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

SUMMARY RECORD OF THE THIRD(3RD) MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE HELD DURING 9TH TO 11THJANUARY 2019 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The thirdmeetingof the Re-ConstitutedExpert Appraisal Committee (EAC) for Industry-I Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held during **9th to 11thJanuary, 2019** in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

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

The minutes of 2ndmeeting held during **10th to 12th December, 2018** circulated were confirmed.

9thJanuary 2019 (Teesta)

3.1 Expansion of stainless steel production from 0.8 to 2.2 MTPA and cold rolling mill from 0.8 to 1.6 MTPA located at Kalinga Nagar Industrial Complex (KNIC), Danagadi near Duburi in Jajpur district of Odisha by M/s Jindal Stainless Limited [Online proposal No. IA/OR/IND/86727/2018; MoEFCC File No. J-11011/281/2007-IA.II(I)] – Environmental Clearance.

1.0 M/s Jindal Stainless Limited made online application vide proposal no. **IA/OR/IND/86727/2018**, dated 30thNovember, 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent:

2.0 The application of M/s Jindal Stainless Ltd. (JSL) located in Kalinga Nagar Industrial Complex (KNIC), Tehsil Sukinda, District Jajpur, State Odisha was initially received in the Ministry on 29th May 2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 33rd meeting held on 10th July 2018 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 23rd July 2018 vide Letter. No. F. No. J-11011/281/2007-IA.II(I).

3.0 The project of M/s JSL located in KNIC, Tehsil Sukinda, District Jajpur, State Odisha is for enhancement of production of crude stainless steel from 0.8 to 2.2 million tonnes per annum

(million TPA) and cold rolling mill (CRM) from 0.8 to 1.6 million TPA. The environmental clearances (EC) for Modification-cum-Expansion of Integrated Steel Plant (ISP) was accorded to M/s JSL vide lr.no. F. No. J-11011/281/2005-IA.II(I) dated 1st Nov 2007. The Status of compliance of earlier EC was obtained from Regional Office (Bhubaneswar) vide File No. 101-1050/EPE dated 10.12.2018. There is no major non-compliance reported by Regional officer. The proposed capacity for different products for new site area as below:

Sl. No.	**Unit**	**Facility**		
		Existing	**Proposed**	**Final**
1	SMS	2 x 100 t EAF	2 x 150 t EAF (upgradation of existing 100 t converters) 2x 6 t + 1x 200 Kg Testing Induction Furnace 1x30 t Holding Induction Furnace	2 x 150 t EAF 2x 6 t + 1x 200 kg Testing Induction Furnace 1x30 t Holding Induction Furnace
2	Secondary Refining	1 x 120 t LF 1 x 120 t AOD	1 x 150 t LF (upgradation of existing 120 t) 1 x 150 t LF (New) 1 x 150 t AOD (upgradation of existing 120 t) 1 x 150 t AOD (New)	2 x 150 t LF 2 x 150 t AOD
3	Caster Shop	1 x 1 - Strand slab caster	1 x 1 - Strand slab caster (New)	2 x 1 - Strand slab caster
4	CRM	HAPL - 1 x 0.8 MTPA CAPL - 1 x 0.45 MTPA Finishing Lines (Slitting, Cut to length, Skin pass mill etc.)	HAPL - 1 x 0.8 MTPA (New) CAPL - 1 x 0.45 MTPA (New) Finishing Lines (Slitting, Cut to length, Skin pass mill etc.) (New)	HAPL - 2 x 0.8 MTPA CAPL - 2 x 0.45 MTPA Finishing Lines (Slitting, Cut to length, Skin pass mill etc.)
5	Air Separation Plant	1 x 425 TPD	1 x 425 TPD (New) (BOO Basis)	2 x 425 TPD (BOO Basis)
6	Ferro Alloy Plant	0.25 MTPA (2 x 60 MVA + 3 X 27.6 MVA); 13 MW WHRB; 50 TPH AFBC Boiler; Briquette Plant- 126 TPH & Jigging Plant	Capacity expansion of Briquette Plant up to 180TPH (including existing)	0.25 MTPA(2 x 60 MVA + 3 X 27.6 MVA); 13 MW WHRB with 50 TPH AFBC Boiler; Briquette Plant - 180TPH & Jigging Plant
7	Lime/Dolo Calcining Plant	-	1x450 TPD + 1x600 TPD (Lime & Dolo) + 200 TPD Hydrated Lime Plant (New) (BOO Basis)	1x450 TPD+ 1x600 TPD (Lime & Dolo) + 200 TPD Hydrated Lime Plant (New) (BOO Basis)

Sl. No.	Unit	Facility		
		Existing	**Proposed**	**Final**
8	Metal recovery Plant	-	1x 50 TPH 1x80 TPH (BOO Basis)	1x 50 TPH 1x80 TPH (BOO Basis)
9	CRMHS	Installed - Matching the production facilities	Matching the production facilities (New)	Matching the production facilities
10	Captive Power Plant (CPP)	2 X 125 MW Coal based	-	2 X 125 MW Coal based

4.0 The total land required for the project is within the existing 317.89 ha area under the ownership of JSL. No forestland involved. The entire land is within the existing plant boundary of JSL. It has been reported that Brahmani River & Kharsua River flows in the study area and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the project area is moderately undulating with presence of moderate to low lying hillocks & mounds at places and is reported to lie between 86°01'53" to 86°03'43" E longitude and 20°56'23" to 20°58'10" N latitude in Survey of India OSM No. F45U1. The elevation of plain area is upto 55 m AMSL. The ground water table reported to ranges between 0.92-4.58 m below the land surface during the post-monsoon season and 3.05-8.38 m below the land surface during the pre-monsoon season. Further, the stage of groundwater development is reported to be 33.8% in the study area and thereby these are designated as safe areas.

6.0 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna does not report presence of no Schedule-I fauna in the study area (Appendix 3-2 to 3-7 of EIA Report, November 2018).

7.0 The process of project and the various processes involved to produce the final output and waste generated in the process is shown in Drg. 11443-97A-000-ENV-0003 and in Appendix 2-1 of EIA/EMP report (November 2018), the list of raw materials is shown below:

Sl. No.	Major Raw Materials	Estimated Quantity, tons	Mode of Transportation
1	Scrap	1,490,340	Sea - Rail (80%)/Road (20%)
2	Ferro Chrome	702,100	Internal Transfer (35%)/Road (65%)
3	Limestone	524,400	Rail
4	Dolomite	315,000	Rail
5	Other Ferro Alloys	133,120	Road
6	Other additives	68,100	Road

8.0 The targeted production capacity of crude stainless steel is 2.2 million TPA. The main

raw materials for the expansion project are scrap, limestone & dolomite which would be purchased from open market & transported through rail & road.

9.0 The water requirement of the project post expansion is estimated to be 26,640 m^3 /day, which will be obtained from the existing source of water i.eRiver Brahmani as per existing Water allocation from Department of Water Resource, Govt. of Odisha to JSL vide letter No. 26166/WR, dated 9/11/2016.

10.0 The power requirement of the project post expansion is estimated as 2389 Million KWh, which will be obtained from captive generation from existing coal based 2 x 125 MW Power plant and the balance from State power grid.

11.0 Baseline Environmental Studies were conducted during summer season i.e. from February to May, 2017. Ambient air quality monitoring has been carried out at 9 locations during February 2017 to May 2017 and the data submitted indicated: PM10 (82.5 to 91.3 µg/m3), PM2.5 (45.5 to 50.6 µg/m3), SO2 (5.9 to 18.3 µg/m3) and NOx (24.3 to 37.0 µg/m3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 1.3 µg/m3 with respect to the PM10, 2.7 µg/m3 with respect to the SO2 & 2.4 µg/m3 with respect to the NOx.

12.0 Ground water quality has been monitored in eight locations in the study area and analysed. pH: 6.2 to 7.0, Total Hardness: 108 to 373.3 mg/l, Chlorides: 27.4 to 139.3 mg/l, Fluoride: < 0.1 mg/l. Heavy metals are within the limits. Surface water samples were analysed from eight locations. pH: 7.1 to 7.2; DO: 5.7 to 6.1 mg/l; BOD: 3.3 to 6.0 mg/l and COD from 11.2 to 26.2 mg/l.

13.0 Noise levels are in the range of 43.8 to 82.4 dBA for daytime and 42.4 to 72.4 dBA for nighttime.

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

15.0 Solid waste generation and disposal/utilization is shown below:

Sl. No.	Solid Wastes	Quantity of Waste Generated, TPA	Re-utilization Measures
Non Hazardous wastes			
1	Fe-Cr slag	250,000	Sent to Jigging Plant for metal recovery and further reuse in low lying area filling.
2	SMS Slag from EAF & AOD	745,000	Sent to Metal Recovery Plant for metal recovery. Non-metallic part used for construction purposes
3	Furnace Scale (CRM)	20,000	100% reuse in Briquette Plant
4	Bag filter dust from EAF & AOD of SMS	82,000	100% reuse in Briquette Plant

5	Fly Ash	530,800	100 % utilization through transfer to Bricks manufacturing units
6	Bottom Ash	115,600	High concentration slurry stored in bottom ash pond. Further reutilized at road making site of NHAI and disposed at abandoned mine void as per Consent of SPCB.
Hazardous Wastes			
1	Used Oil	200 KL	Sold to Authorised recycler
2	Oily Waste	200 KL	Sold to Authorised recycler
3	CRM Sludge	100,000	Disposed at CHWTSDF of M/s. Ramky Enviro Engineers LTD., Sukinda
4	Flue gas cleaning residue (Fe-Cr Plant)	22,000	Recycled in the process.
5	Discarded Containers	25,000 Nos.	Sold to Authorised recycler

16.0 It has been reported that the Consent to Operate from the Odisha Pollution Control Board obtained vide Lr. No .7363/IND-I-Con-5136, dated 22.06.2018 valid up to 31.03.2021.

17.0 The Public hearing of the project was held on14th November 2018 at Danagadi Bhawan, Jajpur under the chairmanship of ADM, Kalinganagar, Jajpur for the expansion project. The issues raised during public hearing, response of project proponent & schedule of implementation are enlisted below:

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
1.	Sri Prasant Kumar Ray Location: Danagadi, Jajpur	He expressed his displeasure towards M/S. Jindal Stainless Limited	PP acknowledged the remark	-	-
		He expressed that the road in his village is damaged	PP emphasized that the matter will be taken up with local Administration through CER	Total CER Budget towards Local Infrastructure Development Programme –Rs. 87.70 Lakh	Within 5 years from the date of commencement of construction activities
		He told that water lines have been disconnected in his village	PP emphasized that the matter will be taken up with local Administration through CER	Total CER Budget towards Local Infrastructure Development Programme –Rs. 87.70 Lakh	Within 5 years from the date of commencement of construction activities
		He also urged that the company has to provide for local employment and have to do more things for the project affected people	PP emphasized that priority will be given to local population as per skill requirement Employment opportunities	-	On receipt of Environmental Clearance (EC)

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
			will be based on the prevailing guidelines notified by the Government of Odisha in the official gazette		
		He also asked the project proponent to take care of the issues and take steps to reduce pollution. He additionally mentioned that ponds are getting polluted due to dust in his village	PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protection programmes	Total CER Budget towards Community Environmental Protection Programme-Rs.52 Lakh Drinking Water – Rs.61.70 Lakh	Within 5 years from the date of commencement of construction activities
2.	Sri Kailash Dalei Location: Marutikar, GP-Kumbhuria	He expressed that all plants in Kalinga Nagar Industrial Complex area are discharging water, which is passing near his village	PP emphasized that plant is operating Zero-discharge norms as specified by SPCB. No water is getting discharged outside from JSL. PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protection programmes	Total CER Budget towards Community Environmental Protection Programme-Rs.52 Lakh	Within 5 years from the date of commencement of construction activities
		Many people have died of cancer and 5-6 persons are currently affected by cancer. Children are also affected by diarrhoea.	PP acknowledged the remark. PP would undertake strengthening of health facilities for the local population.	Total CER Budget towards Health – Rs. 181.50 Lakh	Within 5 years from the date of commencement of construction activities
		Ponds in their village are filled with common water hyacinth, which needs to be cleaned	Cleaning of Ponds would be undertaken by PP through CER	Total CER Budget towards Drinking Water –	Within 5 years from the date of commencement of construction

