilities	Annual production, MTPA except power in MW for CPP		
		Existing	Expansion/ Additional facility	Total
(a)	(b)	(c)	(d)	(c)+(d)
1	Sponge Iron Plant			
	(i) 5X100 TPD DRI Kilns	0.18	0.0475	0.2275
	(ii) 2X600 TPD DRI Kilns	-	0.546	0.546
2	Pelletisation Plant	-	1.47	1.47
3	Steel Melting Shop	-	0.554	0.554
3.1	Steel Melting Via IF-Route			
	(i) Induction Furnace (4 nos. X30 T)	-	0.554	0.554
	(ii) Laddle Furnace (2 nos. X 35 T)	-	0.554	0.554
3.2	Continuous Casting Machine (1 no. X 4 strands)- billets/ bloom/ slab	-	0.543	0.543
4	Rolling Mill (2 nos.)	-	0.532	0.532
5	Silicon Manganese Alloy Plant (2 nos. X 9 MVA)	-	0.032	0.032
6	Captive Power Plant (CPP)	22	110	132
6.1	WHRB Based CPP	10	24	34
6.2	AFBC/ CFBC based CPP	12	86	98

20.12.3 After the grant of ToR, the baseline data was collected during March to May 2019 and the draft EIA report is under preparation.

20.12.4 The company has now made changes in its proposal during detailing, in view of changing raw material availability as well as market demands. The configuration & capacity change granted in ToR vis-a-vis with the proposed changes in configuration & capacity of units for Karakolha Steel Plant is proposed as follows:

Sl. No.	Plant/ Equipment/ Facility	Units	Existing plant capacity as per EC dt. 28.08.2018	Proposed capacity after expansion (TOR dt. 18.07.2019)		Proposed Capacity after expansion for Revised TOR amendment request		Change proposed wrt ToR dt 18.07.2019
				Additional w.r.t. existing	Total	Revised Additional w.r.t. existing	Revised Total	
(a)	(b)		(c)	(d)	(e) = (c)+(d)	(f)	(g)=(c)+(f)	(h)
1	Sponge Iron Plant							
	(i) 5x100 TPD	TPA	180,000	47,500	227,500	77,377	257,377	Increase by 29,877
	(ii) 1x600 TPD	TPA		273,000	273,000	308,850	308,850	Increase by 35,850
	(iii) 1x600 TPD	TPA		273,000	273,000	0	0	Removed 1X600 TPD kiln
	Sub-Total	TPA	180,000	593,500	773,500	386,227	566,227	Overall decrease by 207,273
2	Pellet Plant	TPA		1,474,000	1,474,000	1,800,000	1,800,000	Increase by 326000
3	Steel Melt Shop	TPA		554,176	554,176	577,500	577,500	Increase by 23324
3.1	(i) IF Configuration			4 X 30 T	4 X 30 T	Config change	5X20 T	Change in configuration from 4X30T to 5X20 T
	(ii)LRF configuration			2X35 T	2X35 T	Config change	3 X 25 T	Change in configuration from 2X35T to 3X25 T
3.2	CCM(2x4 strands) Billets/Bloom/Slab	TPA		543,092	543,092	565,950	565,950	Increase by 22,858
4	Rolling Mill -1	TPA		266,070	266,070	217,350	217,350	Decrease by 48,720
	Rolling Mill-2	TPA		266,070	266,070	326,025	326,025	Increase by 59,955
	(TMT/ flat/ round/ wire rod/ structural mill/ others)	Total		532,140	532,140	543,375	543,375	Increase by 11,235
				(2X35 TPH)	(2X35 TPH)	Config change	(1X30 + 1X45 TPH)	Configuration Change
5	Silicon Manganese Alloy Plant (2X9 MVA)	TPA		32,000	32,000	32,000	32,000	No change
6	Captive power plant	MW	22	110	132	87	109	Decrease by 23
6.1	WHRB based CPP	MW	10	24	34	20	30	Decrease by 4
			(5 X 10 TPH)	(2X 60 TPH)	(5X10 + 2X60 TPH)	($^{1x80\ TPH}$)	(5X10 + $^{1x80\ TPH}$)	Configuration change
6.2	AFBC/ CFBC based CPP	MW	12	86	98	67	79	Decrease by 19 MW
			(1X 55 TPH)	(2 X 210 TPH)	(1X55 + 2X210 TPH)	(1X150 + 2X60 TPH)	(1X55 + 1X150 + 2X60 TPH)	Configuration change
6.3	TG		1X22 MW	2x 55 MW	(1X22 MW + 2x55 MW	1X57 MW + 2X15 MW	1X22 MW + 1X57 MW + 2X15 MW	Configuration change
7.0	Producer Gas plant	Nm^3/hr	-	-	-	45,000	45,000	New Unit

20.12.5 The other amendments sought in the ToR dated 18/07/2019 is given as below:

Particulars	**As per ToR dt. 18.07.19**	**Total (for Rev. TOR)**	**Change in rev. TOR wrt 18.7.19**
Subject matter	"Proposed Expansion of existing Sponge Iron Plant (0.18 MTPA DRI plant; 22 MW CPP) to Integrated Steel Plant (0.554 MTPA steel capacity with 132 MW CPP) in Karakolha Sponge Iron Division located at village Karakolha and Karakhendra, District Keonjhar, Odisha"	"Proposed Expansion of existing Sponge Iron Plant (0.18 MTPA DRI plant; 22 MW CPP) to Integrated Steel Plant (0.5775 MTPA steel capacity with 109 MW CPP) in Karakolha Sponge Iron Division located at village Karakolha and Karakhendra, District Keonjhar, Odisha"	Change in subject matter
Steel Production, MTPA	0.554	0.5775	increase 0.0235
Project Area, ha	64.88	64.88	No change but break up changed*
Water requirement, cum/ hour	14,694	14,447	decrease 248
Power generation, MW	132	109	decrease 23
Power consumption, MW	113	109	decrease 4

*Note: *No additional land is required for amendment in ToR. However, after grant of TOR dt. 18.07.2019, during the land acquisition process by IDCO, it emerged that 43.55 acres (17.62 ha) land attracts the provisions of The Forest Act for which application no. FP/OR/IND/45849/2020 has been submitted and is under process.*

20.12.6 Proposed raw material requirement is iron ore (1.97 MTPA from own mines/ OMC/ other private mines), bentonite (0.27 LTPA) from open market, coal (1.036 MTPA from South Africa & Indigenous), coke breeze (0.31 LTPA) from open market, pig iron (0.94 MTPA) from Kamanda Steel Plant.

20.12.7 There is no court case or violation under EIAs Notification to the project or related activity.

20.12.8 Name of consultant: Min Mec Consultancy Private Limited, New Delhi. Min Mec is preparing and presenting reports as per the High Court of Delhi orders in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016.

Observations of the Committee

20.12.9 The Committee noted the following:

i. The project proponent has sought for amendment in the ToR dated 18/07/2019 for change in unit configuration & capacity change in view of changing raw material availability as well as market demands.

ii. Total project area is 64.88 ha. Out of this total area, 17.62 ha is a forest land.

iii. There is reduction in power and water requirement due change in unit configuration and production capacities.

Recommendations of the Committee

20.12.10 In view of the foregoing and after detailed deliberations, the Committee recommended for amendment in the ToR dated 18/07/2019 as mentioned above subject to the stipulation of following additional specific ToRs:

i. There are two steel plant units of project proponent within 500 m distance. In view of this, project proponent shall carryout cumulative impact assessment considering pollution from all units in the same air shed and water shed including integrated waste management.

ii. Producer gas plant shall be closed circuit type with adequate arrangement to dispose phenolic water and tar/tar sludge.

iii. Status of Forest Clearance shall be submitted for diversion of Forest land.

iv. Action plan for complying with the coal consumption norms published by Central Electricity Authority vide letter dated 27th March 2019 shall be submitted.

20.13 Expansion of Karakhendra Steel Plant from 0.127 MTPA to 0.681 MTPA crude steel capacity with installation of 90 MW CPP by **M/s Rungta Mines Ltd.** located at village Karakhendra and Karakolha, **District Keonjhar, Odisha** [Online Proposal No. IA/OR/IND/157689/2020, File No. J-11011/230/2016-IAII(I)] **Amendment in Terms of Reference regarding involvement of Forest land and revision in production capacities of various process units - regarding.**

20.13.1 M/s. Rungta Mines Limited has made application vide online proposal no. IA/OR/IND/157689/2020 dated 15/06/2020 along with the Form 3, revised Form-I, copy of pre-feasibility report and sought for amendment in the ToR accorded by the Ministry vide letter no. J-11011/230/2016-IA.II(I) dated 02/01/2020.

Details submitted by the project proponent

20.13.2 M/s. Rungta Mines Limited obtained Terms of Reference for the project titled *"Expansion of Karakhendra Steel Plant from 0.127 MTPA to 0.681 MTPA crude steel capacity with installation of 90 MW CPP located at village Karakhendra and Karakolha, District Keonjhar, Odisha"* from MoEF&CC vide letter no. J-11011/230/2016-IA.II(I) dated 02/01/2020. The units envisaged in the ToR dated 02/01/2020 is furnished as below:

Sl. No.	Plant Facilities	Annual production, TPA except where mentioned		
		Present sanctioned capacity as per EC dated 07.08.2019	Expansion/ Additional facility	Total
(a)	(b)	(c)	(d)	(c)+(d)
1.	Sponge Iron Plant (1x600 TPD DRI)	-	273,000	273,000
2.	Pelletisation Plant	-	1,474,000	1,474,000
3.	Sinter plant (1x50 sq.mtr)		554,400	554,400

Sl. No.	Plant Facilities	Annual production, TPA except where mentioned		
		Present sanctioned capacity as per EC dated 07.08.2019	Expansion/ Additional facility	Total
(a)	(b)	(c)	(d)	(c)+(d)
4.	Coke oven plant (4x70,000 TPA)		280,000	280,000
5.	Mini Blast furnace (1x380 cum)		372,400	372,400
6.	Steel Melting Shop	126,720	554,400	681,120
6.1	Steel Melting Via IF-Route			
	(i) Induction Furnace (2 nos. X15T)	126,720		
	(ii) Laddle Furnace (1 no. X 20T)	126,720		
6.2	Steel melting shop via EAF/ EOF with LRF/ VD/ AOD (1x70T)		554,400	
7.	Oxygen plant		150 TPD	150 TPD
8.	Continuous Casting Machine - Billets/ Bloom/ Slab	124,186 (1 no. x 2 strands)	543,312(1 no. x 4 strands)	667,498
9.	Rolling Mill	121,702 (Unit-1)	532,140 (Unit-2)	653,842
10.	Captive Power Plant (CPP)	-	90 MW	90 MW
10.1	WHRB Based CPP	-	12 MW	12 MW
10.2	WHRB based CPP from Coke oven plant		18 MW	18 MW
10.3	WHRB based CPP from BF		10 MW	10 MW
10.4	AFBC/ CFBC based CPP	-	50 MW	50 MW
10.5	TG	-	2 x 45 MW	2 x 45 MW

20.13.3 After the grant of ToR, the baseline data was collected during March to May 2019 and the draft EIA report is under preparation.

20.13.4 The company has now made changes in its proposal during detailing, in view of changing raw material availability as well as market demands. The configuration & capacity change granted in ToR vis-a-vis with the proposed changes in configuration & capacity of units for Karakendra Steel Plant is proposed as follows:

Sl. No.	Plant/ Equipment/ Facility	Units	Existing plant capacity	Proposed capacity after expansion (TOR dt. 02.01.2020)		Proposed Capacity after expansion for Revised TOR amendment request		Change wrt ToR dt 02.01.2020
				Additional w.r.t. existing	Total	Revised Additional w.r.t. existing	Revised Total	
(a)	(b)		(c)	(d)	(e) = (c)+(d)	(f)	(g)=(c)+(f)	(h)
1	Sponge Iron Plant							