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
				Rs.61.70 Lakh	activities
3.	Sri Pratap Kumar Tarai Location: Mulasar	He expressed his full support to the proposed expansion project by M/S. Jindal Stainless Limited. He mentioned that the company is providing free education to the children, facilitate drinking water facilities and road, wherever required. He also expects that the company will continue its development work in future	PP acknowledged the support and appreciation	-	-
4.	Sri Susanta Kumar Bata Location: Garadihi	He expressed his full support to the proposed expansion project by M/S. Jindal Stainless Limited. He mentioned that the company is providing free computer education to the children	PP acknowledged the support and appreciation.	-	-
		He also expects that in future the company will provide ITI training to the students	PP emphasized they would undertake local vocational & industrial programmes	Total CER Budget towards Local Skill & Vocational Training Programme - Rs. 120 Lakh	Within 5 years from the date of commencement of construction activities
5.	Sri Kalakar Dalai Location: Marutikar	He expressed his full support to the proposed expansion project. He mentioned that the company has appointed teachers in schools.	PP acknowledged the support and appreciation	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
		He also told that their village is mostly affected with Malaria, so he requested to the PP to take steps to control the same	PP emphasized that the company would strengthen their Malaria eradication programme and awareness programme among villagers through CER	Total CER Budget towards Health – Rs. 181.50 Lakh	Within 5 years from the date of commencement of construction activitie
		He also requested PP to clean the ponds in their village	Cleaning of Ponds in consultation of local administration through CER	Total CER Budget towards Drinking Water – Rs.61.70 Lakh	Within 5 years from the date of commencement of construction activities
6.	Sri Prahalad Dalai Location: Marutikar	He expressed his support for the proposed project. He also told that the company is providing school dress and shoes to the children and have appointed teachers for teaching.	PP acknowledged the support and appreciation	-	-
7.	Sri Asit Kumar Dedi Location: Kharadi	He expressed his full support to the proposed expansion project by M/S. Jindal Stainless Limited	PP acknowledged the support	-	-
8.	Sri Ramarai Laguri Location: Kacherigana	He welcomed the panel and gathering	PP acknowledged the greeting	-	-
		He mentioned that he is a project affected person. At the time of land acquisition, the company has assured them that they will get employment in the plant but till now the same is not fulfilled	PP emphasized that entire land acquisition process was carried out through IDCO and all settlements has been made to the displaced families. No such case is pending.	-	-
		He mentioned that they are affected by kidney disease due dust and smoke. He requested to the ADM to look into the matter personally	PP further assured that the health care facility will be strengthened through CER	Total CER Budget towards Health – Rs. 181.50 Lakh	Within 5 years from the date of commencement of construction activities
9.	Sri Bijay Jena Location: Mulasar	He welcomed the panel and gathering and expressed his support for the proposed expansion project. He told that the company has established an Occupational Health Centre (OHC) near his village due to which they	PP acknowledged the support and appreciation	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
		are getting free treatment and medicines.			
10.	Sri Sagar Dhir Location: Dhuligarh	He welcomed the panel & gathering and thanked the public.	PP acknowledged the support and appreciation.	-	-
		He mentioned that various development works have been carried out by the company in his village and so he also requested the company to do development work in nearby villages	PP would undertake local improvement through support towards various community based developmental programmes	Total CER Budget towards Local Infrastructure Development Programme –Rs. 87.70 Lakh	Within 5 years from the date of commencement of construction activities
		He is supporting the project but they are affected with pollution	PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protecion programmes	Total CER Budget towards Community Environmental Protection Programme-Rs.52 Lakh	Within 5 years from the date of commencement of construction activities
11.	Miss. Suprave Bala Location: Kharanti	She expressed his happiness for the proposed project. She told that the area is getting developed due to the development work carried out by the compan	PP acknowledged the support and appreciation	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
		She also requested the company to take steps towards control of pollution	PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protection programmes.	Total CER Budget towards Community Environmental Protection Programme-Rs.52 Lakh	Within 5 years from the date of commencement of construction activities
12.	Smt. Nirupama Dalai Location: MarutiKar	She expressed her support for the proposed project. She also told that the company has helped their Self Help Group (SHG) for which they are self employed	PP acknowledged the support and appreciation	-	-
13.	Miss. Mami Behera Location: Danagadi	She expressed her full support to the proposed expansion project by M/S. Jindal Stainless Limited	PP acknowledged the support		
14.	Miss. Swarnaprava Patra Location: Khosal Pur	She expressed her full support to the proposed expansion project by M/S Jindal Stainless Limited	PP acknowledged the support	-	-
15.	Sri Nabin Dalai Location: Rachlipur	He welcomed the panel and gathering. He told that he is opposing the proposed project.	PP acknowledged the remark	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
		He asked the company to take step for pollution control	PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protection programmes.	Total CER Budget towards Community Environmental Protection Programme-Rs.52 Lakh	Within 5 years from the date of commencement of construction activities
		He told that the company has to give more opportunity of employment to the local people and also provide employment to the project affected people	PP emphasized that priority will be given to local population as per skill requirement Employment opportunities will be based on the prevailing guidelines notified by the Government of Odisha in the official gazette	-	On receipt of Environmental Clearance (EC)
		He asked the company to take step for plantation of more trees in nearby area	PP emphasized that Avenue/Urban plantation shall be made with consultation of Forest department	Total CER Budget towards Avenue/Urban Plantation –Rs. 25 Lakh	Within 5 years from the date of commencement of construction activities
		He asked the company to take step for development of roads	PP would undertake local infrastructure development in consultation with local administration through CER	Total CER Budget towards Local Infrastructure Development Programme –Rs. 87.70 Lakh	Within 5 years from the date of commencement of construction activities
		He asked the company to take step to facilitate the education system	PP emphasized that strengthening of educational facilities would be ensured	Total CER Budget towards Education - Rs 20 Lakh	Within 5 years from the date of commencement of construction activities
16.	Miss. Diptimayee Ghadei Location: Mantira	She expressed her support for the proposed project	PP acknowledged the support	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
17.	Sri Swabhagya Patnaik Location: Balarampur, GP - Kabatabandha	He welcomed the panel, media and the gathering. He welcomed the project and mentioned that he was associated with CSR department of the company to carry out various development works like water supply, road development, education programme and so on in nearby areas. He expressed his support for the proposed expansion project.	PP acknowledged the support and appreciation	-	-
18.	Sri Promod Perai Location: Mulasir	He expressed his support for the proposed project	PP acknowledged the support	-	-
		He also told that they are facing water crisis during summer so he requested the company to facilitate drinking water system	PP assured that drinking water facility will be strengthened to avoid the crisis	Total CER Budget towards Drinking Water – Rs.61.70 Lakh	Within 5 years from the date of commencement of construction activities
		He also requested the company to make a pond in their village for bathing purposes	PP further emphasized that the matter will be taken up with local administration through CER	Total CER Budget towards Local Infrastructure Development Programme –Rs. 87.70 Lakh	Within 5 years from the date of commencement of construction activities
19.	Smt. Sandhyarani Mohapatra Location: Dhabalgiria	She welcomed the panel and gathering and expressed her support for the proposed expansion project. She is impressed with the development work carried out by Jindal Stainless Limited and also told that many women powers are with her for supporting the project	PP acknowledged the support and appreciation	-	-
20.	Smt. Indumati Dalai Location: Marutikar	She expressed her support for the proposed expansion project of M/S Jindal Stainless Limited	PP acknowledged the support	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
21.	Smt. Namita Dalai Location: Marutikar	She expressed her support for the proposed expansion project. She told that the company is doing development work in her village.	PP acknowledged the support and appreciation	-	-
		She also requested to clean the pond in her village	PP assured that pond cleaning job will be undertaken through CER	Total CER Budget towards Drinking Water – Rs.61.70 Lakh	Within 5 years from the date of commencement of construction activities
		She also requested PP to establish a medical centre for their treatment	PP would take care of the health facilities through various programmes under CER	Total CER Budget towards Health – Rs. 181.50 Lakh	Within 5 years from the date of commencement of construction activities
22.	Smt. Pravati Dalai Location: Marutikar	She expressed her support for the proposed expansion project and told the company is doing development work in her village	PP acknowledged the support and appreciation	-	-
23.	Sri Chaturbhuja Nayak Location: Jakhapura	He expressed his support for the proposed project and told that the company is doing various development works like road construction, drinking water facility, plantation programme in the nearby area	PP acknowledged the support and appreciation	-	-
24.	Sri Milan Sahoo Location: Jakhapura	He welcomed the panel & gathering and expressed his support for the proposed project	PP acknowledged the support.	-	-
		He told that priority should be given towards skill development of local people for better communication so that they can express in a better way	PP emphasized on undertaking local vocational & skill training programme (including communication) through CER	Total CER Budget towards Local Skill & Vocational Training Programme - Rs. 120 Lakh	Within 5 years from the date of commencement of construction activities

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
25.	Sri Jayram Mallick Location: Trijanga	He expressed his support for the expansion project. He told that he is staying in the rehabilitation colony made by the company and the company has provided all the facilities to them. The company also made a boundary around the colony	PP acknowledged the support and appreciation	-	-
		He requested the project proponent to give more emphasis on health of the children of the colony	PP emphasized that more focus will be made towards health care system especially for colony children through CER	Total CER Budget towards Health – Rs. 181.50 Lakh	Within 5 years from the date of commencement of construction activities
26.	Sri Niranjan Bal Location: New Market, Jajpur Road	He welcomed the panel & gathering and expressed his support for the expansion project by M/S Jindal Stainless Limited. He mentioned that he is working as a Supervisor in the company.	PP acknowledged the support	-	-
27.	Sri Ramesh Mallick Location: Vyasanagar	He welcomed the panel, media & gathering and expressed his support for the expansion project by M/s Jindal Stainless Limited. He expects that in future the company will continue its development works	PP acknowledged the support and conviction of the respondent	-	-
28.	Sri Rahul Behera Location: Duburi	He welcomed the panel & gathering and expressed his support for the expansion project by M/S. Jindal Stainless Limited. He told that the company is doing various development works and expects the same will be continued	PP acknowledged the support and appreciation	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
29.	Sri Anil kumar Baria Location: Ranagundi	He welcomed the panel & gathering and expressed his support for the expansion project by M/S. Jindal Stainless Limited. He told that the company is doing development works in the field of health and education and expects the same will be continued.	PP acknowledged the support, appreciation and conviction of the respondent	-	-
30.	Sri Sunil Gagrai Location: Hadisahi	He welcomed the panel & gathering	PP acknowledged the greeting	-	-
		He told that the local people are habituated with the pollution, that is why they are supporting the proposed expansion project	PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protection programmes	Total CER Budget towards Community Environmental Protection Programme-Rs.52 Lakh	Within 5 years from the date of commencement of construction activities
31.	Sri Jagadish Mohanta Location: Ranagundi	He welcomed the panel & gathering and expressed his support for the expansion project	PP acknowledged the support	-	-
32.	Sri Sisir Dalai, Location: Ranagundi	He welcomed the panel & gathering and he expressed his support for the expansion project	PP acknowledged the support	-	-
		He told that the company has partially fulfilled their commitments in the area of education. He hopes that the company will fulfill the issue after this expansion project.	PP emphasized that strengthening of educational facilities would be ensured	Total CER Budget towards Education - Rs 20 Lakh	Within 5 years from the date of commencement of construction activities

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
		He told that the company has partially fulfilled their commitments in the area of local employment. He hopes that the company will fulfill the issue after this expansion project.	PP emphasized that priority will be given to local population as per skill requirement Employment opportunities will be based on the prevailing guidelines notified by the Government of Odisha in the official gazette	-	On receipt of Environmental Clearance (EC)
33.	Sri Smrutiranjan Jena Location: Pankapal	He welcomed the panel & gathering and expressed his support for the expansion project	PP acknowledged the support	-	-
		He told that he is with the company and expects that the company should focus on local employment	PP emphasized that priority will be given to local population as per skill requirement Employment opportunities will be based on the prevailing guidelines notified by the Government of Odisha in the official gazette	-	On receipt of Environmental Clearance (EC)
		He mentioned that the company should focus on facilitation of drinking water system	PP emphasized that strengthening of drinking water facilities would be ensured through CER	Total CER Budget towards Drinking Water – Rs.61.70 Lakh	Within 5 years from the date of commencement of construction activities
		He mentioned that the company should focus on the aspect of education	PP emphasized that strengthening of educational facilities would be ensured through CER	Total CER Budget towards Education - Rs 20 Lakh	Within 5 years from the date of commencement of construction activities

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
34.	Sri Susanta Biswas Location: Vyasanagar	He welcomed the panel & gathering and told that it is a welcome step of the company. He mentioned that he is working in the company from 2004 and that the company is carrying out various development works through its CSR department. He emphasizes that everything has a problem but there is a solution. He also told that company has not terminated its worker but, if the workers come to plant in a drunken condition then the company may terminate the worker from a safety point of view. He also told about the employment of unskilled, semi skilled and skilled local people in the industry. He also emphasized on provision of education, health, road, lighting & drinking water facilities by PP to nearby surrounding villages. At last he expressed his support for the expansion project	PP acknowledged the support. PP acknowledged the appreciation for various developmental activities undertaken by the company and assured that the same will continue through CSR. PP acknowledged the appreciation and assured the employee safety. PP also emphasized that local employment has been provided based on their skill and experiences. PP acknowledged the appreciation for various developmental activities undertaken by the company through CSR and the same will also continue. PP acknowledged the support.	-	-
35.	Sri Arjyabala Singh Location: Pankapal	She registered her name but did not deliberate	-	-	-
36.	Sri Ajit Kumar Routray Location: Athagarh,	He welcomed the panel & gathering and told that it is a welcome step of the company	PP acknowledged the support.	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Budget (Rs. in Lakh)	Schedule of Implemen-tation
	Cuttack	He expressed his support for the expansion project. He mentioned that he is working as a temporary worker for last five years and so he requested the project proponent to make his employment permanent	PP emphasized that priority will be given to local population as per skill requirement Employment opportunities will be based on the prevailing guidelines notified by the Government of Odisha in the official gazette	-	On receipt of Environmental Clearance (EC)

18. An amount of Rs. 8.21 Crore has been earmarked for CER based on public hearing issues and socio economic development activities as detailed below:

CER ACTIVITIES (PH ISSUES)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
	(Rs. in Lakh)					
Local Livelihood Programme within 5 Blocks - With special focus on villages of Dangadi,Rachlipur, Ranagundi and Pankapal	55	55	55	55	55	**275**
Local Infrastructure Development Programme - Repairing of Damaged Roads in villages of Dangadi & Rachilipur	12	12	-	-	-	**24**
- Repairing of disconnected water lines in Dangadi Village	5	-	-	-	-	**5**
- Construction of a pond for bathing purposes in the village of Mulasir	15	-	-	-	-	**15**
Drinking Water - Facilitation of drinking water system in villages of Pankapal and Mulasir (to address drinking water crisis in summer season)	77	88	-	-	-	**115**
- Cleaning of Ponds in villages of Dangadi and Marutikar	1	1	-	-	-	**2**
Community Environmental Protection Programme - In villages of Dangadi, Marutikar,Kacherigan, Dhuligarh, Khurunti,Rachlipur and Hadisahi	11	11	10	10	10	**52**
Education - Providing Tuition Teachers & Salary teachers for specific requirements of schools with special focus in villages of Rachlipur and Ranagundi	5	5	4	4	2	**20**
Health - Support towards establishment of a medical centre in Marutikar in consultation with the local administration	25	25	-	-	-	**50**
- Organizing Malaria Eradication Programme in Marutikar	5	5	5	-	-	**15**
- Support towards strengthening of health facilities in villages of Kacherigan (Kidney ailment) and Trijanga (health of children residing in the R&R Colony)	15	-	-	-	-	**15**
Local Skill & Vocational Training Programme - Provision of local skill (including communication) training in Jakhpura and ITI training in Garadihi	10	10	5	5	5	**35**
Avenue/Urban Plantation in Buffer Zone with special focus in the village of Rachlipur	5	5	5	5	5	**25**
Total						**548.0**

CER ACTIVITIES FROM NEEDS ASSESSMENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
	(Rs. in Lakh)					
Drinking Water - Pipeline, pump house and bore well with Solar Power at Dankagadia Adivsi Sahi, Manatira Harijan Sahi and villages of Balungabandi and Dhapanki	8	8.16	14.23	8.57	-	**38.96**
- Repair & Reinstallation of the pump used by villagers in Kantipur	5.74	-	-	-	-	**5.74**
Health - Solid Waste Management in 22 Villages	17.3	17.3	17.3	17.3	17.3	**86.5**
- Support towards improvement in medical amenities in villages of Sarangpur, Godigotha and Ranagundi	5	5	5	-	-	**15**
Local Infrastructure Development Programme - Electricity expenditure along with installation of transformer at Brahman Sahi	10.0	-	-	-	-	**10**
- Renovation of Community Center used by Local Villagers, Media & Administration at Sukinda Bhavan	12.7	-	-	-	-	**12.7**
- Renovation of Community Center used by Local Villagers, Media & Administration at Danagadi Bhavan	12	-	-	-	-	**12**
- Renovation of Community Hall in Mangobindapur	9	-	-	-	-	**9**
Local Skill & Vocational Training - Stainless Steel Skill Development at Government Polytechnic, Ragadi, Jajpur	15	15	15	15	15	**75**
Skill based training for youth groups in Dhuligarh & Kantipur	5	5	-	-	-	**10**
Total						**274.9**

19.0 The capital cost of the project is Rs 1,684 Crores and the capital cost for environmental protection measures is proposed as Rs 84.8 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 6 Crores. The employment generation from the proposed expansion is 736 including both Permanent & Contractual.

Sl. No.	Item	Capital Cost (in Rs. Crores)	Recurring Cost/Annum (in Rs. Crores)
1	Water Conservation and Wastewater management - ETP for New CRM - Augmentation of existing ETP - Augmentation of Thickener in SMS - Installation of new pump for recycling in SMS - Construction of new catchpits - STP	 12 4 2.5 1.5 3.5 0.5	2.5
2	Air Pollution Control Measures - CHRMS –Installation of new sprinklers, DE, DF - BF for SMS - Low NOx burners and Oil Mist Interceptor	 10 5 5	2.0

	- BF for shot blaster - BF for Lime/Dolo Calcining Plant	5	
3	Solid Waste Management - MRP - waste storage area - Augmentation of Briquetting Plant	 18 5 2	 0.5
4	EMS & laboratory	2.4	0.3
5	Greenbelt Development & Rainwater Harvesting	1.8	0.2
6	Online Monitoring	1.6	0.5

20.0 Existing greenbelt of 44.8% is already present. A 10 m wide greenbelt, consisting of at least 3 tiers around plant boundary is already developed as greenbelt and green cover as per CPCB/MoEFCC, New Delhi guidelines. Local and native species will be planted for gap filling.

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

22.0 EIA Consultant engaged for the EIA-EMP Report is M/s M. N. Dastur & Co. (P) Ltd. (QCI NABET Sl. No 100, Rev 72, December 17, 2018).

Observations of the Committee: -

23.0 The committee observed that the project proponent has not submitted the Certified compliance report from the Regional Office for the all environmental clearances within the Jindal complex (power plant, steel plant, coke oven and hot strip mill). The Committee also noted that action plan prepared for the issues raised during the public hearing is not satisfactory.

Recommendations of the Committee: -

24.0 After detailed delibraions, the committee recommended to submit following information for further consideration of the proposal:

i. Certified compliance report from the Regional Office of the MoEF&CC at Bhubaneswar for the all environmental clearances within the Jindal complex (power plant, steel plant, coke oven and hot strip mill) shall be submitted to the Ministry.

ii. Activity wise time bound action plan to be completed within three years for the issues raised during the public hearing inter-alia including water supply to the villages, renovation of ponds, health assessment studies shall be submitted.

iii. Time bound action plan for green belt development in an additional area of 40 ha outside the plant premises shall be prepared and submitted.

iv. Coal analysis report shall be submitted.

v. Breakup of ash and slag utilization shall be submitted.

vi. Soil monitoring should be related to nutrient cycle.

vii. Revised AAQ modeling based on worst case scenario using already generated data should be carried out for the integrated jindal complex and shall be submitted along with the input file.

3.2 Capacity expansion of Hot Strip Mill from 1.6 MTPA to 3.2 MTPA and installation for 0.3 MTPA Cold Rolling Mill located at Kalinga Nagar Industrial Complex (KNIC), Danagadi near Duburi in Jajpur district of Odisha by M/s Jindal United Steel Limited [Online proposal No. IA/OR/IND/86732/2018; MoEFCC File No. J-11011/110/2018-IA.II(I)] – Environmental Clearance.

1.0 M/s Jindal United Steel Limited made online application vide proposal no. **IA/OR/IND/86732/2018**, dated 30th November, 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent:

2.0 The application of the proposed expansion project of M/s Jindal United Steel Limited located in Kalinga Nagar Industrial Complex, Tehsil Danagadi, District Jajpur, State Odisha was initially received in the Ministry on 29th May 2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 33rd meeting held on 9th to 11th July, 2018 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 24th July 2018 vide Letter No. F. No. IA-J-11011/110/2018-IA.II(I).

3.0 The project of M/s Jindal United Steel Limited located in Kalinga Nagar Industrial Complex, Danagadi Tehsil, Jajpur District, Odisha State is for enhancement of production of Hot Strip Mill from 1.6 to 3.2 million tonnes per annum (million TPA) and setting up of a new Cold Rolling Mill of 0.3 million tones per annum. The existing project was accorded environmental clearance vide letter no. F. No. IA-J-11011/110/2018-IA.II(I) dated 25th May 2018. The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide File. No. 101-1049/EPE, dated 10.12.2018. There is minor non-compliance (not of immediate danger to health & safety of the people) reported by Regional officer. The proposed capacity for different products for new site area as below:

Sl. No.	Unit	Existing capacity, MTPA	Proposed capacity, MTPA	Final capacity, MTPA
1	Hot Strip Mill along with Plate Finishing Shop	1.6	1.6	3.2

Sl. No.	Unit	Existing capacity, MTPA	Proposed capacity, MTPA	Final capacity, MTPA
2	Cold Rolling Mill - 20 Hi Mill - Pickling line - Bright Annealing Line	-	**0.3** 2 x 0.15 1 x 0.3 (2 x 0.05 + 2 x 0.1)	**0.3** 2 x 0.15 1 x 0.3 (2 x 0.05 + 2 x 0.1)

4.0 The total land area of JUSL is of 154.66 Ha. The proposed expansion will come-up in the vacant space of the existing land. No additional land requirement has been envisaged. No forestland is involved. The entire land has been acquired for the project. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the project area is flat and reported to lie between 86°02'02" to 86°03'23" E longitude and 20°56'25" to 20°57'34" N latitude in Survey of India OSM Nos. F45U1 at an elevation of 55 m AMSL. The ground water table reported to ranges between 0.92-4.58 m below the land surface during the post-monsoon season and 3.05-8.38 m below the land surface during the pre-monsoon season. Further, the stage of groundwater development is reported to be 33.8% in the study area and thereby these are designated as safe areas.