Sl. No.	Plant/ Equipment/ Facility	Units	Existing plant capacity	Proposed capacity after expansion (TOR dt. 02.01.2020)		Proposed Capacity after expansion for Revised TOR amendment request		Change wrt ToR dt 02.01.2020
				Additional w.r.t. existing	Total	Revised Additional w.r.t. existing	Revised Total	
	(ii) 1x600 TPD	TPA	-	273,000	273,000	308,850	308,850	Increase by 35,850
	(iii) 1x600 TPD	TPA	-	-	-	308,850	308,850	Additional 1X600 TPD kiln, Increase by 308,850
	Sub-Total	TPA	-	273,000	273,000	617,700	617,700	Overall increase by 344, 700
2	Pellet Plant	TPA	-	1,474,000	1,474,000	1,800,000	1,800,000	Increase by 326,000
3	Sinter Plant	TPA	-	554,400 (1x50 sqm)	554,400 (1x50 sqm)	554,400 (1x60 sqm)	554,400 (1x60 sqm)	Configuration change. No change in production.
4	Coke oven plant	TPA	-	280,000 (4 batteries x70000 TPA)	280,000 (4 batteries x70000 TPA)	280,000 (4 batteries x70000 TPA)	280,000 (4 batteries x70000 TPA)	No change
5	Blast furnace	TPA	-	372,400 (1x380 cum)	372,400 (1x380 cum)	372,400 (1x380 cum)	372,400 (1x380 cum)	No change
6	Steel Melt Shop							
6.1	(i) IF Configuration		2x15 T	-	2X 15 T	5x15 T	7x15 T	Increase in units
	(ii)LRF configuration	-	1x20 T	-	1X20 T	3x20	4x20 T	Increase in units
	(iii) EOF/EAF with LRF-VD-AOD	-	-	1x70 T	1x70 T	-	-	Removed
6.2	(i) IF-LRF production	TPA	126,720	-	126,720	479,655	606,375	Increase by 479,655
	(ii) EOF/EAF with LRF-VD-AOD	TPA	-	554,400	554,400	-	-	Removed, changed steel making route to IF-LRF
	Total (i) & (ii)	TPA	126,720	554,400	681,120	479,655	606,375	Decrease by 74,745
6.3	CCM-1 (Billets/ Bloom/ Slab)	TPA	124,186 (1X2 strand)	45,599 (same CCM)	169,785 (1X2 strand)	45,599 (1X1 strand)	169,785 (1X3 strand)	No change in production. Increase in strand
6.4	CCM-2 (Billets/ Bloom/ Slab)	TPA	-	543,212 (1X 4 strand)	543,212 (1X 4 strand)	424,463 (1X 4 strand)	424,463 (1X 4 strand)	Decrease by 118,749
	Total 6.3+6.4	TPA	124,186 (1X2 strand)	588,811 (1X4 strand)	667,498 (1X2+1X4 strand)	470,062 (1X1+1X 4 strand)	594,248 (1X3+1X 4 strand)	Decrease by 73,250
7	Rolling Mill (Flat/ Round/ Wire Rod /Structural mill/ others)							
7.1	Rolling Mill -1	TPA	121,702	-	121,702	93,898	215,600	Increase by 93,898
7.2	Rolling Mill-2	TPA	-	532,140	532,140	366,713	366,713	Decrease by 165,427
	Total 7.1+7.2		121,702	532,140	653,842	460,611	582,313	Decrease by 71,529
8	DI Pipe	TPA	-	-	84,000	84,000	84,000	New Unit
9	Oxygen plant	TPD	-	150	150	120	120	Decrease 30 TPD
10	CPP, Total	MW	-	90	90	121	121	Increase by 31
10.1	WHRB based CPP	MW	-	40	40	68	68	Increase by 28

Sl. No.	Plant/ Equipment/ Facility	Units	Existing plant capacity	Proposed capacity after expansion (TOR dt. 02.01.2020)		Proposed Capacity after expansion for Revised TOR amendment request		Change wrt ToR dt 02.01.2020
				Additional w.r.t. existing	Total	Revised Additional w.r.t. existing	Revised Total	
10.2	AFBC/ CFBC based CPP	MW	-	50	50	53	53	Increase by 3 MW
10.3	TG	-	-	2X45 MW	2X45 MW	2x42 +1x22 +1x15 MW	2x42 +1x22 +1x15 MW	Revised configuration
11	Producer Gas plant	Nm^3/ hr	-	-	-	45,000	45,000	New Unit

20.13.5 The other amendments sought in the ToR dated 02/01/2020 is given as below:

Particulars	**As per ToR dt. 02/01/2020**	**Total (for Rev. TOR)**	**Change in rev. TOR wrt 02/01/2020**
Subject matter	Expansion of Karakhendra Steel Plant from 0.127 MTPA to 0.681 MTPA crude steel capacity with installation of 90 MW CPP by M/s Rungta Mines Ltd. located at village Karakhendra and Karakolha, District Keonjhar, Odisha	Expansion of Karakhendra Steel Plant from 0.127 MTPA to 0.606 MTPA crude steel capacity with installation of 121 MW CPP by M/s Rungta Mines Ltd. located at village Karakhendra and Karakolha, District Keonjhar, Odisha	Change in subject matter
Steel Production, MTPA	0.681	0.606	decrease 0.075
Project Area, ha	55.646	55.646	No change but break up changed*
Water requirement, cum/ hour	14,733	15,589	increase 856
Power generation, MW	90	121	increase 31
Power consumption, MW	108	128	increase 20

*Note: *No additional land is required for amendment in ToR. However, after grant of TOR dt. 02.01.2020, during the land acquisition process by IDCO, it emerged that 19.458 acres (7.875 Ha) Government Land in village Karakolha attracts the provisions of Forest (Conservation) Act 1980. Thus, an application for Forest Clearance has been applied vide Online Proposal No. FP/OR/IND/45851/2020 and is under process.*

20.13.6 Proposed raw material and fuel requirement for the project are iron ore (2,445,840 TPA from own mines/OMC/ other private mines), Coking Coal (378,000 TPA from open market), Coal & coal dust (1,020,054 TPA from open market/ imported).

20.13.7 There is no court case or violation under EIAs Notification to the project or related activity.

20.13.8 Name of consultant: Min Mec Consultancy Private Limited, New Delhi. Min Mec is preparing and presenting reports as per the High Court of Delhi orders in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016.

Observations of the Committee

20.13.9 The Committee noted the following:

i. The project proponent has sought for amendment in the ToR dated 02/01/2020 for change in unit configuration & capacity change in view of changing raw material availability as well as market demands.

ii. Total project area is 55.646 ha. Out of this total area, 7.875 ha is a forest land.

iii. Necessary Forest Clearances are yet to be obtained.

Recommendations of the Committee

20.13.10 In view of the foregoing and after detailed deliberations, the Committee recommended for amendment in the ToR dated 02/01/2020 as mentioned above subject to the stipulation of following additional specific ToRs:

i. There are two steel plant units of project proponent within 500 m distance. In view of this, project proponent shall carryout cumulative impact assessment considering pollution from all units in the same air shed and water shed including integrated waste management.

ii. Producer gas plant shall be closed circuit type with adequate arrangement to dispose phenolic water and tar/tar sludge.

iii. Modified wet quenching tower shall be provided for coke quenching and incorporated in the EIA report.

iv. Feasibility study for waste heat recovery from sinter cooler shall be furnished.

v. Feasibility study shall be incorporated in the EIA report for equipping Blast Furnace with TRT, Stove gas waste heat recovery, CH Fume extraction, Dry gas cooling and CH slag granulation facility.

vi. In DI Pipe area, following measures shall be taken to control pollution and the same shall be addressed in the EMP:
   a. Annealing furnace with wet scrubber.
   b. Zinc coating & Mg converter unit with bag filter.
   c. closed bitumen/ epoxy painting unit with wet scrubber to control fumes & odour.
   d. Zinc recovery system & sale to paint manufacturer, regular monitoring during operation.
   e. Cement slurry management to recover water & manufacture brick/ cement tiles.
   f. Core sand in casting area & annealing furnace used for land levelling

vii. Provision for zinc dust recovery from BF with 5 mg/Nm^3 Zn level in flue gases shall be provided.

viii. CETP for entire plant shall be provided to recycle treated water and make the plant ZLD.

ix. Status of Forest Clearance shall be submitted for diversion of Forest land.

x. Action plan for complying with the coal consumption norms published by Central Electricity Authority vide letter dated 27th March 2019 shall be submitted.

20.14 Modernization-cum-expansion of Bokaro Steel plant by up-gradation of existing SMS-I(1.306 MTPA), debottlenecking of SMS-II (3.35 MTPA) & existing CRM complex (1.66 MTPA), installation of new kiln of 450 TPD in Lime plant, a new Sinter Plant(3.7MTPA) and Oxygen plant (1250 TPD on BOO basis) without increasing the overall production capacity of 5.77 MTPA hot metal by **M/s SAIL Ltd**. located at Bokaro Steel City, Tehsil: Chas, **District: Bokaro, State: Jharkhand.** [Online Proposal No. IA/JH/IND/153631/2020, File No. J-11011/99/2007-IAII(I)] **Amendment in Terms of Reference regarding Coke oven plant capacity - regarding.**

20.14.1 M/s. Steel Authority India Limited (Bokaro Steel Plant) has made application vide online proposal no. IA/JH/IND/153631/2020 dated 20/05/2020 along with the Form 3, revised Form-I, copy of pre-feasibility report and sought for amendment in the ToR accorded by the Ministry vide letter no. J-11011/99/2007-IA.II(I) dated 10/04/2018.

Details submitted by the project proponent

20.14.2 M/s. Steel Authority India Limited (Bokaro Steel Plant) has obtained Terms of Reference for the project titled "*Modernization-cum-expansion of Bokaro Steel plant by up-gradation of existing SMS-I(1.306 MTPA), debottlenecking of SMS-II (3.35 MTPA) & existing CRM complex (1.66 MTPA), installation of new kiln of 450 TPD in Lime plant, a new Sinter Plant(3.7MTPA) and Oxygen plant (1250 TPD on BOO basis) without increasing the overall production capacity of 5.77 MTPA hot metal located at Bokaro Steel City, Tehsil: Chas, District: Bokaro, State: Jharkhand"* from MoEF&CC vide letter no. J-11011/99/2007-IA.II(I) dated 10/04/2018. The units along with the production capacities envisaged in the ToR dated 10/04/2018 is given as below:

Sl	**Units/ Products**	**Capacity of units at 4.5 MTPA hot metal stage**	**Capacity of units after expansion from 4.5 to 5.77 MTPA hot metal (as per existing EC for, valid upto 14.10.2018 & ALL AMENDMENTS THEREOF)**	**Status of existing facilities (at 5.77 hot metal stage)**	**Changes proposed as per revised configuration**	**Final configuration after acceptance of proposal**
1.	Coke Oven Complex	3.442 MTPA	3.442 MTPA	Completed.	Addition of 1.0 MTPA Coke oven battery	4.442 MTPA
2.	Blast Furnace Complex	4.5 MTPA	5.77 MTPA	Completed.	NO CHANGE	5.77 MTPA
3.	SMS Complex	SMS-1: 1.5 MTPA SMS-2: 2.7 MTPA Total: 4.2 MTPA	SMS-1: 1.306 MTPA SMS-2: 3.3 MTPA Total: 4.606 MTPA	SMS-I up-gradation delayed. SMS-2 expansion completed.	SMS-I up-gradation included. SMS-2 proposed to be upgraded to 3.35 MTPA	4.656 MTPA

Sl	Units/ Products	Capacity of units at 4.5 MTPA hot metal stage	Capacity of units after expansion from 4.5 to 5.77 MTPA hot metal (as per existing EC for, valid upto 14.10.2018 & ALL AMENDMENTS THEREOF)	Status of existing facilities (at 5.77 hot metal stage)	Changes proposed as per revised configuration	Final configuration after acceptance of proposal
4.	Slabbing Mill	- Universal Slabbing Mill with 7 no. soaking pit batteries	- Universal Slabbing Mill with 7 no. soaking pit batteries to be phased out after SMS-1 upgradation	Universal Slabbing Mill with 7 no. soaking pit batteries retained	NO CHANGE	Universal Slabbing Mill with 7 no. soaking pit batteries
5.	Sinter Plant Complex	6.9 MTPA	Existing plant: 5.0 MTPA New Sinter plant: 3.7 MTPA Total: 8.7 MTPA	New sinter plant of 3.7 MTPA delayed.	New Sinter Plant of 3.7 MTPA	8.7 MTPA
	Pellet Plant*	-	-	-	Addition of 2.0 MTPA Pellet plant	2.0 MTPA
6.	Lime-Dolo Kiln	0.2449 MTPA	0.5358 MTPA	Expansion deferred.	New Kiln of 0.1642 MTPA	0.4091 MTPA
7.	Hot Strip Mill	3.2 MTPA	4.5 MTPA	Completed	NO CHANGE	4.5 MTPA
8.	CRM complex	1.2 MTPA	2.4 MTPA	Completed	Increase by 0.46 MTPA	2.86 MTPA
9.	Oxygen Plant	-	Tot. Capacity: 3950 TPD (1450 TPD captive plant + 2x1250 TPD BOO plant)	Installation of 1x1250 TPD BOO based Oxygen plant delayed.	Installation of 1250 TPD Oxygen Plant on BOO Basis	3950 TPD
10.	Water supply system	-	Tenu Canal and alternate water pipeline system	Project delayed	Project Included	Tenu Canal and alternate water pipeline system

20.14.3 As per ToR accorded, capacity of proposed coke oven battery is submitted as 1.0 MTPA. However, due to an inadvertent error, the capacity of Proposed Coke oven plant is submitted as 1.0 MTPA instead of 0.77 MTPA. The 0.77 MTPA coke oven battery is found adequate for proposed Expansion-cum-modernization plan of BSL, hence a 1.0 MTPA coke oven battery is not needed. The EIA report is prepared with 0.77 MTPA coke oven battery and public consultation is also carried out for 0.77 MTPA coke oven battery (i.e. less than 1.0 MTPA as per approved ToR).

20.14.4 The following amendment was sought by the PP in the ToR dated 10/04/2018:

		CONFIGURATION & CAPACITY AS PER APPROVED TOR		AMENDMENT REQUESTED AS PER PRESENT PROPOSAL	
Sn	**Units/ Products**	**Capacity of Proposed units**	**Final configuration**	**Capacity of Proposed units after proposed amendment**	**Final configuration**
1.	Coke Oven Complex	Addition of 1.0 MTPA Coke Oven Battery	Existing: 3.442 MTPA Proposed: 1.0 MTPA Total: 4.442 MTPA	Addition of 0.77 MTPA Coke Oven Battery	Existing: 3.442 MTPA Proposed: 0.77 MTPA Total: 4.212 MTPA

Observations of the Committee

20.14.5 The Committee noted that the project proponent has sought for amendment in the ToR dated 10/04/2018 for change in capacity of proposed coke oven battery as 0.77 MTPA and the total capacity of coke oven complex after installation of proposed coke oven battery as 4.212 MTPA (i.e. 3.442 MTPA (existing) + 0.77 MTPA (proposed)). Further, PP agreed for installation of CDQ is Coke Oven battery. Also agreed that they will not approach MOEFCC for waiver of CDQ installation for the Coke Oven battery.

Recommendations of the Committee

20.14.6 In view of the foregoing and after detailed deliberations, the Committee recommended for amendment in the ToR dated 10/04/2018 as mentioned above subject to the stipulation of following additional specific ToRs:

i. Coke Oven battery shall be equipped with Coke Dry Quenching (CDQ) facility and the details shall be incorporated in the EIA report.

20.15 Proposed alumina refinery of 3.0 Million TPA along with co-generation power plant of 150 MW by **M/s. Hindalco Industries Limited (Aditya Aluminium Alumina Refinery)** located at Kansarigurha village, Kashipur tehsil, **Rayagada district, Odisha** [Proposal No. IA/OR/IND/154572/2020, MoEF&CC File No. J-11011/141/2004/ IA.II (I)] – **Prescribing of Terms of Reference – regarding.**

20.15.1 M/s. Hindalco Industries Limited has made an online application vide proposal no. IA/OR/IND/154572/2020 dated 29/05/2020 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 S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

20.15.2 M/s. Hindalco Industries Limited: Aditya Aluminium Alumina Refinery- Kansarigurha, Rayagada proposes to install a new Alumina Refinery manufacturing unit for

production of alumina. It is proposed to set up the plant for production of alumina refinery of 3.0 Million TPA along with co-generation power plant of 150 MW based on Bayer's technology.

20.15.3 The project was originally accorded Environment Clearance vide Lr.No J-11011/141/2004/ IA.II.(I) dated 18.03.2006. However, no activity has commenced at the project site and the validity of the said EC was already lapsed.

20.15.4 The proposed unit is located at Village: Kansarigurha, Taluka: Kashipur, District: Rayagada, State: Odisha.

20.15.5 The site co-ordinates are given as below:

Corner	**Latitude**	**Longitude**
Plant Site		
A	19° 06' 29" N	83° 04' 36" E
B	19° 07' 29" N	83° 05' 29" E
C	19° 06' 58" N	83° 06' 1.0" E
D	19° 06' 16" N	83° 05' 39" E

Corner	**Latitude**	**Longitude**
Red Mud Pond Site		
1	19° 04' 19" N	83° 05' 30" E
2	19° 03' 25" N	83° 05' 10" E
3	19° 03' 04" N	83° 06' 06" E
4	19° 03' 40" N	83° 06' 14" E

Corner	**Latitude**	**Longitude**
Ash Pond Site		
X	19° 05' 22" N	83° 05' 38" E
Y	19° 05' 53" N	83° 06' 05" E
Z	19° 05' 35" N	83° 06' 30" E
Corner	Latitude	Longitude
Township		
	19° 07' 20.48" N	83° 04' 32.37" E
R& R Colony-1		
	19° 07' 52.17 N	83° 04' 15.32" E
R & R Colony-2		
	19° 05' 14.42 N	83° 06' 14.68" E

20.15.6 The land area acquired for the proposed plant is 870.42 ha out of which 246.761 ha is an agricultural land, 575.826 ha barren land and 47.833 ha forest land (558.742 Ha Private land and 311.678 Ha Government Land). 47.833 Ha forest land is involved. 560.659 Ha of land has been acquired and rest is in process of acquisition for the project. Of the total area 287.239 Ha (33 %) land will be used for greenbelt development.

20.15.7 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. Detailed study of ecological aspects including the Schedule-I, flora and faunal species will be carried out

in the environmental base line studies.

20.15.8 The reserved and protected forest exists in the study area are Karhinga PF, 1.0 km, S; Kendripadar RF, 1.6 km, E; Titigurha RF, 2.8 km, NE; Baghmari PF, 3.5 km, SE; Bariguma PF, 3.5 km, E; Masimandi PF, 4.8 km, NW; Shankararha RF, 5.4 km, NE; Sargighati PF, 5.9 km, SE; Kutil PF, 7.5 km, E; Minaharu PF, 8.2 km, ENE; Dhamanaganda PF, 9.4 km, SE; Kutinga PF, 9.6 km, SE; Karajhol PF, 9.6 km, NE; Champi RF, 11.4 km, SSW; Rapukana PF, 11.6 km, E; and Kumbhikota PF, 14.2 km, SE.

20.15.9 The water bodies exists in the study area are Patagarhanala adjacent to project site, N; PoragarNadi 8.2 km N; BaghriNala 9.8 km, W; and ChikambNala 12.9 km, W.

20.15.10 The targeted production capacity of the Plant is 3.0 million TPA. The ore for the plant would be sourced from nearby Kodingamali Bauxite Mines and procurement from other sources. The ore transportation will be done through environmental friendly fully covered closed conveyor.

20.15.11 The electricity load of 3 MW will be procured from the GRID & Company has also proposed to install 4500 KVA DG Set during construction. The electricity load of 150 MW will be met from CPP during operation.

20.15.12 Proposed raw material and fuel requirement for project are Bauxite ore, Coal, Lime, Caustic Soda and Furnace Oil. Requirement of Bauxite ore will be fulfilled from Kodingamali and nearby other Bauxite Mines, Coal from domestic and imported sources, Lime from domestic sources in Rajasthan & Madhya Pradesh, Caustic Soda from domestic suppliers and imported sources. Fuel consumption will be mainly coal and HFO. HFO will be sourced from domestic oil companies like HPCL & IOCL.

20.15.13 Water Consumption for the proposed project will be 10.41cusecs (25,470 m^3/day). 20,000 m^3/day during operation and 5,000 m^3/day during construction. Wastewater generation will be 10,000 m^3 /day. Domestic wastewater will be treated in STP and the treated water will be used for sprinkling & horticulture. Industrial wastewater generated will be recycled and reused fully.

20.15.14 Total project cost is approx. Rs 11,000.00 Crores. Employment generation from the proposed project will be 150 direct and 8,000 indirect employments during construction phase and 750 direct and 4,000 indirect employments during operation phase.

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

20.15.16 Name of the EIA consultant: M/s. Vimta Labs Limited [S.No.167, List of Accredited Consultant Organizations (Alphabetically) Rev. 88, June 10, 2020].

Observations of the Committee

20.15.17 The Committee noted the following:

i. Area allotted for red mud disposal is 282.92 ha. This shall be revisited and the land requirement shall be optimized as for similar proposals, only one third of land proposed by the proponent is required for red mud disposal.
ii. Design details of Red Mud Pond has not been furnished.
iii. Area allotted for Fly ash disposal is 116.73 ha. This needs to be reworked by considering the provision of the Fly ash Notification 1999 and it is subsequent amendments.

iv. Plant layout has to be revised based on the optimization of land requirement of Red mud pond and ash pond.

v. Form 1A for the proposed residential township has not been submitted. Further, no details are furnished in the pre-feasibility report with respect to the proposed residential township facility.

Recommendations of the Committee

20.15.18 In view of the foregoing and after detailed deliberations, the Committee recommended to return the proposal in present form.

20.16 Expansion of Integrated Steel Plant comprising of Pellet Plant from 900,000 TPA to 1250,000 TPA, DRI plant from 375,000 TPA to 953,000 TPA, New 720,000 TPA Sinter Plant, New 450,000 TPA Blast Furnace, SMS from 305512 TPA to 1171,000 TPA, Rolling Mill from 480,000 TPA to 1020,000 TPA, New 220 TPD Oxygen Plant, Captive Power Plant from 72.5 MW to 123.5 MW **by M/s. MSP Steel & Power Ltd** located at Jamgaon and Manuapalli villages, **District Raigarh, Chhattisgarh** [Proposal No. IA/CG/IND/146473/2020, MoEF&CC File No. J-11011/267/2007-IA-II.(I)] – **Prescribing of Terms of Reference – regarding.**

20.16.1 M/s. MSP Steel & Power Ltd has made an online application vide proposal no. IA/CG/IND/146473/2020 dated 30/04/2020 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 S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

20.16.2 M/s. MSP Steel & Power Limited proposes to install expansion of existing manufacturing unit for Pellet Plant from 900,000 TPA to 1250,000 TPA, DRI plant from 375,000 TPA to 953,000 TPA, New 720,000 TPA Sinter Plant, New 450,000 TPA Blast Furnace, SMS from 305512 TPA to 1171,000 TPA, Rolling Mill from 480,000 TPA to 1020,000 TPA, New 220 TPD Oxygen Plant, Captive Power Plant from 72.5 MW to 123.5 MW. It is proposed to set up the plant for producing Steel Strip, Bar, Wire Rod based on DRI-Induction Furnace-Rolling Mill, Blast Furnace - LD Convertor-Rolling Mill technology.

20.16.3 The existing project was accorded Environment Clearance vide lr.no.J.11011/267/2007/IA-II (I) dated 2nd April 2009. Consent to Operate was accorded by Chhattisgarh State Pollution Control Board vide lr. no. 6237 dated 16th October 2019 validity of CTO is up to 31st October 2022.

20.16.4 The proposed unit will be located at Village: Jamgaon, Taluka: Raigarh, District: Raigarh, State: Chhattisgarh.

20.16.5 The existing plant area is 51 ha. The additional land area for the proposed plant is 47 ha, which is an agricultural land, No forest land is involved. 17.4 ha land has been acquired for the project (consent of land owners obtained for the balance 29.6 ha land). Of the total area of 98 ha (existing 51 ha + proposed 47 ha) 33% area or 32.4 ha land will be used for green belt development.

20.16.6 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.

20.16.7 The targeted production capacity of the Integrated Steel Plant is 1.171 million TPA Steel. The ore for the plant would be procured from mines located in CG and Odisha. The ore transportation will be done through Rail (only minor raw materials, that are not feasible to transport by rail, will be transported by road). The capacity for different products for existing and proposed expansion units at the site area is given below:

SN	Name of Unit	Name of Product	Existing Production Capacity		Expansion Production Capacity, TPA		Ultimate Production
			Configuration	**Capacity TPA**	**Configuration**	**Capacity TPA**	**Capacity TPA**
1	Coal Washery	Clean coal	2 x 50 TPH	3,60,000*[1]	-	3,60,000	**7,20,000 TPA**
2	Producer gas plant	Coal gas	2 x 6000 + 6 x 2200 + 1x8000 Nm^3/h	116.81 mNm^3/year	-	-	**116.81 mNm^3/year**
3	Iron Ore Beneficiation plant	Iron ore Concentrate	9,00,000 TPA	9,00,000	-	-	**9,00,000 TPA**
4	Pellet Plant	Iron ore Pellets	1x0.6 MTPA	6,00,000	Up gradation	8,33,000	8,33,000
			1x0.3 MTPA	3,00,000	Up gradation	4,17,000	4,17,000
						Total	**12,50,000 TPA**
5	DRI Plant	Sponge iron	3x375 TPA	375,000	-	-	3,75,000
			-	-	2x600 TPD 1x500 TPD	4,08,000 1,70,000	5,78,000
						Total	**9,53,000 TPA**
6	Sinter Plant	Iron ore Sinter	-	-	60 m^3	7,20,000	**7,20,000 TPA**
7	Blast Furnace	Hot Metal, Pig Iron	-	-	380 m^3	4,50,000	**4,50,000 TPA**
8	SMS – 1	Billets	1x18 tons IF 3x15 tons IF 5x8 tons* IF	305,512	4x20 tons IF 1x20 tons Dephos Unit	2,90,400	5,77,000
	SMS – 2	Billets	-	-	4x30 tons IF 1x60 tons LDC 1x60 tons LRF 1x60 tons VDU	5,94,000	5,94,000
						Total	**1,171,000 TPA**
9	Rolling Mill-1	TMT Bar, LSM, HSM	TPM mill LS Mill HS Mill	4,80,000	-	-	4,80,000
	Rolling	Strip, Bar,	Hot Strip Mill	-	-	5,40,000	5,40,000

SN	Name of Unit	Name of Product	Existing Production Capacity		Expansion Production Capacity, TPA		Ultimate Production
			Configuration	Capacity TPA	Configuration	Capacity TPA	Capacity TPA
	Mill-2	Wire Rod	Bar & Wire Rod Mill				
						Total	**10,20,000 TPA**
10	Oxygen Plant	Oxygen, N_2, Argon			1x220 TPD	220 TPD	**220 TPD**
11	Captive Power Plant	Electricity	WHRB 1x16 MW 1x8 MW	24 MW	WHRB 2x18MW 1x15 MW	51 MW	75 MW
			CFBC 1x34 MW 1x10 MW	44 MW	-	-	44 MW
			Biomass 1x4.5MW	4.5 MW	-	-	4.5 MW
						Total	**123.5 MW**

*[1]*2x50TPHwashey installed, but only 1x50 TPH is operated for washing 360000 TPA ROM coal.*

20.16.8 The additional electricity load is 96 MW;45 MW will be procured from CPP and 51 MW from State Grid. Company has also proposed not to install DG sets.

20.16.9 Proposed raw material and fuel requirement for project are Iron ore, coal, dolomite, limestone, quartzite, bentonite, lime, fluorspar and ferroalloys. The requirement would be fulfilled by purchase from mine owners, plant owners and locally available sources. Fuel consumption will be mainly coal.