6.0 No National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger Reserve, Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The list of flora and fauna does not report presence of schedule-I fauna in the study area (Annexure- 3-2 of EIA Report (November 2018)).

7.0 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process is shown in Drg. 11443-97B-000-ENV-0003 and in Appendix 2-1 of EIA Report (November 2018).

8.0 The targeted production capacity of the plant is 3.2 million TPA HR Coil and 0.282 million TPA CR product. The raw material for the project is Slab which would be sourced from JSL and open market.

9.0 The water requirement of the project is estimated at 1368 m^3 /day which would be obtained from the existing source of water i.e Brahmani River via JSL. The permission for drawl of surface water is obtained from Department of Water Resource, Govt. of Odisha to JSL vide letter No. 26166/WR, dated 9/11/2016.

10.0 The power requirement of the project (after expansion) is estimated as 309 MU which would be obtained from the JSL.

11.0 Baseline Environmental Studies were conducted during summer season i.e. from February to May, 2017. Ambient air quality monitoring has been carried out at nine locations during February 2017 to May 2017 and the data submitted indicated: PM_{10} (82.5 to 91.3 µg/m^3), $PM_{2.5}$ (45.5 to 50.6 µg/m^3), SO_2 (5.9 to 18.3 µg/m^3) and NOx (24.3 to 37.0 µg/m^3). The results

of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.99 µg/m^3 with respect to the PM_{10}, 0.29 µg/m^3 with respect to the SO_2 0.61 µg/m^3 with respect to the NOx.

12.0 Ground water quality has been monitored in eight locations in the study area and analysed. pH: 6.2 to 7.0, Total Hardness: 108 to 373.3 mg/l, Chlorides: 27.4 to 139.3 mg/l, Fluoride: < 0.1 mg/l. Heavy metals are within the limits. Surface water samples were analysed from eight locations. pH: 7.1 to 7.2; DO: 5.7 to 6.1 mg/l; BOD: 3.3 to 6.0 mg/l and COD from 11.2 to 26.2 mg/l.

13.0 Noise levels are in the range of 56.5 to 78.9 dB(A) for day time and 47.8 to 69.8 dB(A) for night time.

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

15.0 It has been reported that a total of 50,700 tons per annum of waste will be generated due to the project, out of which 20,700 tons will be used in Ferro alloy plant of JSL and 30,000 tons will be sold to authorized recycler.

16.0 It has been reported that the Consent to Operate from the State Pollution Control Board, Odisha obtained vide Letter No 3795/IND-I-CON-6567 dated 29.03.2018 and consent is valid up to 31.03.21.

17.0 The Public hearing of the project was held on 14th November 2018 at Danagadi Bhawan, Jajpur under the chairmanship of ADM, Kalinganagar, Jajpur for proposed expansion under the State Pollution Control Board, Odisha. The issues raised during public hearing are Environment, Local employment, Education, Health facilities, Drinking water and Plantation. An amount of 5.0 crore (0.71 % of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues and need based assessment.

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
1.	Sri Prasant Kumar Ray Location: Danagadi, Jajpur	He expressed his support to the proposed expansion project of M/S. JUSL	PP acknowledged the support	-	-
		He demanded for local employment	PP emphasized that priority will be given to local population as per skill requirement Employment opportunities will be based on the prevailing guidelines notified by the Government of Odisha in the official gazette	-	On receipt of Environmental Clearance (EC)

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
		He demanded for local economic growth	PP emphasized that economic growth would be facilitated through them by undertaking local vocational & skill training programmes and local livelihood programmes	Total CER Budget towards Local Skill & Vocational Training Programme - Rs. 25 Lakh Local Livelihood Programme - Rs. 165 Lakh	Within 5 years from the date of commencement of construction activities
		He demanded for local avenue plantation	PP emphasized that Avenue/Urban plantation shall be made with consultation of Forest department	Total CER Budget towards Avenue/Urban Plantation – Rs. 25 Lakh	Within 5 years from the date of commencement of construction activities
		He demanded for local supply of drinking water	PP emphasized that strengthening of drinking water facilities would be ensured	Total CER Budget towards Drinking Water – Rs.76.96 Lakh	Within 5 years from the date of commencement of construction activities
		He demanded for control of environmental pollution in nearby areas	PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protection programmes	Total CER Budget towards Community Environmental Protection Programme- Rs.52 Lakh	Within 5 years from the date of commencement of construction activities

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
2.	Sri Bhagirathi Tarai Location: Kumbhiragadia,Danagadi	He expressed his support to the proposed 3.2 MTPA expansion project of M/S. JUSL. He emphasized that the local area will be developed by the proposed project	PP acknowledged the support	-	-
		He demanded for better education	PP emphasized to strengthening of educational facilities would be ensured	Total CER Budget towards Education - Rs 19.5 Lakh	Within 5 years from the date of commencement of construction activities
		He demanded for better health facility	PP would take care of the health facilities through various programmes	Total CER Budget towards Health – Rs. 70.70 Lakh	Within 5 years from the date of commencement of construction activities
		He demanded for improvement in local nearby areas	PP would undertake local improvement through support towards various community based developmental programmes	Total CER Budget towards Local Infrastructure Development Programme – Rs. 76 Lakh	Within 5 years from the date of commencement of construction activities
3.	Smt. Sanjubala Nayak Location: Kumbhiragadia,Danagadi	She expressed her support to the proposed expansion project and appreciated the company for its various types of CSR effort towards the development of nearby village areas	PP acknowledged the support and appreciation	-	-
4.	Paramananda Sethy	He welcomed the panel & gathering and told that they have hope for area development, local employment,	PP appreciated the support and acknowledged the conviction of the respondent	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
	Location: Jajpur Road	education & health improvement by the proposed expansion project			
		He urged the company to take step for health development	PP would take care of the health facilities through various programmes	Total CER Budget towards Health – Rs. 70.70 Lakh	Within 5 years from the date of commencement of construction activities
		He urged the company to take step for educational development	PP emphasized that strengthening of educational facilities would be ensured	Total CER Budget towards Education - Rs 19.5 Lakh	Within 5 years from the date of commencement of construction activities
		He urged the company to take step for permanent employment to the educated people and priority for local employment in the area	PP emphasized that priority will be given to local population as per skill requirement Employment opportunities will be based on the prevailing guidelines notified by the Government of Odisha in the official gazette	-	On receipt of Environmental Clearance (EC)
		He finally expressed his support but asked to take step for pollution control	PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protection programmes	Total CER Budget towards Community Environmental Protection Programme - Rs.52 Lakh	Within 5 years from the date of commencement of construction activities
		He asked PP to take step for development of local people in the area	PP would undertake local improvement through support towards various community based developmental programmes	Total CER Budget towards Local Infrastructure Development Programme – Rs. 76 Lakh	Within 5 years from the date of commencement of construction activities

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
5.	Smt. Santilata Nayak Location: Jakhapura	She welcomed the gathering and expressed her pleasure for the proposed expansion project of M/S. JUSL. She was also thankful to M/S. JUSL for the financial support, which let her son to be a well-established educated person	PP acknowledged the support and appreciation	-	-
		She asked the company for local environmental development	PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protection programmes	Total CER Budget towards Community Environmental Protection Programme-Rs.52 Lakh	Within 5 years from the date of commencement of construction activities
		She asked the company for local health development	PP would take care of the health facilities through various programmes	Total CER Budget towards Health – Rs. 70.70 Lakh	Within 5 years from the date of commencement of construction activities
		She asked the company for local educational development	PP emphasized that strengthening of educational facilities would be ensured	Total CER Budget towards Education - Rs 19.5 Lakh	Within 5 years from the date of commencement of construction activities
6.	Sri Sudhansu Sekhar Bhanja Location: Danagadi	He addressed M/S. JUSL as a leading Steel Industry of Asia. He supported the proposed expansion project of M/S. JUSL	PP acknowledged the support	-	-
		He urged the company to provide for better local health facility	PP would take care of the health facilities through various programmes	Total CER Budget towards	Within 5 years from the date of commencement of

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
				Health – Rs. 70.70 Lakh	construction activities
		He urged the company to provide for better educational facility	PP emphasized that strengthening of educational facilities would be ensured	Total CER Budget towards Education - Rs 19.5 Lakh	Within 5 years from the date of commencement of construction activities
		He urged the company to provide for improved plantation	PP emphasized that Avenue/Urban plantation shall be made with consultation of Forest department	Total CER Budget towards Avenue/Urban Plantation – Rs. 25 Lakh	Within 5 years from the date of commencement of construction activities
		He urged the company to provide for improved CSR activities for development of nearby areas	PP emphasized on strengthening of the on-going CSR activities	-	-
7.	Sri Bidyadhar Mohanty Location: Jajpur Road	He welcomed the panel and gathering. He told that he is supporting the proposed expansion project. He mentioned that M/S. JUSL has supported the CHC Danagadi for better medical facility	PP acknowledged the support and the appreciation	-	-
		He demanded the company for better medical treatment facility	PP would take care of the health facilities through various programmes	Total CER Budget towards Health – Rs. 70.70 Lakh	Within 5 years from the date of commencement of construction activities
		He demanded for improvement in education	PP emphasized that strengthening of educational facilities would be ensured	Total CER Budget towards	Within 5 years from the date of commenceme

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
				Education - Rs 19.5 Lakh	nt of construction activities
		He demanded for improvement in plantation	PP emphasized that Avenue/Urban plantation shall be made with consultation of Forest department	Total CER Budget towards Avenue/Urban Plantation – Rs. 25 Lakh	Within 5 years from the date of commencement of construction activities
		He demanded for improvement in implementation in CSR activities	PP emphasized on strengthening of the on-going CSR activities	-	-
		He emphasized that priority should be given to Odiya officer in higher executive post	This claim is unwarranted for	-	-
		He emphasized on development of surrounding areas	PP would undertake local improvement through support towards various community based developmental programmes	Total CER Budget towards Local Infrastructure Development Programme – Rs. 76 Lakh	Within 5 years from the date of commencement of construction activities
8.	Miss Sima Mani Lenka Location: Solei, Danagadi	She welcomed the panel and gathering and told that she supports the proposed expansion project	PP acknowledged the support	-	-
		She asked the company for environmental development activities	PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protection programmes	Total CER Budget towards Community Environmental Protection Programme- Rs.52 Lakh	Within 5 years from the date of commencement of construction activities
		She asked the company for prosperity of local	PP emphasized that prosperity would be facilitated through them by undertaking local vocational & skill	Total CER Budget	Within 5 years from the date of