20.16.10 Water Consumption for the proposed project will be additional 3050 KLD. Wastewater generation will be approximately 300 KLD. Domestic wastewater will be treated in STP and industrial wastewater generated will be treated in ETP.100% treated water will be reused and ZLD will be maintained. The source of water is Anicut made on Kur nalla.

20.16.11 Total project cost is INR 2045 Crore rupees. Employment generation from proposed project will be 1000 direct employment and 1000 indirect employment.

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

20.16.13 Name of the EIA consultant: M/s. Grass Roots Research and Creation India (P) Ltd. [S.No.87, List of Accredited Consultant Organizations (Alphabetically) Rev. 88, June 10, 2020].

Observations of the Committee

20.16.14 The Committee noted the following:

i. Land acquisition issues with regard to overhead conveyor, railway siding and underground pipe line from KUR Nallah could not be clarified.
ii. The permission for water withdrawal and compliance to the conditions of earlier permission were not available.
iii. Permission to extend railway siding and its current status is not available.
iv. Permission to cross the railway line for water pipe line from KUR nallah to the plant is not available.

v. Consultant was not able to explain the criteria for selection of sampling locations for soil and Noise quality monitoring.
vi. Engineering layout for the plant is not available. The map given is not legible.
vii. Details of the Green belt to be developed on western side of the plant to protect the village of Manupali (200 m away from plant boundary) from fugitive emission of the plant has not been given.
viii. Details of tailing pond for iron ore washing plant is not furnished. Action plan for tailings management has not been submitted.
ix. Details of 4.5 MW biomass power plant has not been furnished.

Recommendations of the Committee

20.16.15 In view of the foregoing and after detailed deliberations, the Committee recommended to return the proposal in present form.

20.17 Production of 4,60,000 TPA of Newsprint/paper/Board, new wood pulp mill of 600 TPD (Paper & Board) capacity and coal fired boiler based captive power plant having capacity 140 MW by **M/s. Emami Paper Mills Limited** located at Village Balgopalpur, Tehsil Remuna, **District Balasore, State Odisha** - [Online Proposal No. IA/OR/IND/124371/2019, File No. J-11011/437/2010-IA-II-(I)] - **Amendment in EC conditions - regarding.**

20.17.1 M/s. Emami Paper Mills Limited has made online application vide proposal no. IA/OR/IND/124371/2019 dated 25/02/2020 along with Form 4 and sought for amendment in the Environment Clearance conditions accorded by the Ministry vide letter no. J-11011/323/2006-IA.II(I) dated 17/05/2007 and J-11011/437/2010-IA-II(I) dated 13/01/2012.

20.17.2 The proposal cited above was considered in the 17th REAC meeting held on 9/04/2020. The EAC proceedings of the proposal is reproduced as below:

Proceedings of the 17th REAC meeting held on 9/04/2020

M/s. Emami Paper Mills Ltd. is operating a 3,00,000 TPA paper & board plant at village Balgopalpur, District Balasore, Odisha with valid CTO dated 27.03.2019. The paper & board types comprise Newsprint, Kraft, Writing, Printing and Industrial Paper Board/ Packaging Board.

The company had obtained an Environment Clearance as follows:

i. EC letter No. J-11011/437/2010-IA-II (I) dt. 13.01.2012 for a capacity of 4,60,000 TPA paper & board and 140 MW captive power plant
ii. EC letter No. J-11011/323/2006-IA-II (I) dt. 17.05.2007 for 1,30,000 TPA paper and 20 MW captive power plant.

The units & capacity sanctioned through the above two Environment Clearances and their current status is given below:

Sl. No.	Section	Unit	As per EC
1	Newsprint, Paper & Board	tpd	1400 (4,60,000 TPA)
2	RCF Pulp	tpd	800

Sl. No.	Section	Unit	As per EC
3	Wood Pulp	tpd	600
4	Chlorine-di-oxide	tpd	14
5	Oxygen Generation	tpd	15
6	Evaporation Plant	tpd	280
7	Recovery Boiler	solids/day	1300
		tph stream	280
8	Lime Kiln	tpd	280
9	Causticiser Plant – recovered caustic (AA) basis	tpd	300
10	Producer gas plant	Nm^3/h	10000
11	Power Plant	MW	140
12	Coal fired boiler	tph	540
13	DM/RO plant	m^3/h	225
14	Power Evacuation sub station	MVA	65
15	Cooling Towers	m^3/h	29000
16	Water requirement	m^3/day	82000
17	Waste water treatment plant capacity	m^3/day	75000
18	Colony	No. of Houses	975

Due to lack of success in developing plantation for wood pulp, the Company dropped the project for captive pulping and associated processes. Thus, as on 31.03.2019, the production achieved could only be 3,00,000 TPA paper & board and 33.5 MW captive power plant could be installed. The CTO from OSPCB is for the actually achieved capacities. The following Table shows the present status of implementation of the EC:

Sl. No.	Section	Unit	As per EC	Existing status of implementation (based on CTO dt. 27.03.2019 & actual implementation)
1	Newsprint, Paper & Board	TPD	1400 (4,60,000 TPA)	909 (3,00,000 TPA)
2	RCF Pulp	TPD	800	600
3	Wood Pulp	TPD	600 (was to be produced in-house)	300 (purchasing)
4	Chlorine-di-oxide	TPD	14	Not installed
5	Oxygen Generation	TPD	15	Not installed

Sl. No.	Section	Unit	As per EC	Existing status of implementation (based on CTO dt. 27.03.2019 & actual implementation)
6	Evaporation Plant	TPD	280	Not installed
7	Recovery Boiler	solids/day	1300	Not installed
		TPH stream	280	Not installed
8	Lime Kiln	TPD	280	Not installed
9	Causticiser Plant – recovered caustic (AA) basis	TPD	300	Not installed
10	Producer gas plant	Nm^3/h	10000	Not installed
11	Power Plant	MW	140	33.5 (part installed & existing augmented)
12	Coal fired boiler	tph	540	185 (part installed)
13	DM/RO plant	m^3/h	225	Not installed, existing 75 m^3/h continued
14	Power Evacuation sub station	MVA	65	16/20MVA, 132/11Kv (part augmented)
15	Cooling Towers	m^3/h	29000	8,750 (existing 6000 + part installed 2750)
16	Water requirement	m^3/day	82000	11,700 (reduced due to partial installation of plant)
17	Waste water treatment plant capacity	m^3/day	75000	14,500 (reduced due to partial installation of plant)
18	Colony	No. of Houses	975	205 (Existing 175 augmented by 30)

It can be seen from the above table that full production at serial 1 to 3 could not be achieved. The units at serial 4 to 10 were not installed at all and units at serial 11 to 18 were partially installed or the units existing at time of EC were augmented. Since the wood pulp could not be produced in-house, therefore, the pulp is purchased.

Due to non-installation of seven of the sanctioned facilities, partial installation of eight facilities and only partial achievement of Newsprint, Paper & Board production i.e. of 3 lakh TPA instead of 4.6 lakh TPA sanctioned the overall reduction in air emission, water consumption, effluent generation, solid waste generation has occurred as follows:

Parameter	As sanctioned in EC	Amendment sought
Water	82,000	11,700

<table>
<tr><th>Parameter</th><th>As sanctioned in EC</th><th>Amendment sought</th></tr>
<tr><td>requirement, m^3/day</td><td></td><td></td></tr>
<tr><td>Waste Water discharge, m^3/day</td><td>65,500</td><td>7,000</td></tr>
<tr><td>Effluent treatment plant</td><td>75000</td><td>14,500</td></tr>
<tr><td>Power requirement</td><td>100 MW</td><td>33.5 MW</td></tr>
<tr><td>Solid waste</td><td colspan="2">
<table>
<tr><th rowspan="2">SI. No.</th><th rowspan="2">Source</th><th colspan="2">As per EC dt. 13.02.2012</th><th colspan="2">Amendment sought</th><th rowspan="2">Management</th></tr>
<tr><th>Total</th><th>Reuse/ Sale</th><th>Total</th><th>Reuse/ Sale</th></tr>
<tr><td>1.</td><td>Used Oil, TPA</td><td>--</td><td>--</td><td>25</td><td>25</td><td>Sold to authorized vendor</td></tr>
<tr><td>2.</td><td>Ash, TPD</td><td>900</td><td>900</td><td>401</td><td>401</td><td>Used 100% in brick manufacturing</td></tr>
<tr><td>3.</td><td>Primary Sludge, BDMT</td><td>204</td><td>204</td><td>100</td><td>100</td><td>Primary sludge used in company’s own power boiler as a fuel</td></tr>
<tr><td>4.</td><td>Secondary Sludge, TPD</td><td>9</td><td>9</td><td>3.5</td><td>3.5</td><td>Used in Plantation/ horticulture as a manure</td></tr>
<tr><td>5.</td><td>Waste Plastic, TPD</td><td>--</td><td>--</td><td>10</td><td>10</td><td>Sent to authorized cement industry for co Processing in lime kiln</td></tr>
<tr><td>6.</td><td>Lime sludge</td><td>50</td><td>50</td><td>Nil</td><td>Nil</td><td>Brick manufacturing & cement grinding plant</td></tr>
</table>
</td></tr>
<tr><td>Air Emission</td><td colspan="2">
All values in μg/m³
<table>
<tr><th></th><th colspan="3">As per EIA</th><th colspan="2">As per amended configuration</th><th></th></tr>
<tr><th>Pollutant</th><th>Baseline air quality values</th><th>Incremental GLC</th><th>Resultant GLC</th><th>Incremental GLC</th><th>Resultant GLC</th><th>Reduction in GLC</th></tr>
<tr><td>PM_{10}</td><td>68.7</td><td>3.8</td><td>72.5</td><td>0.225</td><td>68.925</td><td>3.575</td></tr>
<tr><td>SO_2</td><td>15.5</td><td>16.4</td><td>31.9</td><td>4.742</td><td>20.242</td><td>11.658</td></tr>
<tr><td>NOx</td><td>19.3</td><td>4.3</td><td>23.6</td><td>2.478</td><td>21.778</td><td>1.822</td></tr>
</table>
</td></tr>
</table>

The amendment required in the EC dated 13/01/2012 and 17/05/2007 are furnished as below:

(1) ***with respect to EC dated 13.01.2012:*** The plant was envisaged to expand from

(a) 130000 TPA to 460000 TPA of Newsprint/ paper/ Board was sanctioned but only 3,00,000 TPA is installed till date

(b) New wood pulp mill of 600 TPD (Paper & board) capacity was sanctioned could not be installed and wood pulp is currently purchased

(c) Coal fired boiler based Captive Power Plant from 20 MW to 140 MW was sanctioned but only 33.5 MW has been installed

The present capacity is lower than that permitted in the EC and no new wood pulp mill was installed due to lack of success in developing plantation for wood pulp. Thus, instead of manufacturing wood pulp in-house, the company is purchasing wood pulp from various countries to Haldia Port and bringing it to plant by road. Furthermore, due to change in plans, none of the following units have been installed:

- One new de-inking pulp mill of capacity 400 tpd
- ECF wood pulp mill of capacity 600 tpd in two phase
- New plant of Chlorine –di-oxide plant (s) of capacity 14 tpd
- New Oxygen generation plant of capacity 15 tpd
- New evaporation plant (s) of capacity 240 tpd water evaporation
- Two new recovery boiler (s) 1300 tonne of BL solids firing per day
- Two new lime kiln (s) of capacity 280 tpd Lime
- Two new causticiser plant (s) of capacity 300 tpd of recovered caustic (AA)
- New producer gas plant of capacity 10000 Nm^3/h
- New DM/RO plant (s) of Capacity 150 m^3/hr
- New water treatment plant of capacity 75000 m^3/day

The capacities of following project constituents as per EC dated 13.01.2012 were partly implemented:

	As per EC dated 13.01.2012	**Actual implementation**
i.	One newsprint/ board machine #4 of capacity 400 tpd	One board machine # 4 of capacity 500 TPD. Out of 3 paper/ Board machines of 1000 TPD capacity, we have installed only one board machine of capacity 500 TPD
ii.	Two paper /board paper machines (PM#5 &#6) of capacity 600 tpd	
iii.	Two new power plant (s) of capacity 120 MW	One new power plant of capacity 10.5 MW and augmentation of power plant 15 MW to 18 MW
iv.	Three new coal fired boilers of capacity 420tph (3 x140tph)	One new coal fired boilers of capacity 65 tph
v.	New cooling towers of capacity 23000 m^3/hr of water	New of 2750 m^3/Hr
vi.	Augmentation of power substation of capacity 50 MVA for receiving and evacuation of power to grid	Augmentation of power substation of capacity 16/20 MVA, 132/11kV for receiving Grid power
vii.	New wastewater treatment plant of 65000 m^3/day	Augmentation of present installed capacity to 14500 m^3/day
viii.	Additional housing colony consisting of 800 houses	Additional 30 new houses in existing colony

- Due to non-installation, and other changes as mentioned above, there is no generation of black liquor, wood chips nor use of furnace oil.

- Ground water consumption has also not increased with respect to that mentioned in 2007 EC due to various water conservation measures implemented over the years. Hence, the proposal to draw additional water from Budhabalanga river through Barrage for expansion project was not required to be implemented as per EC of 2012.