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
		villagers	training programmes and local livelihood programmes	towards Local Skill & Vocational Training programme – Rs. 25 Lakh Local Livelihood Programme - Rs. 165 Lakh	commencement of construction activities
9.	Miss Nirupama Majhi Location: Solei,Danagadi	She expressed her support for the proposed expansion project and appreciated the environmental, health and educational development activities of M/S. JUSL	PP acknowledged the support and appreciation	-	-
10.	Mr. Tapan Kumar Biswal Location: Santara, Jajpur Road	He supported the proposed expansion of M/S. JUSL. He expressed special thanks to the company for emerging focus in environmental protection	PP acknowledged the support and appreciation	-	-
		He asked the company for the permanent employment	PP emphasized that priority will be given to local population as per skill requirement Employment opportunities will be based on the prevailing guidelines notified by the Government of Odisha in the official gazette	-	On receipt of Environmental Clearance (EC)
11.	Sri Anil Kumar Jena Location: Rampilo, Danagadi	He expressed his support towards proposed expansion project. Additionally, he appreciated the environmental protection initiatives and drinking water provision of the	PP acknowledged the support and appreciation	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
		company			
12.	Sri Santosh Kumar Tarai Location: Kumbhiragadia Tikara	He expressed his support for the proposed expansion project. Further, he mentioned that M/S. JUSL has provided for good education through improvement in educational facilities for the nearby rural areas	PP acknowledged the support and appreciation	-	-
13.	Smt. Sanjukta Moharana Location: Jakhapura	She supported the proposed expansion project. She told that M/S. JUSL is bringing development in the nearby areas and the company is also giving importance to environmental protection and its development	PP acknowledged the support and appreciation	-	-
14.	Sri Santosh Das Location: Giptrijanga Danagadi	He opposed the proposed expansion project of M/S. JUSL	PP acknowledged the remark	-	-
15.	Smt. Subhadra Moharana Location: Jakhapura	She supported the proposed expansion project of M/S. JUSL	PP acknowledged the support	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
16.	Sri Satya Ranjan Das Location: Dala	He expressed his support for the proposed expansion project	PP acknowledged the support	-	-
		He asked the company for employment opportunities	PP emphasized that priority will be given to local population as per skill requirement Employment opportunities will be based on the prevailing guidelines notified by the Government of Odisha in the official gazette	-	On receipt of Environmental Clearance (EC)
17.	Miss Manasmita Nayak Location: Kumbhiragadia	She expressed her support for the proposed expansion project	PP acknowledged the support	-	-
18.	Miss Manasi Ojha Location: Dhabalgiri	She welcomed the panel and gathering. She expressed her support for the proposed project and mentioned that the company is bringing educational improvement to its nearby areas	PP acknowledged the support and appreciation	-	-
19.	Sri Ramesh Chandra Singh Location: Manatira	He welcomed the panel and told that he is supporting the proposed expansion project of M/S JUSL	PP acknowledged the support	-	-
20.	Sri Niranjan Bal Location: New Market, Jajpur Road	He welcomed the project and told that he supports the proposed expansion project. Further, he mentioned that the proposed expansion project will create employment facility which will reduce the unemployment situation in nearby	PP appreciated the support and acknowledged the conviction of the respondent	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
		areas			
		He also demanded for development in environmental protection	PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protection programmes	Total CER Budget towards Community Environmental Protection Programme - Rs.52 Lakh	Within 5 years from the date of commencement of construction activities
21.	Miss Rasmita Sahoo Location: Mangobinda-pur	She welcomed the panel and gathering and expressed her interest for the proposed expansion project	PP acknowledged the support	-	-
22.	Miss Tarini Ratha Location: Mangobinda-pur	She told that she supports the proposed expansion project of M/S. JUSL	PP acknowledged the support	-	-
23.	Sri Ramesh Malick Location: Vyasanagar	He expressed his interest in the proposed expansion project	PP acknowledged the interest of the respondent	-	-
		He demanded the company for environmental protection	PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental	Total CER Budget towards Community Environmental Protection Programme- Rs.52 Lakh	Within 5 years from the date of commencement of construction activities

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
			protection programmes		
24.	Miss Tanushree Sethy Location: Sarangapur	She expressed her support for the proposed expansion project. She mentioned that the tailoring knowledge given by the company brought a lot of happiness in her life, also made her independent and opened a way towards employment	PP acknowledged the support and appreciation	-	-
25.	Sri Abhiram Das Location: Nuagaon	He opposed the proposed expansion project	PP acknowledged the remark	-	-
		He also told that M/S. JUSL is discharging its effluent water to nearby Ganda Nallah and close by agricultural fields	PP emphasized that plant is operating Zero-discharge norms as specified by SPCB. PP has already implemented various pollution control measures and further up gradation will be made to control the environmental pollution under the allocated EMP budget mentioned in Chapter 4. Further up gradation will be made to control the environmental pollution through community environmental protection programmes	Total CER Budget towards Community Environmental Protection Programme-Rs.52 Lakh	Within 5 years from the date of commencement of construction activities
		He told that the company is not providing any employment facilities	PP emphasized that employment have been provided to locals under both permanent & contractual categories PP emphasized that similarly for the proposed expansion priority will be given to local population as per skill requirement Employment opportunities will be based on the prevailing guidelines notified by the Government of Odisha	-	On receipt of Environmental Clearance (EC)

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
			in the official gazette		
		He mentioned that the company is not providing development in the nearby areas	Various development programmes have been undertaken under CSR in the nearby area PP emphasized on further strengthening of the on-going CSR activities	-	-
26.	Miss Pinky Sahoo Location: Marutikar	She expressed her support towards proposed expansion project. She mentioned that tailoring was learnt from M/S.JUSL, which made her independent and opened a way towards employment. Due to this, her family financial problem was solved	PP acknowledged the support and appreciation	-	-
27.	Sri Dharmendra Kumar Patra Location: Chapua	He welcomed the gathering and told that the company brings more development in Kalinganagar area The company has also provided electricity in nearby rural areas. Hence, he supports the proposed expansion project	PP acknowledged the support and appreciation	-	-
28.	Miss Mamata Sahoo Location: Ranipada	She told that the company is bringing development to nearby areas. So, she supports the proposed expansion project	PP acknowledged the support and appreciation	-	-
29.	Miss Sasmita Khilar Location: Dhabalgiri	She welcomed the gathering and told that she supports the proposed expansion project	PP acknowledged the support	-	-
30.	Sri Milan	He welcomed the	PP acknowledged the support and	-	-

Sl. No.	Name & Address	Issues raised by public	Response of Project Proponent (PP)	Allocated Budget for CER (Rs. in Lakh)	Schedule of Implementation
	Sahoo Location: Jakhapura	public hearing and the gathering. He expressed his support for the proposed expansion project He mentioned that the company is doing several CSR activities and due to this various type of improvements are undertaken	appreciation		
		He demanded the company to give priority for local employment	PP emphasized that priority will be given to local population as per skill requirement Employment opportunities will be based on the prevailing guidelines notified by the Government of Odisha in the official gazette	-	On receipt of Environmental Clearance (EC)
31.	Sri Sunil Gagrai Location: Siaria	He opposed the proposed expansion project and demanded for justice in front of the ADM	PP acknowledged the remark	-	-
32.	Sri Chaitan Samal	He expressed his support for the proposed expansion project	PP acknowledged the support	-	-

18.0 The details of activities and fund provision under CER with regard to issues raised during public hearing:

CER ACTIVITIES (PH ISSUES)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
	(Rs. in Lakh)					
Local Livelihood Programme 3 Blocks (Danagadi, Sukinda & Jajpur Road)	30	50	40	25	20	165.00
Local Infrastructure Development Programme - Construction of 4 Community Centers located within 3 Blocks of Danagadi, Sukinda & Jajpur Road	13	13	13	13	-	52.00

Drinking Water - Pipeline, pump house and bore well with Solar Power at Rampillo	4	3.60	3	3	-	13.60
- Pipeline, pump house and bore well with Solar Power at Manpur Brahman Sahi	-	4	4.2	4.2	-	12.40
- Pipeline, pump house and bore well with Solar Power at Pingal	-	-	7	5	5	17.00
- Pipeline, pump house and bore well with Solar Power at Pankhal Sasan	5.26	4	3	3	-	15.26
- Cleaning of Ponds in 22 villages in blocks of Danagadi, Sukinda & Jajpur Road	3.74	3.74	3.74	3.74	3.74	18.70
Community Environmental Protection Programme - Air and Water Monitoring in Buffer Zone especially in Vyasnagar Municipality Area & New Market of Jajpur Road Block and villages of Nuagaon, Jakhpura, Solei and Danagadi	8	8	8	8	8	40.00
- Water Sprinkling in surrounding areas	2.4	2.4	2.4	2.4	2.4	12 .00
Education - Providing Tuition Teachers & Salary teachers for specific requirements of schools in nearby villages like Kumbhiragadia, Danagadi and Jakhpura located within the blocks of Danagagi and Jajpur Road	2	2	2	2	2	10.00
- Boundary Wall for Nodal Upper Primary School at Trijanga	9.5	-	-	-	-	9.50
Health - Upgradation and replacement of Medical equipment at CHC of Danagadi	10	10	10	10	-	40.00
- Provision of a DG Set & Beds in PHC of Pachhikot	5.7	-	-	-	-	5.70
Health Camps Within blocks of Danagadi and Jajpur Road	5	5	5	5	5	25.00
Local Skill & Vocational Training Programme - Provision of local skill and vocational training programme in nearby villages like Solei and Danagadi within the block of Danagadi	3	3	3	3	3	15.00
Avenue/Urban Plantation - Urban Plantation within the blocks of Danagagi and Jajpur Road	6	6	4	4	-	20.00
- Free Saplings to local Villages within the blocks of Danagagi and Jajpur Road	1	1	1	1	1	5.00
Total						**476.16**

19.0 The details of activities and fund provision under CER based on need basesd assessment:

CER ACTIVITIES FROM NEEDS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL

ASSESSMENT	**(Rs. in Lakh)**					
Local Skill & Vocational Training Programme Vocational and Skill Development Training for women and girls in Mangobindapur, Sarangapur and Kacherigan	4	3	3	-	-	10.0
Local Infrastructure Development Programme Improvement in Road Conditions in consultation with local administration in villages of Sorei and Mangobindapur	12	12	-	-	-	24.0
Total						**34.0**

20.0 The capital cost of the project is Rs 700 crores and the capital cost for environmental protection measures is proposed as Rs 35 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 2 crores .The detailed CER plan has been provided in the EMP in its page No 7-14 to 7-30. The employment generation from the proposed expansion is 150 included both permanent & Contractual.

Sl. No.	**Item**	**Capital Cost (in Rs. Crores)**
1	Water Conservation and Wastewater management	17
2	Air Pollution Control Measures	7
3	Solid Waste Management	6
4	Energy conservation	2
5	Greenbelt Development & Rainwater Harvesting	2
6	Online Monitoring	1

21.0 Existing greenbelt is 185.54 Ha (37%) of JSL (before demerger) plant area and 37.12 Ha (24%) of JUSL plant area. During the expansion project existing greenery would be further strengthened.

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

23.0 EIA Consultant engaged for the EIA-EMP Report is M/s M. N. Dastur & Co. (P) Ltd. (QCI NABET Sl. No 100, Rev 72, December 17, 2018).

Observations of the Committee: -

24.0 The committee observed that the project proponent has not submitted the Certified compliance report from the Regional Office for the all environmental clearances within the Jindal complex (power plant, steel plant, coke oven and hot strip mill). The Committee also noted that action plan prepared for the issues raised during the public hearing is not satisfactory.

Recommendations of the Committee: -

25.0 After detailed delibraions, the committee recommended to submit following information for further consideration of the proposal:

i. Certified compliance report from the Regional Office of the MoEF&CC at Bhubaneswar for the all environmental clearances within the Jindal complex (power plant, steel plant, coke oven and hot strip mill) shall be submitted to the Ministry.

ii. Activity wise time bound action plan to be completed within three years for the issues raised during the public hearing inter-alia including water supply to the villages, renovation of ponds, health assessment studies shall be submitted.

iii. Time bound action plan for green belt development in an additional area of 10 ha outside the plant premises shall be prepared and submitted.

iv. Details of the scale and sludge generated from the plant shall be submitted.

v. Soil monitoring should be related to nutrient cycle.

vi. Revised AAQ modeling based on worst case scenario using already generated data should be carried out for the integrated jindal complex and shall be submitted along with the input file.

3.3 Expansion of Steel Plant – New Iron Ore Beneficiation & Pellet Plant (Pellets - 6,00,000 TPA), Producer Gas Plant 30,000 Nm^3 /Hr, Induction Furnace (MS Ingots / Billets/Blooms from 86,400 TPA to 2,48,400 TPA), New Electric Arc Furnace with AOD / VOD Caster (MS & SS Ingots / Billets / Blooms – 1,20,000 TPA), Rolling Mill (Rolled Products / Structural Steels / TMT bars – from 1,45,250 TPA to 3,45,250 TPA), New Ferro Alloys Unit (FeSi – 12,600 TPA / SiMn – 28,400 TPA / FeMn – 37,000 TPA), power plant – 25 mw[WHRB based – 18 MW and FBC based – 7MW] by M/s. API Ispat & Powertech Pvt. Limited at Siltara Village, near Phase – II, Siltara Industrial Growth Centre, Tehsil and District Raipur, Chhattisgarh – Reconsideration for grant of environmental clearance based on ADS reply.

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

Details submitted by the Project Proponent

2.0 The proposed expansion of Integrated Steel Plant of M/s. API Ispat & Powertech Private Limitedlocated at Siltara Village, Near Phase-II, Siltara Industrial Growth Centre, Raipur Tehsil & District, Chhattisgarh was initially received in the Ministry on 27th November 2014 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised in 29th EAC (Industry) meeting held on 11th – 12th December, 2014 for prescribing ToR to the expansion project for undertaking detailed EIA study for obtaining Environmental Clearance.

Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR to the project on vide Lr. No.J-11011/377/2014-IA II (I) dt. 12th June 2015 and subsequently TOR validity has been extended vide letter dated 21st June 2018 and is valid up to 10th June 2019.

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

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

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

S. No.	**Unit (Product)**	**Existing Plant (In Operation)**	**Proposed Expansion**	**After Proposed Expansion**
1.	Iron Ore Beneficiation and Pelletization Plant (Pellet)	---	2 x 1000 TPD (6,00,000 TPA)	2 x 1000 TPD (6,00,000 TPA)
2.	Gasifier for Pellet Plant	---	14,250 Nm^3 /Hr	14,250 Nm^3 /Hr
3.	DRI Kilns (Sponge Iron)	2 x 350 TPD (2,10,000 TPA)	---	2 x 350 TPD (2,10,000 TPA)
4.	Steel Melting Shop			
	a) Induction Furnace	2 x 12 T	3 x 15 T	2 x 12 T & 3 x 15

	with CCM (MS Ingots/ billets/ blooms)	(86,400 TPA)	(1,62,000 TPA)	T (2,48,400 TPA)
	b) Electric Arc Furnace with AOD/ VOD & Caster (MS and SS Ingots/ billets/ blooms)	---	2 x 20 T (1,20,000 TPA)	2 x 20 T (1,20,000 TPA)
5.	Rolling Mill (Rolled Products / Structural Steels / TMT bars / Wire Drawing mill)	1,45,250 TPA	2,00,000 TPA	3,45,250 TPA
6.	Gasifier for Rolling Mill	---	15,500 Nm^3/Hr	15,500 Nm^3/Hr
7.	Ferro alloys	---	2 x 9 MVA	2 x 9 MVA
	i. Ferro – Silicon	---	12,600 TPA	12,600 TPA
	Or		Or	Or
	ii. Silico–Manganese	---	28,400 TPA	28,400 TPA
	Or		Or	Or
	iii. Ferro–Manganese	---	37,000 TPA	37,000 TPA
8.	Power Plant (WHRB based)	18 MW	---	18 MW
9.	Power Plant (FBC based)	7 MW	---	7 MW

6.0 Existing plant is located in 96.57 acres (39.1 Ha.) of land and proposed expansion will be carried out in the existing plant premises only. The land is in possession of management. Existing land is private land and diverted for industrial purpose. No River / stream passes through the plant area. It has been reported that no natural water body / stream exists in the plant area and any modification / diversion in the existing natural drainage pattern at any stage has not been proposed.

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

8.0 There are no notified Reserve Forest / National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ Elephant Corridors / migratory routes for Birds with in 10 Km. radius of the plant. There are no Schedule- I fauna exists in the study area. The list of flora and fauna during study period in the study area is furnished in Chapter # 3 of EIA report.

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

S. No.	RAW MATERIAL	QUANTITY (TPA)	SOURCES	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
1. For Iron Ore beneficiation plant (Iron ore concentrate)					
a)	Iron ore fines	9,00,000	Orissa	~500 Kms.	By Rail & Road through covered

S. No.	RAW MATERIAL		QUANTITY (TPA)	SOURCES	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
						trucks
2.	For Pellet Plant (Pellets)					
a)	Iron ore Concentrate		6,30,000	Own Generation	----	Covered Conveyor
b)	Bentonite		9,000	Gujarat	~1400 Kms.	By Rail & Road through covered trucks
c)	Limestone		9,000	Chhattisgarh / Madhya Pradesh	100 – 500 Kms.	By Rail & Road through covered trucks
d)	Coke breeze		21,450	Chhattisgarh / Andhra Pradesh	100 – 200 Kms.	By Rail & Road through covered trucks
e)	Coal (Gasifier)	Indian	39,000	SECL	~200 Kms.	By Rail & Road (Covered trucks)
		Imported	24,000	Indonesia / South Africa / Australia	590 Kms. (from Vizag Port)	By Sea, Rail & Road (Covered trucks)
	Furnace Oil		10500 KL/annum	Raipur	~50 Kms.	By road (through Tankers)
3.	For Induction Furnace (MS Billets)					
a)	Sponge Iron		1,32,000	In house generation	---	By Road through covered trucks
b)	Scrap		42970	Raipur	~50 Kms.	By Rail & Road through covered trucks
c)	Ferro Alloys		12,350	In house generation	---	----
4.	For Electric Arc Furnace with AOD/ VOD & Caster unit					
a)	Sponge Iron		1,08,000	In house generation & External purchase	--- ~50 Kms.	By Road through covered trucks
b)	Scrap		24,000	Raipur	~50 Kms.	By Rail & Road through covered trucks
c)	Ferro Alloys		6,000	In house generation	---	----
5.	For Rolling Mill (TMT bars & Structural Steel)					
	Billets / Ingots		2,16,600	In house generation	---	----

S. No.	RAW MATERIAL		QUANTITY (TPA)	SOURCES	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
	Coal for Gasifier	Indian	41,500	SECL	~200 Kms.	By Rail & Road (Covered trucks)
		Imported	25,400	Indonesia / South Africa / Australia	590 Kms. (from Vizag Port)	By Sea, Rail & Road (Covered trucks)
	Furnace Oil		11450 KL/annum	Raipur	~50 Kms.	By road (through Tankers)
6. For Ferro Alloys						
6. (i) For Ferro Silicon						
a)	Quartz		16890	Chhattisgarh / Andhra Pradesh	100 – 700 Kms.	By Rail & Road through covered trucks
b)	LAM coke		5600	Imported from Australia, China	590 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)
c)	MS Scrap		350	Raipur	~50 Kms.	By Road through covered trucks
d)	Electrode paste		840	Andhra Pradesh (Vizag)	~550 Kms.	By Rail & Road through covered trucks
6. (ii) For Silico Manganese						
a)	Manganese Ore		31780	MOIL / OMC	~300 Kms.	By Rail & Road through covered trucks
b)	Mn. Slag		18000	In house generation	---	----
c)	Quartz		7800	Chhattisgarh / Andhra Pradesh	100 – 700 Kms.	By Rail & Road through covered trucks
d)	LAM coke		3160	Imported from Australia, China	590 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)
6. (iii) For Ferro Manganese						
a)	Manganese Ore		53400	MOIL / OMC	~300 Kms.	By Rail & Road through covered trucks
b)	LAM coke		30780	Imported from Australia,	590 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)

S. No.	RAW MATERIAL	QUANTITY (TPA)	SOURCES	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
			China		
c)	MS Scrap	2060	Raipur	~50 Kms.	By Road through covered trucks
d)	Electrode Paste	6160	Andhra Pradesh (Vizag)	~550 Kms.	By Road through covered trucks

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

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

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

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

14.0 Ground water quality has been monitored in 8 locations in the study area are analysed and the data submitted indicated pH: 7.4 to 8.1, Total Hardness: 178 to 249 mg/l, Chlorides: 101 to 294 mg/l, Fluoride: 0.39 to 0.61 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 3 locations in the study area and analysed and the data submitted indicated pH: 7.3 to 7.8, DO: 4.3 to 4.8 mg/l, BOD: 2.3 to 2.8 mg/l & COD 7.0 to 13.0 mg/l.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Responsibility (CER) based on public hearing issues. The details of CER proposed are as follows:

S.No.	Major Activity Heads	Years (Rs. In Lakhs)							Total Expenditure (Rs. In Lakhs)
		1st	2nd	3rd	4th	5th	6th	7th	
A	**Based on need based & Social assessment study**								
1	Community & Infrastructure Development Programmes (Development of village road, renovation of school buildings, providing Street Lights & its maintenance in panchayat area, maintenance of Temples in nearby Villages, sanitation facilities, drainage facilities in nearby villages & schools.	8	8	8	4	4	4	4	40
2	Skill & Entrepreneur Development (Skills updation on welder / Fitter / wiremen etc.)	7	7	7	7	7	6	6	47
3	Education and Scholarship Programmes (Providing furniture, computers, library, sports equipment etc. for schools, Sponsorship for School Sport events, Merit Scholarships to School Children)	2	2	2	2	2	1	1	12
4	Medical & health related activities (Ambulance facilities to villagers)	2	2	2	2	1	1	1	11
5	Other requirements as per needs of the nearby Village Panchayat (such as supply of Fertilizers to augment N,P,K)	2	2	2	1	1	1	1	10
	SUB TOTAL (A)	**21**	**21**	**21**	**16**	**15**	**13**	**13**	120
B	**Based on Public Consultation**								
1	Additional Rain water harvesting measures in nearby villages	3	3	2	2	2	2	2	16
2	Plantation in the Siltara area	10	10	5	0	0	0	0	25
3	Deepening of Ponds in the	20	10	10	0	0	0	0	40

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

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

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

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

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

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

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

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

27.0 The proposal was considered in the 1st Reconstituted EAC (Industry – 1) meeting scheduled during 26th – 28th November, 2018. The committee observed that the background consentration of the particulate matter is almost reaching the permissible standard; the issues raised during the public hearing was not addressed properly; the CER provision was not made as per the guideines issued by the ministry vide OM dated 1st May 2018; the committee opined that the unit configuaration of the EAF may be revised by proposing one 40T EAC in place of 2X20T EAF for reduction of pollutions, explore the possibility of providing one gassifier in place of two gassifier proposed for pellet plant and rolling mill or shall explore the possibility of liquid firing and fume extraction system;

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

1. Revised time bound action plan along with budget provision on the issues raised by the public during the public consultation;

2. Revised CER based on the issues raised during the public consultation;

3. Additional dust control measures for containing the air pollution to bring down the particulate matter consentration well below the prescribed standards;

4. Revided configuration of the EAF

5. Explore the possibility of providing one gassifier in place of two gassifier proposed for pellet plant and rolling mill or shall explore the possibility of liquid firing

6. Fume extraction system with forth hole

7. Provision of filer press shall be made

29.0 Reply to the above points has been submitted by the project proponent. The summery of the reply is as follows:

Point No. 1	***Revised time bound action plan along with budget provision on the issues raised by the public during the public consultation.***
Reply No. 1	The following are the Revised time bound action plan along with budget provision on the issues raised by the public during the public consultation

The following are the Revised time bound action plan along with budget provision on the issues raised by the public during the public consultation:

S.N	Name of	Issue raised	Management Response	Time	Budgetary

o.	Person			schedule	allocation
1.	Sri. Dhanesh Yadav, Janpad Vice President	• He opined that Industry management shall provide employment to educated unemployed and take-up CSR activities in the village	• In the existing plant, out of total 350 numbers of employees, 245 numbers (70%) of employees are from the nearby villages. It is here by confirmed that priority in employment will be given to the local youth based on their qualification & experience and the requirement for a particular vacancy.	Continuous Process	---
			• Socio economic activities will be carried out under CER and budget for same has been allocated under CER as per MOEF&CC norms which will be carried out in consultation with the village panchayat.	1 to 7 years	₹ 2.1 Crores
2	Sri M.R. Yadu, Sarpanch of Gram Panchayat Siltara	• He demanded that all industrialists personally come to meet with the villagers, so that they can be appraised of the problems faced by the villagers.	• It is assured that PP will meet the villagers in village panchayat as and when decided by the village panchayat.	Continuous process	---
		• There are several sponge iron industries in the area. Pollution can be controlled in sponge iron industries if industries operate the pollution control systems properly. Requested that all industries shall control pollution.	• In the existing plant air emission control systems such as ESP, Bagfilters, dust suppression system, covered conveyers, pucca internal roads, Dust extraction system with bag filters have been installed and operated to comply with the CECB norms. CECB has issued CTO for the existing plant which is valid till 31st August 2020. CECB accords CTO after all necessary emission control systems have been installed and operated. • ESPs are operated continuously in the plant and the CEMS data connected to CPCB server is well within the norms. Similarly, in the expansion also requisite emission control systems will be installed and operated to comply with the norms. • Net resultant GLCs are within the National Ambient Air Quality standards after the expansion also. • No effluent is being discharged outside and ZLD is being followed in the existing	Before commencement of operation of expansion	₹ 18 Crores

			plant. Similar practice will be followed after expansion also. • Ash is stored in silo and no open storage of ash. Ash disposal in the expansion project also will be in accordance with the MOEF&CC Notification and its subsequent amendments. • Development of greenbelt in 1/3rd of the area helps in mitigating the emissions further. • With all these measures there will not be any significant adverse impact on environment due to the proposed expansion project		
		Plantation in siltara industrial area needs improvement and industries should contribute towards the same.	In the existing plant out of total 39.1 Ha., 13 Ha. of area has been developed with greenbelt. Additional 9000 nos. of saplings will be planted in the premises as part of expansion. Tree plantation will be taken up in Silatara area to increase the green cover of the area. 6500 plants will be planted in siltara area during the next monsoon. The same is considered under CER and budget also has been earmarked for the same.	1st year of operation 1st year of operation	₹ 15 lakhs ₹ 25 Lakhs
		Drinking water problem in the area.	4 nos. R.O. plants will be established in the village for the purpose of providing drinking water.	1st year of operation	₹ 10 Lakhs
		Employment to local people shall be provided	Top priority will be given to the local youth in providing employment in the expansion project and will be based on their qualification & experience and the requirement for a particular vacancy.	Continuous	---
		CSR activities shall be undertaken for development of nearby areas.	Socio economic activities will be carried out under CER and budget for same has been allocated under CER as per MOEF&CC norms which will be carried out in consultation with the village panchayat.	1 to 7 years	₹ 2.1 Crores
3	Mr. Sachin Mairisa of Siltara village	The road made by PWD from Bazar Chowk in Siltara to Bilaspur Road is hardly two to two and	Company is willing to contribute expenditure jointly with other industries in the area in consultation with the State Government to lay the new road.	2nd year (ready to contribute provided other	₹ 10 lakhs

		half years old. Godavari power promised to lay the road but till now it is not laid.	Provision will be made in the CER budget. However, the company will definitely contribute towards the maintenance of the road outside the plant premises.	industries also come forward)	
		Lot of pollution in siltara area due to more number of power plants. Pollution shall be controlled properly.	• The following measures are proposed to reduce the emissions further. • In the existing Induction furnaces also PM of 30 mg/Nm3 will be provided. • In the proposed expansion PM of 30 mg/Nm^3 (maximum) has been considered in all the units. • Instead of 2 nos. of Pellet plants each of 1000 TPD, 1 no o. of Pellet plant of 2000 TPD is proposed. • Instead of 2 nos. of EAFs each of 20 T, 1 no. of EAF of 40 T is proposed. • Instead of 2 nos. of gasifiers , 1 no. of gasifier is proposed.	--	--
3	Contd. Mr. Sachin Mairisa of Siltara village	More Plantation shall be taken up in Siltara area.	• In the existing plant out of total 96.57 acres (39.1 Ha.), 32.0 acres (13 Ha.) of area has been developed with greenbelt. Additional 6500 nos of saplings will be planted in the premises by the time the expansion project commences operation. • 5000 nos. of saplings will be planted in Silatara area to increase the green cover of the area during the next monsoon. The same is considered under CER and budget also has been earmarked for the same.	1st year of operation 1st year of operation	₹ 15 lakhs ₹ 25 lakhs
4	Sri. Keval Kumar Chakradhari from Village - Khulmurhi	CSR amount shall be spent for development of village, such as construction of Wharf in village pond, plantation, concreting of village road. All the work of village development can't be done by the government alone and industries in the area shall also contribute to	• Socio economic activities will be carried out under CER and budget for same has been allocated under CER as per MOEF&CC norms which will be carried out in consultation with the village Panchayat. These activities include development of plantation in Siltara area, pucca village road, strengthening of existing ponds, etc.	1 to 7 years	₹ 2.1 Crores

		the village development.			
5	Sri. Prashant Thakur, C.G. Majdoor Congress	He said that the topic regarding capacity expansion of API Ispat is that the committee for environmental approval has been dissolved due to completion of the term, so is this public hearing proper? The main points are as follows :-	TOR has been granted, by MOEF&CC, Govt. of India, New Delhi and not from the SEIAA, Chhattisgarh (SEIAA is due for reconstitution at the time of PH). Moreover at the time of conducting of public hearing the Expert Appraisal Committee need not necessarily be functional. CECB has conducted the Public hearing as per the procedure prescribed by MOEF&CC	---	---
		The company where it is expanding, that place was previously for Green Land.	Existing plant is located in the 97.57 acres (39.1 Ha.) of land and proposed expansion will be carried out in the vacant land in existing plant and no plant cutting is envisaged. Additional 6500 nos. of saplings will be planted in the plant premises duly covering the reduced areas due to dropping of taiilngs pond, establishment of single Pellet plant , establishment of single EAF, establishment of single Gasifier & other areas.	1st year	₹ 10 Lakhs
		Company has not done any work under CSR for the last 4 years neither given any details.	During the financial year of 2015-16, 2016-17 and 2017-18, an amount of Rs.7.71 Lakhs, Rs. 5.34 and Rs.24 Lakhs respectively has been spent on the developmental activities in the villages. The same can be confirmed from the certified compliance report issued by the Regional Office, MoEF&CC, Nagpur.	---	---
		When this company had changed its ownership in the past, 60 numbers of employees did not get any new jobs nor got last salary	Salaries to all employees at the time of acquisition by the new management has all been done by the earlier management. Priority will be given to local people in employment .	---	---
		There is no provision like PF nor the company follow the any rules of government.	PF and all other statutory rules have been followed	---	---
		Where will the water come from for the capacity expansion, this is not clear. Water	Water for the expansion will be supplied by Chhattisgarh Ispat Bhumi Ltd. . A copy of the confirmation letter is enclosed in		

		level of Siltara, Sankra and Sondra is already at low level.	the Final EIA Report. To augment the water table Rainwater harvesting has been implemented in the existing plant and further RWH measures will be implemented in the plant as part of expansion. Company also proposes to deepen the existing ponds in the village to augment the ground water table. Recharge pits also will be constructed to further augment water table. All these measures will help in improvement of ground water table	1st year of operation 1st, 2nd& 3rd years	₹ 10 Lakhs ₹ 56 Lakhs
		It is not clear that the new unit will run by coal or anything else, so how will the environment be compensated.	Coal will only be used in Producer gas plant.	---	---
		The siltara also comes in the urban residential area in the new master plan. Then how can it be allowed there.	The present proposal is expansion and which will be taken up in the existing plant premises only which is situated adjacent to industrial area.	---	---
6	Sri. Shiv Kumar Sarang of Siltara village	There are several plants in Siltara area, except for one or two industries the wages given by other companies are very low. Wages paid are Rs 200-250 in Siltara area as against the minimum wage fixed by the govt at Rs 350. Necessary action can be done to meet this.	Wages in our company have been paid in accordance with the govt norms.	---	---
7	Sri Manjas Verma from Village Chapora, Mandhar	He told that he is a farmer in the village and he should be given employment according to his ability.	It is confirmed that top priority will be given to the local youth in providing employment and will be based on their qualification & experience and the requirement for a particular vacancy.	Continuous	---
8	Sri. Mitharam Sahu, Village Nimora	He told that he or his friends may get employment due to this project depending on our qualification. Unemployed youth	It is confirmed that top priority will be given to the local youth in providing employment and will be based on their qualification & experience and the requirement for a particular vacancy.	Continuous	---

		shall get employed.			
		Solution to water problem	• To augment the water table Rainwater harvesting has been implemented in the existing plant and further RWH measures will be implemented in the plant as part of expansion. • Company also proposes to deepen the existing ponds in the village to augment the ground water table. • Recharge pits also will be constructed to further augment water table. • All these measures will help in improvement of ground water table	1st year of operation 1st, 2nd& 3rd years	₹ 10 Lakhs ₹ 56 Lakhs
9	Sri. Tarun Nishad, Village Sondra	He told that he has worked in 10 plants through contractors. Industries have developed well. Similarly we also should be developed by way of getting permanent employment	It is confirmed that top priority will be given to the local youth in providing employment and will be based on their qualification & experience and the requirement for a particular vacancy.	Continuous	---

Point No. 2	***Revised CER based on the issues raised during the public consultation.***
Reply No. 2	*The following is the Revised Cost Break-up of Proposed CER activities*

The following is the Revised Cost Break-up of Proposed CER activities

S.No.	Major Activity Heads	Years (₹ in Lakhs)							Total Expenditure (₹ in Lakhs)
		1st	2nd	3rd	4th	5th	6th	7th	
A	**Based on need based & Social assessment study**								
1	Community & Infrastructure Development Programmes (construction of 10 nos. of toilets in 5 nos. of schools inSiltara&Sondra village under Swachh Bharat (10 nos@Rs 2 lakhs/toilet), renovation of 2 nos. of school buildings (Rs 5 Lakhs), drainage facilities in Sondra village (5 lakhs), village road	8	8	6	2	2	2	2	30
2	Development of Skill Development Centre "DISHA Centre" along with necessary infrastructure for various vocational training program for employment generation in association with *National Skill Development Mission* (Automobile Repair, Welding,	7	7	7	7	7	7	6	48

	Electrical, Computer Hardware, Soft skills like computer programs, Industrial Sewing Operator & Coaching classes for under privilege students for various competitive exams, Defence Services etc.)								
3	Education and Scholarship Programmes • Providing furniture, computers, library, sports equipment etc. for 5 nos. of schools in Siltara&Sondra village • Sponsorship for School Sport events, Merit Scholarships to School Children • Providing Model Anganwadi Centres in consultations with State Women and Child Development Department	2	2	2	2	2	1	1	12
4	Medical & health related activities (like Conduct of Medical Camps, Distribution of Free Medicine, Ambulance facilities to villagers etc.)	10	0	0	0	0	0	0	10
5	Other requirements as per needs of the nearby Village Panchayat (such as supply of Fertilizers to augment N,P,K)	2	2	2	2	1	1	1	11
	SUB TOTAL (A)	**29**	**19**	**17**	**13**	**12**	**11**	**10**	**111**
B	**Based on Public Consultation**								
1	Providing additional Rain water harvesting measures in nearby villages & Deepening of Ponds in Siltara, Sondra villages	25	17	14	--	--	--	--	56
2	Plantation in the Siltara & Sondra (5000 nos. will be planted and maintained)	10	10	5	--	--	--	--	25
3	Providing RO system for supply of drinking water in Sondra village	4	4	--	--	--	--	--	8
4	Contribution towards PWD road from Bazar Chowk in Siltara to Bilaspur Road	--	10	--	--	--	--	--	10
	SUB TOTAL (B)	**39**	**41**	**19**	**--**	**--**	**--**	**--**	**99**
	TOTAL (A+B)	**66**	**56**	**34**	**15**	**14**	**13**	**12**	**210**

Point No. 3	***Additional dust control measures for containing the air pollution***
Reply No. 3	*In the Final EIA submitted, we have considered outlet Particulate emission from all air emission control systems as 50 mg/Nm^3. Now we are proposing to reduce the outlet particulate emission to <30 mg/Nm^3 (40% reduction in emissions).*

The following are the details of the air emission control systems and the maximum outlet particulate emissions from each APCS.