- Accordingly, the project configuration of 2012 EC got changed and subsequently the project cost reduced to Rs 490 Crores from Rs. 2500 Crores and correspondingly ESR expenditure may be replaced with the CER as per MoEF&CC OM dated 01.05.2018.

(2) with respect to EC dated 17.05.2007: There is typographical error in the subject matter while the correct figures regarding production are mentioned in the first paragraph of the letter itself. Subsequently, EMPL has not installed captive Digestor Pulping (Kraft process), Recovery Boiler or chemical recovery plant, as mentioned in the EC letter no F.No. J-11011/323/2006-IA-II (I) dt. 17.05.2007 hence there is no conventional pulp bleaching. Consequently, the pollutant emitted through these processes (H_2S, Pb, Mercaptans, Methylene chloride, TOC and AOx), wastes generated (black liquor) and chemicals used in these processes (chlorine and hypochlorite) do not apply.

The amendment required in the environment clearance letters are given below:

(1) Amendments required in Environmental clearance letter no. J-11011/437/2010-IA-II (I) dated 13.01.2012

Reference of approved EC	**Description as per approved EC**	**Description required as per proposal (proposed changes are underlined)**	**Justification of amendment**
(1)	**(2)**	**(3)**	**(4)**
Subject	Expansion of Paper Mill from 130000 TPA to 460000 TPA of Newsprint/ Paper/ Board, new wood pulp mill of 600 TPD (Paper & board) capacity and Coal fired boiler based Captive Power Plant from 20 MW to 140 MW capacity at Balgopalpur village, Remuna Tehsil, Balasore District, Orissa by M/s Emami Paper Mills Limited- regarding Environment Clearance	Expansion of Paper Mill from 1,30,000 TPA to 3,00,000 TPA of Newsprint/Paper/ Board and Coal fired boiler based Captive Power Plant from 20 MW to 33.5 MW capacity at Balgopalpur village, Remuna Tehsil, Balasore District, Odisha by M/s Emami Paper Mills Limited- regarding Environment Clearance	• Due to lack of success in developing plantation for wood pulp the company dropped the project for captive pulping and associated processes • The total production that could be achieved was 3,00,000 TPA paper & board with 33.5 MW installed capacity of CPP
Para 2	The Ministry of Environment and Forests has examined the proposal. It is noted that M/s Emami Paper Mills Limited have proposed for expansion of Paper Mill from 130000 TPA to 460000 TPA of Newsprint/Paper/Board by increasing the production of Newsprint/Printing & Writing Papers from 400 TPD (Newsprint)	The Ministry of Environment and Forests has examined the proposal. It is noted that M/s Emami Paper Mills Limited have proposed for expansion of Paper Mill from 1,30,000 TPA to 3,00,000 TPA of Newsprint/ Paper/ Board by increasing the production by using 300 TPD purchased pulp and RCF/balance Deinked pulp 600 TPD. Coal fired boiler based Captive Power Plant from 20 MW to 33.5 MW capacity at Balgopalpur Village,	Captive pulping and associated process was dropped as wood plantation project did not succeed.

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
(1)	(2)	(3)	(4)
	to 800 TPD capacity, new wood pulp mill of 600 TPD (Paper & Board) capacity and Coal fired boiler based Captive Power Plant from 20 MW to 140 MW capacity at Balgopalpur Village, Remuna Tehsil, Balasore District, Orissa. Total plant area is 967 acres including 69 acres of existing plant area. About 150 acres of the plant area will be developed under green belt. No national park/ wildlife sanctuary / eco-sensitive area is located within 10 km radius of the project. However, Mitrapur reserve forest is located at a distance of 2.5 km and 4.3 km in the west and 5.9 km in south west. Total cost of the proposed expansion will be Rs. 2500.00 Crores (including Rs.325.00 Crores will be earmarked towards for environmental pollution control measures) in the proposed expansion plan.	Remuna Tehsil, Balasore District, Odisha. Total plant area is 158.35 acres including 69 acres of existing plant area. About 53 acres of the plant area will be developed under green belt No national park/ wildlife sanctuary / eco-sensitive area is located within 10 km radius of the project. However, Mitrapur reserve forest is located at a distance of 2.5 km. Total cost of the proposed expansion will be Rs. 490 Crores (including Rs.30.00 Crores will be earmarked towards for environmental pollution control measures) in the proposed expansion plan.	
Para 3	Following additional facilities will be taken up in the proposed expansion:	Following additional facilities will be taken up in the proposed expansion:	
	➢ One newsprint/ board machine #4 of capacity 400 tpd	- One board machine # 4 of capacity 500 tpd	Out of 3 paper /Board machines of 1000TPD capacity, we have installed only one board machine of capacity 500TPD.
	➢ Two paper /board paper machines (PM#5 &#6) of capacity 600 tpd		
	➢ One new de-inking pulp mill of capacity 400tpd	-	Not installed
	➢ ECF wood pulp mill of capacity 600 tpd in two phase	-	Not installed
	➢ New plant of Chlorine –di-oxide plant (s) of capacity 14 tpd	-	Not installed
	➢ New Oxygen generation plant of capacity 15 tpd	-	Not installed
	➢ New evaporation plant (s) of capacity 240 tpd water evaporation	-	Not installed
	➢ Two new recovery boiler (s) 1300 tonne of BL solids firing per day	-	Not installed
	➢ Two new lime kiln (s) of capacity 280 tpd Lime	-	Not installed
	➢ Two new causticiser plant (s) of capacity 300 tpd of recovered caustic (AA)	-	Not installed

<table>
<tr><th>Reference of approved EC</th><th>Description as per approved EC</th><th>Description required as per proposal (proposed changes are underlined)</th><th>Justification of amendment</th></tr>
<tr><td>(1)</td><td>(2)</td><td>(3)</td><td>(4)</td></tr>
<tr><td></td><td>➢ New producer gas plant of capacity 10000 Nm^3/h</td><td>-</td><td>Not installed</td></tr>
<tr><td></td><td>➢ Two new power plant (s) of capacity 120 MW</td><td>➢ One new power plant of capacity 10.5 MW and augmentation of power plant 15 MW to 18 MW</td><td>Reduced capacity installed.
Existing 5 + Augmented 18+ new 10.5 = 33.5 MW total capacity</td></tr>
<tr><td></td><td>➢ Three new coal fired boilers of capacity 420tph (3x140 tph)</td><td>➢ One new coal fired boilers of capacity 65 tph</td><td>Reduced capacity installed.
Existing 35 + 85 + new 65 = 185 TPH total.</td></tr>
<tr><td></td><td>➢ New DM/RO plant (S) of capacity 150 m^3/hr</td><td>-</td><td>Not installed</td></tr>
<tr><td></td><td>➢ New cooling towers of capacity 23000 m^3/h of water</td><td>➢ New cooling towers of capacity 2750 m^3/h of water</td><td>Reduced capacity installed</td></tr>
<tr><td></td><td>➢ Augmentation of power substation-50 MVA for receiving and evacuation of power to grid</td><td>➢ Augmentation of power substation of capacity 16/20 MVA, 132/11kV for receiving Grid power</td><td>Reduced capacity installed</td></tr>
<tr><td></td><td>➢ New water treatment plant of capacity 75000 m^3/day</td><td>-</td><td>Not installed</td></tr>
<tr><td></td><td>➢ New wastewater treatment plant of capacity 65000 m^3/day</td><td>➢ Augmentation of wastewater treatment plant of capacity to 14500 m^3/day</td><td>Augmentation of existing ETP capacity</td></tr>
<tr><td></td><td>➢ Additional housing colony consisting of 800 houses.</td><td>➢ Additional new 30 houses in existing colony</td><td>Augmentation of existing colony with new houses</td></tr>
<tr><td>Table in Para 4</td><td>
<table>
<tr><th>Sr. No.</th><th>Section</th><th>Unit</th><th>Existing</th><th>MEP</th><th>Total Post MEP</th><th>Proposal</th></tr>
<tr><td>1</td><td>Newsprint, Paper & Board</td><td>tpd</td><td>400</td><td>1000</td><td>1400</td><td>New</td></tr>
<tr><td>2</td><td>RCF pulp</td><td>tpd</td><td>400</td><td>400</td><td>800</td><td>New</td></tr>
<tr><td>3</td><td>Wood pulp</td><td>tpd</td><td></td><td>600</td><td>600</td><td>New</td></tr>
<tr><td>4</td><td>Chlorine-di-oxide</td><td>tpd</td><td>-</td><td>14</td><td>14</td><td>New</td></tr>
<tr><td>5</td><td>Oxygen Generation</td><td>tpd</td><td>-</td><td>15</td><td>15</td><td>New</td></tr>
<tr><td>6</td><td>Evaporation Plant</td><td>tpd</td><td>-</td><td>280</td><td>280</td><td>New</td></tr>
<tr><td>7</td><td>Recovery Boiler</td><td>Solids/ day</td><td>-</td><td>1300</td><td>1300</td><td>New</td></tr>
<tr><td></td><td></td><td>Tph steam</td><td>-</td><td>160</td><td>280</td><td>New</td></tr>
<tr><td>8</td><td>Lime kiln</td><td>tpd</td><td>-</td><td>280</td><td>280</td><td>New</td></tr>
<tr><td>9</td><td>Causticiser plant – recovered caustic (AA) basis</td><td>tpd</td><td>-</td><td>300</td><td>300</td><td>New</td></tr>
<tr><td>10</td><td>Producer gas plant</td><td>Nm^3/h</td><td>-</td><td>10000</td><td>10000</td><td>New</td></tr>
<tr><td>11</td><td>Power Plant</td><td>MW</td><td>20</td><td>120</td><td>140</td><td>New</td></tr>
</table>
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<table>
<tr><th>Sr. No.</th><th>Section</th><th>Unit</th><th>Existing</th><th>MEP</th><th>Total Post MEP</th><th>Proposal</th></tr>
<tr><td>1</td><td>Newsprint, Paper & Board</td><td>tpd</td><td>400</td><td>509</td><td>909</td><td>New</td></tr>
<tr><td>2</td><td>RCF pulp</td><td>tpd</td><td>400</td><td>200</td><td>600</td><td>New</td></tr>
<tr><td>3</td><td>Wood pulp</td><td>tpd</td><td>-</td><td>300</td><td>300</td><td>Purchased Pulp</td></tr>
<tr><td>4</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>5</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>6</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>7</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>8</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>9</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>10</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>11</td><td>Power Plant</td><td>MW</td><td>20</td><td>13.5</td><td>33.5</td><td>New & augmentation</td></tr>
<tr><td>12</td><td>Coal fired boiler</td><td>tph</td><td>120</td><td>65</td><td>185</td><td>New</td></tr>
<tr><td>13</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>14</td><td>Power Evacuation sub station</td><td>MVA</td><td>15</td><td>5</td><td>20</td><td>Augmentation</td></tr>
<tr><td>15</td><td>Cooling Towers</td><td>m^3/h</td><td>6000</td><td>2750</td><td>8750</td><td>New</td></tr>
<tr><td>16</td><td>Water requirement</td><td>m^3/ day</td><td>7000</td><td>4,700</td><td>11,700</td><td>Augmentation</td></tr>
<tr><td>17</td><td>Waste</td><td>m^3/h</td><td>10000</td><td>4500</td><td>14,500</td><td>Augmentati</td></tr>
</table>
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Due to lack of success in developing plantation for wood pulp production, Company had to drop the project for captive pulping and associated processes.
The total capacity that could be achieved was 3,00,000 TPA paper & board. Accordingly, the capacity of the following units has been reduced commensurate to production:

RCF pulp
Wood pulp to be purchased in place of in-house manufacturing

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<table>
<tr><th>Reference of approved EC</th><th>Description as per approved EC</th><th>Description required as per proposal (proposed changes are underlined)</th><th>Justification of amendment</th></tr>
<tr><td>(1)</td><td>(2)</td><td>(3)</td><td>(4)</td></tr>
<tr><td></td><td>
<table>
<tr><td>12</td><td>Coal fired boiler</td><td>tph</td><td>120</td><td>420</td><td>540</td><td>New</td></tr>
<tr><td>13</td><td>DM/RO plant</td><td>m^3/h</td><td>75</td><td>150</td><td>225</td><td>New</td></tr>
<tr><td>14</td><td>Power Evacuation sub station</td><td>MVA</td><td>15</td><td>50</td><td>65</td><td>Augmentation</td></tr>
<tr><td>15</td><td>Cooling Towers</td><td>m^3/h</td><td>6000</td><td>23000</td><td>29000</td><td>New</td></tr>
<tr><td>16</td><td>Water requirement</td><td>m^3/ day</td><td>7000</td><td>75000</td><td>82000</td><td>New</td></tr>
<tr><td>17</td><td>Waste water treatment plant capacity</td><td>m^3/h</td><td>10000</td><td>65000</td><td>75000</td><td>New</td></tr>
<tr><td>18</td><td>Colony</td><td>No. of Houses</td><td>175</td><td>800</td><td></td><td>New</td></tr>
</table>
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<table>
<tr><td></td><td>water treatment plant capacity</td><td></td><td></td><td></td><td></td><td>on</td></tr>
<tr><td>18</td><td>Colony</td><td>No. of Houses</td><td>175</td><td>30</td><td>205</td><td>Augmentation</td></tr>
</table>
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Not installed since not required:

Chlorine dioxide
Oxygen generation
Evaporation plant
Recovery boiler
Lime kiln
Causticiser plant – recovered caustic (AA) basis
Producer plant

</td></tr>
<tr><td>Table in Para 5</td><td>
<table>
<tr><th>Product</th><th>Unit</th><th>Pre-Mill Expansion Plan</th><th>Post Mill Expansion Plan</th></tr>
<tr><td>Paper/ Board</td><td>tpa</td><td>1,30,000</td><td>4,60,000</td></tr>
<tr><td>Wood based pulp</td><td>BD tpa</td><td>-</td><td>2,00,000</td></tr>
<tr><td>De-inked pulp</td><td>BD tpa</td><td>1,30,000</td><td>2,60,000</td></tr>
</table>
</td><td>
<table>
<tr><th>Pro duct</th><th>Unit</th><th>Pre-Mill Expansion Plan</th><th>Post Mill Expansion Plan</th></tr>
<tr><td>Paper/ Board</td><td>tpa</td><td>1,30,000</td><td>3,00,000</td></tr>
<tr><td>Wood based pulp</td><td>BD tpa</td><td>-</td><td>89,000 (Purchased Pulp)</td></tr>
<tr><td>De-inked & RCF pulp</td><td>BD tpa</td><td>1,30,000</td><td>2,00,000</td></tr>
</table>
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Due to lack of success in developing plantation for wood pulp production, Company had to drop the project for captive pulping and resort to import of wood based pulp.
The total capacity that could be achieved was 3,00,000 TPA paper & board.

</td></tr>
<tr><td>Para 6</td><td>Raw materials required for the project will be mixed hard wood & bamboo and waste paper. The mixed hard wood and bamboo will be obtained through social / farm forestry and Govt. plantation. The waste paper will be imported and obtained through local sources. The major chemicals required will be sodium hydroxide, hydrogen peroxide, Sodium silicate, Hydro sulphite, surfactant/DI chemicals, sulphuric acid, polyelectrolytes/flocculants, limestone, sodium sulphate, SO, and Chlorine etc. Black liquor (in chemical recovery boiler), furnace oil (in lime kiln), coal (in co-generation plant) will be used as fuels. The coal will be imported and obtained from MCL.</td><td>Raw materials required for the project will be waste paper and purchased pulp. The waste paper and bleached wood pulp will be imported and/ or obtained through local sources. The major chemicals required will be sodium hydroxide, hydrogen peroxide, Sodium silicate, Hydro sulphite, surfactant/ DI chemicals, sulphuric acid, polyelectrolytes/flocculants, etc. Coal (in co-generation plant) will be used as fuel. The coal will be obtained from MCL.</td><td>

Black liquor will not be generated as there is no captive pulping and recovery boiler.
Furnace oil will also not be required as no lime kiln is installed.
Use of hard wood & bamboo not required as captive pulping project is dropped.

</td></tr>
<tr><td>Para 7</td><td>It is noted that proposed coal-based</td><td>It is noted that proposed coal-based power</td><td>

Due to reduction in

</td></tr>
</table>

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
(1)	(2)	(3)	(4)
	power boilers will be based on circulating fluidized bed combustion technology. Electrostatic precipitators will be installed to control the particulate emissions from the captive power plants. There will be additional water requirement of 75,000 m^3/day for the proposed expansion in addition to the present water requirement of 13,550 m^3/day. The existing plant has water drawl permission for about 13,550 m^3/day from the river Sona. The additional water for the proposed expansion is proposed to be drawn from River Budhabalanga. The expansion will aim at maximum recycling of back water, thereby minimizing the wastewater discharge from new paper machines. New wastewater treatment plant of capacity 65000 m^3/day will be established for treatment of wastewater generated from the proposed expansion project. Treated wastewater along with cooling tower blow down will be used for irrigation to raise wood plantation and green cover. The mill will have dewatering system to dewater sludge from the ETP and deinking plant. The treated waste water meeting the prescribed standards is proposed to the let out in the Daula nallah drain and meeting Lembunai: It is proposed to develop rain water harvesting structures to recharge the ground water. NCG collection and firing system will be installed as part of proposed expansion project. Treated sanitary waste water / sewage will be used for greenbelt development and maintenance. Black liquor will be completely recovered and burnt in the chemical recovery boiler.	boilers will be based on Atmospheric Fluidised Bed Combustion (AFBC) technology. Electrostatic precipitators will be installed to control the particulate emissions from the captive power plants. There will be additional water requirement of 4700 m^3/day for the proposed expansion in addition to the present water requirement of 7,000 m^3/day. The existing plant has water drawl permission for 12,100m^3/day from the Ground water. The additional water for the proposed expansion is proposed to be drawn from ground water. The expansion will aim at maximum recycling of back water, thereby minimizing the wastewater discharge from new paper board machine. Existing wastewater treatment plant will be augmented to a capacity of 14,500 m^3/day for treatment of wastewater generated from the proposed expansion project. Treated wastewater will be used for irrigation, green cover and reused in the non- process areas. The mill will have dewatering system to dewater sludge from the ETP and deinking plant. The treated effluent meeting the prescribed standards is proposed to be let out in the Sapna Nala and meeting Sona River. It is proposed to develop rain water harvesting structures to recharge the ground water. Treated sanitary waste water / sewage will be used for greenbelt development and maintenance.	boiler capacity, CFBC boiler was replaced with AFBC boiler as CFBC is not suitable at this lower capacity • Since the wood pulp mill was dropped the project and additional power generation of 140 MW was not required. Company has installed AFBC based boiler for 33.5 MW (5 MW+18 MW+10.5 MW) power generation. • Water requirement for the project is now 11700 m^3/day, commensurate with present production & configuration. • The existing plant has water drawl permission for 12,100 m^3/day from ground water. Hence, the source of water for expansion is changed from River Budhabalanga to ground water. • Wastewater treatment plant capacity has been changed commensurate with production to 14500 m^3/day • Treated wastewater discharge point continues to be Sapna Nala. • Quantity of Cooling tower blowdown is reduced substantially. • NCG collection and firing system is not applicable as there is no captive pulping. • Black liquor is not present as no captive pulping is installed.
Para 8	Fly ash generated from the plant	Fly ash generated from the plant will be used	• 100% fly ash

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
(1)	(2)	(3)	(4)
	will be used in roof sheets manufacturing units, brick manufacturing units, road construction activities, abandoned mines in the surrounding area and captive cement grinding units. Sludge from Deinking plant will be dried and fired in the boiler. Lime sludge will be dried and sold to cement mills. Chip dust will be fired in boilers/Vermi compost. STP sludge will be used as manure for greenbelt development. Dust generated from coal yard will be suppressed by dust suppression system. Sludge generated from waste water treatment plant (WWTP) will be disposed as per prescribed HWM rules. Waste fibre from DIP will be fired in boiler. Waste pulp from WWTP will be used for card board / fired in boiler.	in roof sheets manufacturing units, brick manufacturing units, road construction activities, abandoned mines in the surrounding area and captive cement grinding units. Sludge from Deinking plant and ETP will be dried and fired in the boiler. STP sludge will be used as manure for greenbelt development. Dust generated from coal yard will be suppressed by dust suppression system. Sludge generated from waste water treatment plant (WWTP/ ETP) will be fired in power plant boiler. Waste fibre from DIP will be fired in boiler.	generated from the plant is being given to fly ash brick manufacturers who are registered in District Industries Centre. • No captive cement grinding unit is installed • Lime sludge is not present as no recovery unit/ lime kiln is installed • Chip dust is not generated as there is no captive pulping of bamboo/ wood material. • 100% sludge generated from the ETP & DIP is being burnt in power plant boiler.
Para 9	Greenbelt will be developed in about 33% of total plant area. All the new equipments will be designed for low noise level at source. Total power requirement (100 MW) will be met from the proposed 120 MW Captive Power Plant and excess power (40 MW) will be exported to State Grid.	Greenbelt will be developed in about 33% of total plant area. All the new equipments will be designed for low noise level at source. Total power requirement (29 MW) will be met from the proposed 33.5 MW Captive Power Plant	• Power requirement has reduced commensurate with the lesser number of machinery and lower production • No excess power generation is there
Specific Condition(i)	The project authority shall install Electrostatic Precipitator to control the emissions from the Chemical Recovery Boiler and Coal Fired Boilers to achieve the particulate emission below 50 mg/Nm^3.	The project authority shall install Electrostatic Precipitator to control the emissions from the Coal Fired Boilers to achieve the particulate emission below 50 mg/Nm^3.	• No chemical recovery boiler is installed
Specific condition (iv)	The water requirement should not exceed 75,000 m^3/day. The industry shall ensure the compliance of the standards for discharge of the treated effluent from the unit as stipulated under the Environment (Protection) act rules or SPCB, whichever is more stringent. The company shall make an effort to limit the water consumption upto 75 m^3/tonne of product. The company shall develop more water recharge structure in addition to the existing recharge structures and shall make barrage on the river in consultation	The water consumption should not exceed 11700 m^3/day. The industry shall ensure the compliance of the standards for discharge of the treated effluent from the unit as stipulated under the Environment (Protection) act rules or SPCB, whichever is more stringent. The company shall make an effort to limit the water consumption upto 75 m^3/tonne of product. The company shall develop more water recharge structure in addition to the existing recharge structures.	• Water requirement has reduced commensurate with the production achieved. • No river water withdrawn due to lower requirement off waster in absence of captive pulping. Thus, no separate arrangement for construction of barrage on the river is required since source

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
(1)	(2)	(3)	(4)
	with the state government.		of water is ground water.
Specific condition (vi)	The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1 kg/tonne of paper production	To be deleted	As no captive pulping has been installed, hence, this condition is not applicable.
Specific condition (vii)	ECF technology shall be adopted and the lime kiln shall be installed to manage lime sludge.	To be deleted	As no captive pulping has been installed, hence, this condition is not applicable
Specific condition (xvi)	At least 5% of the total cost of the project shall be earmarked towards the enterprise social commitment and item – wise details along with time bound action plans shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.	At least 0.75% of the total cost of the project shall be earmarked towards the Corporate Environment Responsibility and item – wise details along with time bound action plans shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.	Since only part of the project sanctioned in EC dated 13.01.2012 has been installed, the project cost has reduced to Rs 490 Crores. Furthermore, as per MoEF&CC OM no. F-No. 22-65/2017-IA.II dated 01.05.2018, henceforth CER of 0.75% is requested to become applicable instead of ESR

(2) Amendments required in Environmental clearance letter no. J-11011/323/2006-IA II (I) dated 17.05.2007

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
Subject	Expansion of Paper Production (45,000 to 136,000 TPA) and Cogeneration Power Plant (4.2 to 15.7 MW) at Balasore, Balgopalpur, Orissa by M/s Emami Paper Mills Ltd.- Environmental Clearance reg	Expansion of Paper Production (45,000 to 130,000 TPA) and Cogeneration Power Plant (5 to 20 MW) at Balasore, Balgopalpur, Odisha by M/s Emami Paper Mills Ltd.- Environmental Clearance reg	As mentioned in EC letter itself in para 1
Specific condition (i)	The gaseous emissions (SPM, RPM, SO2, NOx, H2S, CO and Pb) from various process units shall conform to the standards prescribed from time to time. The Orissa State Pollution Control Board (OSPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of industry, its	The gaseous emissions (PM_{10}, $PM_{2.5}$, SO_2, NOx and CO) from various process units shall conform to the standards prescribed from time to time. The Odisha State Pollution Control Board (OSPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of industry, its size and location. At no time, the emission level shall go beyond the prescribed standards. In the event of failure of any pollution	Digester pulping and recovery boiler are not installed hence no H_2S or Pb is generated and there is no gaseous emission from the paper manufacturing process. The parameters of SPM and RPM are now

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
	size and location. At no time, the emission level shall go beyond the prescribed stands. In the event of failure of any pollution control system(s) adopted by the unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Ambient air quality shall be regularly monitored and records maintained and reports submitted to the Ministry/ CPCB / OSPCB once in six months	control system(s) adopted by the unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Ambient air quality shall be regularly monitored and records maintained and reports submitted to the Ministry/ CPCB / OSPCB once in six months	replaced by PM10 & PM2.5 as per National Ambient Air Quality Standards 2009.
Specific condition (ii)	The flue gases from recovery boiler shall be analyzed continuously for SPM, SO_2, NOx, H_2S.Continuous monitoring shall be carried out for H_2S near the major source of emission and in the ambient air near the plant boundary at three location. No odour should emanate as there will be no captive pulping. In case, any odour from any source is generated, same shall be adequately treated to alleviate the odour problem.	No odour should emanate as there will be no captive pulping. In case, any odour from any source is generated, same shall be adequately treated to alleviate the odour problem.	As per MoEF Notification dated 16.11.2009 on NAAQS standard, H_2S Parameter is not mentioned and in absence of digester pulping and recovery boiler, no odour is being generated. Furthermore, as the mill is using only waste paper for manufacturing of paper neither wood/ bamboo nor any agro residues are being used and there is no black liquor generation and hence, no chemical recovery plant exists. EPML has written to Ministry vide letter dated 18.01.2012 and got acknowledgement that this clause may be exempted.
Specific condition (iii)	The company shall install Electrostatic precipitators to control emissions from the boiler and co-generation power plant, dust extraction system in chemical recovery plant and dust suppression system in conveyors to control gaseous and fugitive emissions. The particulate emissions from the stacks shall not exceed 75 mg/ Nm^3. The efficiency of ESP	The company shall install Electrostatic precipitators to control emissions from the boiler and co-generation power plant and dust suppression system in conveyors to control gaseous and fugitive emissions. The particulate emissions from the stacks shall not exceed 75 mg/ Nm^3. The efficiency of ESP shall be 99.9%.	As chemical recovery plant is not installed hence no corresponding dust extraction system is installed for controlling fugitive emissions.

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
	shall be 99.9%.		
Specific condition (iv)	The company shall adopt environment friendly Element Chlorine Free (ECF) pulp bleaching process. Existing straw pulping will be ceased to make mill environment friendly. No captive pulping will be carried out. No straw or forest based raw material will be used. Since new material mix will consist of 60% local waste paper and 40% imported, availability of waste paper shall be tied up prior to expansion.	Existing straw puling will be ceased to make mill environment friendly. No captive pulping will be carried out. No straw or forest based raw material will be used. Since new material mix will consist of 60% local waste paper and 40% imported, availability of waste paper shall be tied up prior to expansion	The mill produces paper using waste paper and neither elemental chlorine nor chlorine products are used in bleaching. Hence, the first sentence is not applicable. EPML have requested Ministry vide letter dated 18.01.2012 to delete this condition as it is not applicable.
Specific condition (V)	Total water requirement from borewells shall not exceed 13,525 m^3/day as per the permission accorded by the Central Ground Water Authority (CGWA). The waste water will be treated in the waste water treatment plant (WWTP) and reused in the process or for irrigation purpose. Remaining treated waste water will be discharge into Sona River through Sapna Nullah by a closed pipeline. Reverse Osmosis plant will be installed. The waste water shall be colourless due to absence of captive pulping. No bleaching will be involved. Regular monitoring of Mercaptans, Methylene chloride, TOC and AOx in the treated effluent and AOx level in the river (surface) water shall be carried out once in month. TOC analyzer shall be installed to monitor TOC in the effluent regularly. Domestic sewage will be taken into oxidation pond and treated. The quality of the treated effluent shall be monitored regularly and reports submitted to the Ministry and its Regional	Total water requirement from borewells shall not exceed 13,525 m^3/day as per the permission accorded by the Central Ground Water Authority (CGWA). The waste water will be treated in the waste water treatment plant (WWTP) and reused in the process or for irrigation purpose. Remaining treated waste water will be discharge into Sona River through Sapna Nullah by a closed pipeline. Reverse Osmosis plant will be installed. The waste water shall be colourless due to absence of captive pulping. Secondary fiber treatment includes bleaching using Hydrogen peroxide and Sodium hydrosulfite. Domestic sewage will be taken into Sewage treatment plant and treated. The quality of the treated effluent shall be monitored regularly and reports submitted to the Ministry and its Regional Office at Bhubaneshwar.	• Mercaptans, Methylene chloride, TOC and AOx are generated in the captive pulping through digester (kraft process) followed by chlorine-based bleaching. Plant does not have such process. Hence, it is not applicable. EPML has already requested to Ministry vide letter dated 18.01.2012 to suitably amend this condition.

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
	Office at Bhuvaneshwar.		
Specific condition (vii)	Solid waste generated in the form of boiler ash shall be used for manufacturing bricks in company's own fly ash manufacturing machines and for road construction. Waste pulp from wastewater treatment plant (WWTP) will be used for firing in the boilers. ETP sludge shall be used as manure for green belt development.	Solid waste generated in the form of boiler ash shall be used for manufacturing bricks. Waste pulp (primary sludge) from wastewater treatment plant (WWTP) will be used for firing in the boiler. ETP (secondary Sludge) shall be used as manure for green belt development.	• 100% of the fly ash as being utilised by outside brick manufacturers • "Primary and Secondary" sludge have been included for more clarity.

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

Observations of the Committee held on 9th April, 2020

The Committee noted project proponent has not made available the following :

- Request for ground water abstraction for reduced amount of water consumption not acceptable. PP has not furnished action plan to meet the water requirement from surface water. In view of it, request pertaining to groundwater abstraction even in reduced quantum is untenable. PP should make effort as per specific condition (iv) for making barrage on the river in consultation with the State Government.
- Details of the CER activities carried out based on the findings of the social impact study and public hearing issues along with the expenditure incurred since the grant of EC has not been furnished.
- Impact on the existing traffic due to the transportation of ready pulp to the plant site has not been furnished.
- Action plan for recycle of wastewater being discharged into the Nallah for irrigation has not been submitted.

Recommendations of the Committee held on 9th April, 2020

In view of the foregoing and after detailed deliberations, the Committee deferred the consideration of the instant proposal for want of following additional information for further consideration.

i. Action plan to meet the water requirement from surface water as per specific condition (iv) of the EC dated 13/01/2012 shall be furnished.

ii. Action plan for recycle of wastewater being discharged into the Nallah for irrigation shall be submitted.

iii. Details of the CER activities carried out based on the findings of the social impact study and public hearing issues along with the expenditure incurred since the grant of EC shall be furnished.

iv. Impact on the existing traffic due to the transportation of ready pulp to the plant site shall be submitted.

20.17.3 The reply of the above ADS was submitted online on 20/05/2020 through PARIVESH. The summary of the ADS reply submitted is given as below:

S.No.	ADS raised	Response of PP
i.	Action plan to meet the water requirement from surface water as per specific condition (iv) of the EC dated 13/01/2012 shall be furnished.	The project mentioned in the EC was 4,60,000TPA paper/ board, 600 TPD wood pulp mill and 140 MW co-generation power plant. The water was required at the rate of 75,000 cum/day for that capacity. However, due to implementation of only 3,00,000 TPA paper/ Board, no wood pulp mill and only 33.5 MW power plant the project water requirement got reduced substantially and is now only 11,700 cum/day on average (15.6% of requirement stated in EC). The specific water consumption is 15 cum/Ton of product which is only 20% of 75 cum/tonne of product sanctioned in EC. The company has been operating on ground water since commencement of its operation. The Company has historical permissions from CGWA to use ground water for plant operation since 2006 for 10525 cum/day till 2015 & for 12100 cum/day since 2015 till date. When paper production was 1,30,000 TPA and power plant was 20MW, the peak water consumption was 10,525 cum/day. When the Paper/ paper Board increased to 2,62,000 TPA and power plant increased to 30.5 MW, the water requirement went up to only 12,100 cum/day i.e 15% increment only due to continuously ongoing self-improving measures to reduce water consumption. The water consumption at no point has exceeded 12,100 cum/day despite the production further increasing by 12.6 % to 3,00,000 TPA and power plant increasing by 9% to 33.5MW. EMPL is continuously endeavouring to reduce fresh water consumption and will continue to do so in the future also. Due to various Water Conservation measures adopted, water requirement has reduced considerably – which is disproportionate (on the better side) to the production achieved i.e. 3,00,000 TPA compared to 4,60,000 TPA with wood pulping and power plant 33.5 MW compared to 140 MW.

S.No.	ADS raised	Response of PP
		It may be noted that Balasore area, where the project is located, has high rainfall (~1700-1800 mm/annum) and shallow water table of 2 to 12 m bgl throughout the year. The stage of ground water development in the study area is 17.73% , classified in "safe" category. The ground water studies of EMPL have been approved by CGWB, Odisha. CGWA has been evaluating the renewal applications and the renewal takes place only when project are found to be in compliance to all NOC conditions (including adequacy of rain water harvesting structures). The company has 20 Nos of surface runoff water recharge structures in the mill premises and two piezometers. Emami Paper Mills had been actively exploring the possibility of drawing surface water from river Budhabalanga. The State Government, IDCO & NOCCI Balasore Infrastructure Company are jointly implementing a project to provide surface water from river Budhabalanga to the industries situated near Balasore, amongst which Emami will be one. The present status of the pipeline laying is that 14.85 km out of total 15.7 km has been completed. The work of intake well structure is yet to start although work order has been placed. The project is expected to be delayed as a consequence of COVID -19 lockdown. After the pipeline project completion, Emami Paper Mills has to set up its own surface water treatment plant (which includes sump pit for collection, primary clarifier and other connecting pipeline for distribution to various processes inside the plant as per requirement). Thus, in another 3.5 years' time period, the Company expects to be able to changeover to surface water source from ground water. Till then, the Company may be permitted to operate using ground water, as has been the case since the beginning of the operation of this plant, with due permission from CGWA.
ii.	Action plan for recycle of wastewater being discharged into the Nallah for irrigation shall be submitted.	Industry is having its wastewater treatment system and after complete treatment about 30% of treated effluent is being recycled and reused for various purposes in the plant premises. The company has explored the option to reduce discharge in nala as follows : • The company has its own land about 35 acres (used for paddy cultivation). • Adjacent to this land, private

S.No.	ADS raised	Response of PP
		agricultural land (50 Acres) is being explored for irrigation purpose with the help of local farmers for their own benefit. • In both these areas, about 50% of the present discharge can be reutilised. • However, despite all measures, the entire treated effluent can be only partially utilized for irrigation purpose due to high rainfall : ▪ Balasore district - in excess of 1700 mm (IMD, 1981-2010). ▪ Remuna Tehsil - 1757 mm. (SRC, Govt. Of Odisha, 1995-2018) Therefore, industry will be able to additionally use 50% of its current discharge in non-monsoon season and discharge the balance into the nala.
iii.	Details of the CER activities carried out based on the findings of the social impact study and public hearing issues along with the expenditure incurred since the grant of EC shall be furnished.	The EC was obtained for a project cost of Rs. 2500 crores out of which only Rs. 490 crores could be spent on project. Thus, 5% of Rs. 490 works out to Rs. 24.5 crores. In line with the assessment based on social surveys, requests received from the surrounding villages and the points raised in public hearing, the expenditure in excess of Rs. 24.5 crores i.e. Rs. 35.74 crores has been carried out. The activities with the expenditure are Education support to KIDZ High International School (Rs. 12.79 lakhs), Various activities such as promoting education, health awareness, health checkup camp, vocational training, SHG etc. (Rs. 11.11 crores), Expenditure on School at Samnathpur in Collaboration with KISS (Kalinga Institute of Social Sciences) (Rs. 1.57 crores), Construction of Shree Jagannath Temple on public demand (Rs. 16.84 crores), Construction of Vehicle Parking & Toilet (Rs. 26.38 lakhs), Construction of Atithi Newas (Rs. 74.61 lakhs), Public Road (RCC) (Rs. 31.72 lakhs) and New residential Tribal School at Samnathpur, Balasore by KISS (Kalinga Institute of Social Sciences) supported by Emami Foundation (Rs. 4.76 Crores)
iv.	Impact on the existing traffic due to the transportation of ready pulp to the plant site shall be submitted.	The overall traffic as compared to the scenario that would have risen in the case of full implementation of EC will reduce by 443 trucks as calculated in Section 10.10 of Addendum EIA submitted to the Ministry.

Observations of the Committee

20.17.4 The Committee was not satisfied with the reply furnished by the project proponent with respect to switch over from ground water usage to surface water and recycle of treated wastewater. Further, the Committee did not accede to the request of PP regarding amendment in the specific condition no. (xvi) of the EC dated 13/01/2012 pertaining to Enterprise Social Commitment as the EC was accorded prior to the CER Office Memorandum dated 1/05/2018.

Recommendations of the Committee

20.17.5 In view of the foregoing and after detailed deliberations, the Committee deferred the consideration of the proposal and sought the following additional information:

i. Revised time schedule to switch over to 100 % use of surface water and stopping GW abstraction shall be furnished.
ii. Finding of a study to be carried out by engaging a technical institute with respect to compliance on revised CREP charter on paper industry along with the feasibility to recycle maximum quantity of the treated wastewater.

20.18 Expansion of Bokaro Steel Plant from 4 MTPA to 4.606 MTPA Crude steel by **M/s. Steel Authority of India Limited** located at **Bokaro, Jharkhand** [Online Proposal No. IA/JH/IND/113706/2019, File No. J-11011/99/2007-IA.II(I)] **– Amendment in Environment Clearance regarding specific condition no. xi pertaining to fly ash disposal – regarding**

20.18.1 M/s. Steel Authority of India Limited has made an online application vide proposal no. IA/JH/IND/113706/2019 dated 07/08/2019 along with Form 4 sought for amendment in the Environmental Clearance accorded by the Ministry vide letter no. J-11011/99/2007-IA-II(I) dated 16/10/2008 regarding specific condition no. xi pertaining to fly ash disposal.

20.18.2 The proposal cited above was considered in the 10th REAC meeting held on 22-23rd August, 2019. The EAC proceedings of the proposal is reproduced as below:

Proceedings of the 10th REAC meeting held on 22- 23rd August, 2019

Expansion of Bokaro Steel Plant from 4 MTPA to 4.606 MTPA crude steel by M/s. Bokaro Steel Plant, Steel Authority of India Limited (SAIL) located at Bokaro, Jharkhand. EC was accorded by MoEF&CC vide letter no. J-11011/99/2007-IA-II(I) dated 16/10/2008 and subsequently amended on 28/11/2014.

As per Specific Condition (xi) of EC issued to Bokaro Steel Plant by MOEF&CC, states the following:
"(xi) Proper utilization of Fly ash shall be ensured as per Fly ash notification, 1999 and subsequent amendment in 2003 ".

Bokaro Steel Plant (BSL) is not generating power and hence no fly ash is being generated by BSL. Power generation is done by M/s BPSCL (Bokaro Power Supply Company Limited), a separate entity which has got separate CTO from JSPCB and

separate EC from MoEF&CC. Responsibility of compliance to EC conditions related to fly ash generation and its management lies with M/s BPSCL.

In view of the above, exemption from specific condition no. (xi) related to Fly ash management is requested by Bokaro Steel Plant, through amendment in Environmental Clearance.

Observations of the Committee held on 22-23rd August, 2019

The committee noted the following:

a) The Bokaro Steel Ltd (BSL) transferred the management of the captive power plant to the joint venture company, Bokaro Power Supply Company Ltd [JV of Steel Authority of India Ltd (SAIL) and Damodar Valley Corporation (DVC)] in the year 2001.

b) The BSL has submitted a proposal for amending the EC conditions no. xi issued vide MoEF&CC letter dated 16.10.2008. The condition reads as follows.
'Proper utilization of fly ash shall be ensured as per fly ash notification, 1999 and subsequent amendment in 2003'.

c) The BSL stated that since it is not involved in power generation activities, no fly ash is generated out of its own processes and hence the above mentioned condition should be dropped from the EC issued to BSL. They further, stated that all fly ash generation and its management is to be done by M/s BPSL.

d) The BSL further stated that the condition no. (viii) in the EC issued to M/s BPSL on 3rdApril 2012 by IA -Thermal sector [J-13012/74/2010-IA.II (T)] stated that utilization of 100% fly ash generated shall be made from 4thyear of operation as per Fly Ash Notification 1999 and its subsequent amendments.

e) The Committee also noted that old fly ash stock is lying unutilized as reported by RO, MoEF&CC in its inspection report.

f) The committee felt that an important job of 100 % fly ash utilization is kept pending because two companies appear to be disowning the work. Due to this, the environment is getting adversely affected.

Recommendation of the Committee held on 22-23rd August, 2019

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

- M/s BSP and M/s BPSL should jointly prepare a time bound joint action plan for 100% disposal of fly ash-old as well as newly generated stocks.
- The above joint action plan should be approved by the board of both the companies and submitted to the Ministry by BSL within 30 days.
- After receipt of the above, the modification pertaining the EC conditions shall be considered.

20.18.3 The reply of the above ADS was submitted online on 16/05/2020 through PARIVESH. The summary of the ADS reply submitted is given as below:

i. The time bound joint action plan for 100% disposal of fly ash, old as well as newly generated stocks, has been prepared and submitted to MoEF&CC after approval of board of both the companies, SAIL-Bokaro Steel Plant and M/s BPSCL. The approved action plan has already been under implementation. Approx. 1 Lakh Tonnes of Fly-Ash has already been utilized in Road making by NHAI and around 65000 Tonnes of ash utilized for filling up low lying areas in BSL plant premises. The progress of the action plan is also being monitored by SAIL Board and M/s BPSCL Board on regular basis.

ii. The time frame delineated under the approved action is summarized as below:

S.No.	Mode of utilization	Quantity (m^3)	Time frame	Responsibility
a)	Utilization in road construction	19,00,000/ 5000	Aug, 2021/Dec, 2019	M/s. BPSCL
b)	Filling up of low-lying areas	65,000	July, 2020	M/s. BPSCL & M/s. BSL
c)	Backfilling of abandoned mines	20,00,000	August, 2024	M/s. BPSCL & M/s. BSL & M/s. SAIL Colliery Division
d)	Stabilization of ash mound by biological process	18,00,000	March 2020	M/s. BPSCL & M/s. BSL Pilot project taken up under the supervision of JSPCB.

Observations of the Committee

20.18.4 The Committee satisfied with the Joint Action Plan submitted by PP and asked to complete the implementation of said action plan by Dec, 2023.

Recommendations of the Committee

20.18.5 In view of the foregoing and after detailed deliberations, the Committee recommended for amendment in Specific Condition (xi) of EC, issued to BSL vide letter no. J-11011/99/2007-IA-II(I) dated 16/10/2008 as given below:

i. The Joint Action Plan submitted by project proponent regarding ash utilization shall be fully implemented by December, 2023. The progress report in this regard shall be submitted to the Regional Office along with the six-monthly compliance report.

20.19 Expansion of Alumina Refinery (1 MTPA to 4 MTPA) and Captive Power Plant (75 MW to 285 MW) **by M/s. Sesa Sterlite Limited**, located at Lanjigarh **District Kalahandi Odisha** [Online Proposal No. IA/OR/IND/153786/2020, File No. J-11011/53/2014-IA.II (I)] **– Amendment in Environment Clearance regarding specific condition no. v pertaining to land acquisition for phase III Alumina Refinery – regarding.**

20.19.1 M/s. Sesa Sterlite Limited has made an online application vide proposal no. IA/OR/IND/153786/2020 dated 20/05/2020 along with Form 4 sought for amendment in the Environment Clearance accorded by the Ministry vide letter no. J-11011/53/2014-IA-II(I) dated 20/11/2015 regarding specific condition no. v pertaining to land acquisition for Phase III Alumina refinery.

Details submitted by the project proponent

20.19.2 M/s. Sesa Sterlite Limited vide their application dated 19/08/2014 has applied to MoEF&CC for grant of EC for expansion of (1MTPA to 6 MTPA) Alumina Refinery and Captive Power Plant (from 75MW to 285MW) at Dist. Kalahandi, Odisha. As per the EC accorded, the total project area is1552.7 ha. Out of this total area, 833.17 + 53.5 ha is under advanced stage of acquisition and the balance 666.03 ha was yet to be acquired. Of the 666.03 ha, 221.73 ha is Govt. land which requires to be allocated by the Govt. of Odisha through their Nodal Agency –IDCO and the balance 444.3 ha is private land which requires being acquired by the Govt. of Odisha through IDCO.

20.19.3 Since the total land required for the project activity was not under the possession of proponent, the EC was accorded for the expansion of Alumina Refinery (1 MTPA to 4 MTPA) and Captive Power Plant (75 MW to 285 MW) on 20/11/2015.

20.19.4 Presently, the proponent operates its Alumina Refinery & CPP within its licensed capacity of 2 MTPA and 75 MW respectively as per the Consent Order no.2189 dated 31st March 2016 having validity up to 31st Mar 2021.

20.19.5 As per para no. 26 of the EC dated 20/11/2015, the project need not go through a fresh appraisal process again for the Phase -III expansion from 4 to 6 MTPA and stipulated a following specific condition:

"v. For Phase-III (6 MTPA), the proponent shall obtain an amendment of EC after completion of land acquisition of the balance area of 666.03ha".

20.19.6 The instant amendment proposal is for seeking amendment in the aforementioned specific condition (v) of the EC dated 20/11/205 due to the following;

i. As per the assessment done by Industrial Promotion & Investment Corporation of Odisha (IPICOL), the nodal agency of Government of Odisha though Engineers India Limited (EIL), a Government of India Undertaking and have assessed that the total additional land required for expansion to 6 MTPA is of only 666 acres i.e. 269.52 Ha.

ii. The land earmarked for phase III as per the EC dated 20/11/2015 and the land approved by IPICOL is given as below:

S.No.	Facility	Addl. Land for Ph. III (4-6 MTPA) (ha) as per EC Granted on 20th Nov'15	Land Approved by IPICOL (ha) for Ph. III (4-6 MTPA)
1.	Main Plant with greenbelt	Nil	Nil
2.	Red Mud Storage Pond with green belt	518.03 (yet to be acquired)	269.52 (including ongoing acquisition of 53.5 of Phase I)
3.	Ash Pond with Pipeline with greenbelt	80 (yet to be acquired)	Nil
4.	Township & Misc including greenbelt	28 (yet to be acquired)	Nil
5.	Railway including Greenbelt	40 (yet to be acquired)	To be assessed later on as per RITES report
	TOTAL	**666.03 ha**	**269.52 ha (666 Ac.)**

iii. In view of the above, PP has sought for the following amendments in the EC dated 20/11/2015.

Particulars	Existing Configuration	Proposed Configuration
Capacity of Alumina Refinery	4 MTPA	6 MTPA
Specific Condition no (v) of the Environmental Clearance F. No. J-11011/53/2014-IA II (I)	For Phase-III (6 MTPA), the proponent shall obtain an amendment of EC after completion of land acquisition of the balance area of 666.03ha details of which will be furnished to MOEF&CC	The details of acquisition of remaining land of 269.52 Ha (666 Ac) as proposed by IPICOL shall be furnished before commissioning of expansion for 6 MTPA.
Specific Condition no (xxiii) of the Environmental Clearance F. No. J-11011/53/2014-IA II (I)	Of the total area of 1552.65 ha. an area of 512.37 ha (33%) shall be developed into green belt. Of this, a total of 215.20 ha of green belt have been developed and the balance area of 297.17 ha shall also be brought under plantation, which includes plantation in a width of 15-20m along the remaining boundary wall of 3km of the 8km.	In view of proportionate reduction in Green belt land requirement by IPICOL, the condition will be read as under: "Of the total area of 1102.52 ha. an area of 363.83 ha (33%) shall be developed into green belt. Of this, a total of 278.21 ha of green belt have been developed and the balance area of 85.62 ha shall also be brought under plantation, which includes plantation in a width of 15-

Particulars	Existing Configuration	Proposed Configuration
		20m along the remaining boundary wall of 3km of the 8km."

20.19.7 Further, PP informed that Shri Prafulla Samantaray, a self-proclaimed environmental activist, has filed an appeal against the order of MoEF&CC granting EC for expansion of Alumina Refinery from 1 to 4 MTPA and CPP from 75 to 285 MW dated 20.11.2015. The appeal has been filed before National Green Tribunal, Kolkata Bench. In the said appeal, one Misc. case (MA No. 333/2016/EZ) has also been filed for condonation of delay in filing appeal. The matter would be posted for hearing of the arguments, however the same has not been heard sofar. No interim order has been passed by Hon'ble Court on this matter.

Observations of the Committee

20.19.8 The Committee noted the following:

i. Name transfer of EC from M/s. Sesa Sterlite Limited to M/s. Vedanta Limited has not been obtained by the project proponent.

ii. The implementation status of the existing EC dated 20/11/2015 as on date of consideration has not been furnished.

iii. Land acquired for the phase I and phase II of Alumina Refinery and the compliance status to the existing EC conditions from Regional Office of MoEF&CC has not been furnished.

iv. In accordance with Office Memorandum of the Ministry issued vide F.No.22-76/2014–IAIII dated 07.10.2014, full acquisition of the land is not the prerequisite for consideration of the case for EC. However, there should be some credible document to show the status of Land acquisition with respect to project site when the case is brought before the concerned EAC for appraisal. In case, if the land for the project is proposed to be acquired through Government intervention, a preliminary notification issued by the concerned State Government regarding acquisition of land as per the provisions of land acquisition, R&R Act, 2013 shall be required at the time of appraisal by the EAC. In the instant proposal under consideration, PP has not made available the preliminary notification of IDCO, Govt. of Odisha regarding the acquisition of 269.52 ha land.

v. Enough land is not available with project proponent for even 4 MTPA phase II expansion.

vi. Land allocation of 269.52 ha is excluding railway siding that needs to be acquired in addition of above. There is no evidence of acquisition of land for railway siding.

vii. New land use plan based on the revised project area is not available in the documents submitted by the project proponent including that for colony, plant, green belt, water reservoir FAP and RMP and other utilities.

Recommendations of the Committee

20.19.9 In view of the foregoing and after detailed deliberations, the Committee recommended to return the proposal in present form.

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ANNEXURE –1

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 (Quantitative) from raw material to products to be provided
   - x. Hazard identification and details of proposed safety systems.
   - xi. Expansion/modernization proposals:
     - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB/PCC shall be attached with the EIA-EMP report.
     - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
4. Site Details
   - i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

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

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

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

6. **Environmental Status**

i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.

ii. AAQ data (except monsoon) at 8 locations for PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.

iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.

v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.

vi. Ground water monitoring at minimum at 8 locations shall be included.

vii. Noise levels monitoring at 8 locations within the study area.

viii. Soil Characteristic as per CPCB guidelines.

ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.

x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio-economic status of the study area.

7. **Impact Assessment and Environment Management Plan**

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

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

vi. Measures for fugitive emission control

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

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

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

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

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

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

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

8. **Occupational health**

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

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

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

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

9. **Corporate Environment Policy**

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

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

11. Corporate Environment Responsibility (CER)

i. To address the Public Hearing issues, an amount as specified under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018 amounting to Rs. .....crores, shall be earmarked by the project proponent, towards Corporate Environment Responsibility (CER). Distinct CER projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These CER projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat& District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/donations and or free camps shall be included in the above CER budget

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

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

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

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

i. All documents shall be properly indexed, page numbered.
ii. Period/date of data collection shall be clearly indicated.
iii. Authenticated English translation of all material in Regional languages shall be provided.
iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report

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

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

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

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ANNEXURE-2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

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

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

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 base bleaching 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.

ADDITIONAL ToRs FOR 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.

ADDITIONAL ToRs FOR 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.

ADDITIONAL ToRs FOR 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.

ADDITIONAL ToRs FOR METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)

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

Executive Summary

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

i. Project name and location (Village, Dist, State, Industrial Estate (if applicable)
ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)
iv. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes. Materials balance shall be presented.
v. Measures for mitigating the impact on the environment and mode of discharge or disposal.
vi. Capital cost of the project, estimated time of completion
vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of 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

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