S.No.	Source	Control Equipment	Maximum Particulate emission at the outlet
1	Pellet plant	Electro Static Precipitator (ESP)	< 30 mg/Nm^3
2	Induction Furnaces with CCM	Fume Extraction system with bag filters	< 30 mg/Nm^3

3	Electric Arc Furnace with AOD/ VOD & Caster	4th hole extraction system with bag filters	< 30 mg/Nm^3
4	Submerged Electric Arc Furnaces	4th hole extraction system with bag filters	< 30 mg/Nm^3
5	Rolling Mill	--	< 30 mg/Nm^3
Note: Apart from the above Fume extraction system with bagfilters, dust suppression system, covered conveyers etc. will also be installed.			

a) Now it has been proposed to provide mechanical road sweepers to further reduce the fugitive emissions.

b) In the Electric Arc Furnace (EAF), we now propose to implement 4th hole extraction system with bagfilters which is more efficient as compared to the canopy-based Fume extraction system. This will result in further control of emissions.

c) Additional greenbelt of 2 acres will be developed in addition to the 32 acres of greenbelt already proposed. Thus, the total greenbelt will be 34 acres in a total area of 96.57 acres.

d) Instead of 2 x 20 T electric Arc Furnaces, now it has been proposed to install 1 x 40 T capacity EAF.

e) In the final EIA report 2 nos. of gasifiers (one for Pellet Plant (14,250 Nm^3/hr) & one for Rolling Mill (15,500 Nm^3/hr) have been proposed. Now it has been proposed to have only one gasifier of 30,000Nm^3/hr capacity instead of 2 nos. of gasifiers. This will help in reduction of emissions further.

Point No. 4	**Revised configuration of the EAF.**
Reply No. 4	Now it has been proposed to install 1 x 40 T capacity Electric Arc Furnace with AOD/VOD caster to produce 1,20,000 TPA of MS and SS Ingots/ billets/ blooms instead of 2 x 20 T EAFs. This will help in reducing the emissions further. Area requirement also will reduce by 0.20 Acres.
Point No. 5	**Explore the possibility of providing one gasifier in place of two gasifiers proposed for pellet plant and rolling mill or shall explore the possibility of liquid firing .**
Reply No. 5	In the final EIA report 2 nos. of gasifiers (one for Pellet Plant (14,250 Nm^3/hr) & one for Rolling Mill (15,500 Nm^3/hr) have been proposed. Now it has been proposed to have only one gasifier of 30,000 Nm^3/hr capacity instead of 2 nos. of gasifiers. This will help in reduction of emissions further. Area requirement also will reduce by 0.10 Acres.
Point No. 6	**Fume extraction system with fourth hole**
Reply No. 6	In the Electric Arc Furnace (EAF), we now propose to implement 4th hole extraction system with bagfilters which is more efficient as compared to the canopy-based Fume

	extraction system.
Point No. 7	**Provision of filter press shall be made**
Reply No. 7	Earlier tailings pond has been proposed for storage of tailings. Now as per the advice of the Hon'ble EAC, now it is proposed to go for a filter press. The tailings will be dewatered in the filter press and the tailings residue will be stored in storage yard. Hence Tailings pond will not be required. This will result in significant reduction in the area (1.2 acres).

Revised Plant Lay-out

- 1x2000 TPD Pellet Plant instead of 2 nos. of Pellet plants each of 1000 TPD
- 1x 40 T capacity EAF instead of 2 x 20 T EAFs
- 1 no. of Gasifier of 30,000 Nm^3/hr instead of 2 nos. of gasifiers.
- Removal of tailings pond
- Additional 2 acres greenbelt (Total 34 acres)
- **Revised Plant Lay-out incorporating all the details were submitted.**

Observations of the Committee: -

30. The Committee noted that following would be final configuration of units after incorporating the aforesaid additional information.

S.No.	Unit (Product)	Existing Plant (In Operation)	Proposed Expansion	After Proposed Expansion
1	Iron Ore Beneficiation and Pelletization Plant (Pellet)	---	2 x 1000 TPD (6,00,000 TPA)	2 x 1000 TPD (6,00,000 TPA)
2	DRI Kilns (Sponge Iron)	2 x 350 TPD (2,10,000 TPA)	---	2 x 350 TPD (2,10,000 TPA)
3	Steel Melting Shop			
	• Induction Furnace with CCM (MS Ingots/ billets/ blooms)	2 x 12 T (86,400 TPA)	3 x 15 T (1,62,000 TPA)	2 x 12 T & 3 x 15 T (2,48,400 TPA)
	• Electric Arc Furnace with AOD/ VOD & Caster (MS and SS Ingots/ billets/ blooms)	---	1 x 40 T (1,20,000 TPA)	1 x 40 T (1,20,000 TPA)
4	Rolling Mill (Rolled Products / Structural Steels / TMT bars / Wire Drawing mill)	1,45,250 TPA	2,00,000 TPA	3,45,250 TPA
5	Producer Gas Plant (Gasifer)	---	**30,000 Nm^3/Hr**	**30,000 Nm^3/Hr**
6	Ferro alloys	---	2 x 9 MVA	2 x 9 MVA
	Ferro – Silicon	---	12,600 TPA	12,600 TPA
	or		or	or

S.No.	Unit (Product)	Existing Plant (In Operation)	Proposed Expansion	After Proposed Expansion
	Silico–Manganese	---	28,400 TPA	28,400 TPA
	or		or	or
	Ferro–Manganese	---	37,000 TPA	37,000 TPA
7	Power Plant (WHRB based)	18 MW	---	18 MW
8	Power Plant (FBC based)	7 MW	---	7 MW

Recommendations of the Committee: -

31.0 After detailed deliberation, the Committee recommended for environmental clearance under the provisions of EIA Notification, 2006 for the proposed Expansion of Steel Plant – New Iron Ore Beneficiation & Pellet Plant (Pellets - 6,00,000 TPA), Producer Gas Plant 30,000 Nm^3 /Hr, Induction Furnace (MS Ingots / Billets/Blooms from 86,400 TPA to 2,48,400 TPA), New Electric Arc Furnace with AOD / VOD Caster (MS & SS Ingots / Billets / Blooms – 1,20,000 TPA), Rolling Mill (Rolled Products / Structural Steels / TMT bars – from 1,45,250 TPA to 3,45,250 TPA), New Ferro Alloys Unit (FeSi – 12,600 TPA / SiMn – 28,400 TPA / FeMn – 37,000 TPA), power plant – 25 mw[WHRB based – 18 MW and FBC based – 7MW] by M/s. API Ispat & Powertech Pvt. Limited at Siltara Village, near Phase – II, Siltara Industrial Growth Centre, Tehsil and District Raipur, Chhattisgarh subject to following specific and general conditions:

A. Specific conditions –

i) The particular emission from all the units shall be less than 30 mg/Nm^3.

ii) Electric Arc Furnace shuld be provided with 4th hole extraction system with bagfilters.

iii) Tailings shall be dewatered in the filter press and the tailing residue will be stored in storage yard.

iv) Green belt development in an additional area of 2 acres shall be carried out.

B. General Conditions:

I. Statutory compliance:

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

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

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

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to timeand connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

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

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

v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.

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

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

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

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

x. The project proponent shall provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc.

xi. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

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

III. Water quality monitoring and preservation

i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time.

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

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

iv. Adhere to 'Zero Liquid Discharge'.

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

vi. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.

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

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

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

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

IV. Noise monitoring and prevention

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

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

V. Energy Conservation measures

i. The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.

ii. Practice hot charging of slabs and billets/blooms as far as possible.

iii. Ensure installation of regenerative type burners on all reheating furnaces.

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

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

VI. Waste management

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

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

iii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

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

VII. Green Belt

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

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

VIII. Public hearing and Human health issues

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

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

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

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

IX. Corporate Environment Responsibility

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

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

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

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

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

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

X. Miscellaneous

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.4 Proposed expansion of Ferro Alloy Plant manufacturing of FeCr (15,000TPA) or Fe-Si (7000 TPA) in the existing 1x9 MVASEAFA and manufacturing of Si-Mn (14400TPA) or Fe-Mn (14400 TPA) or Fe-Cr (15000 TPA) or Fe-Si (7000 TPA) in the new 1x9 mVA SEAF of M/s. V. A. Power and Steel Private Limited located at Plot No. 143, 144 & 145, Sector – E, O.P. Jindal Industrial Park, Village Punjipathra, Tehsil Gharghoda, District Raigarh, Chhattisgarh – Reconsideration for grant of environmental clearance based on ADS reply.

1.0 The proponent has made online application vide proposal no. IA/CG/IND/77598/2006 dated 25th September 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The proposed expansion of Ferro Alloys plant of M/s. V.A. Power & Steels Pvt. Ltd. located at Plot Nos. 143, 144, 145, O.P Jindal industrial Park, Sector -E, Punjipathra Village, Gharghoda Tehsil, Raigarh District, Chhattisgarh was initially received in the Ministry on 10th December, 2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised in 14th EAC (Industry-1) meeting held on 22nd – 23rd December 2016 for prescribing ToR to the expansion project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and

Climate Change had prescribed ToR to the project on 31stJanuary 2017 vide F. No. J-11011/239/2016-IA.II(I).

3.0 The project of M/s. V.A. Power & Steels Pvt. Ltd. located at Plot Nos. 143,144, 145, O.P Jindal industrial Park, Sector -E, Punjipathra Village, Gharghoda Tehsil, Raigarh District, Chhattisgarh does not have E.C. as the plant was established in August, 2006 (as per EIA Notification 1994 EC required for capital investment more than Rs 100 Crores, for Greenfield projects). Accordingly, CTE has been taken from CECB, Chhattisgarh vide Order No: 1779/TS/CECB/2006 dated 07th April 2006 & First Consent to Operate was Obtained vide order no. 4067/TS/CECB/2005 dated 17th August 2006 for Ferro Alloy Plant of 1 x 9 MVA Capacity (SEAF) to manufacture Si-Mn – 14,400 TPA or Fe-Mn of 14,400 TPA capacity. Hence, Certified Compliance report of Consent to Operate issued for existing plant from the Regional Office, CECB, Raigarh, C.G has been obtained. There are no non-compliances reported by Regional officer, CECB, Raigarh.The proposed capacity for different products for new site area as below:

S.No.	**Product**	**Plant Configuration & Production Capacity**		
		Permitted capacities as per CTE obtained vide dated 7th April 2006 (1 x 9 MVA SEAF)	**Proposed Expansion (1 x 9 MVA SEAF)**	**After Expansion (2 x 9 MVA SEAF)**
1	SiMn	14,400 TPA (In Operation)	14,400 TPA	28,800 TPA (96 TPD)
		or		
2	FeMn	14,400 TPA (In Operation)	14,400 TPA	28,800 TPA (96 TPD)
		or		
3	FeCr	15,000 TPA **(Proposed Now)**	15,000 TPA	30,000 TPA (100 TPD)
		or		
4	FeSi	7,000 TPA **(Proposed Now)**	7,000 TPA	14,000 TPA (47 TPD)

4.0 The total land required for the existing & proposed expansion project is 4.88 Ha. / 12.05 acres. The land is industrial. Entire land is taken on lease from M/s. Jindal Steel & Power Limited. Chhattisgarh State Industrial Development Corporation (CSIDC) has given 218.253 Ha. of land to M/s. JSPL on lease for development of industrial Park. Expansion will be taken up in the existing plant premises only. No additional land is proposed. No forestland involved. No River / stream passes through the plant area. It has been reported that no natural water body / stream exists in the plant area and any modification / diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is flat with undulations and reported that the site lies between 22°3'18.94" to 22°3'25.56" North Latitude and 83°20'24.04" to 83°20'32.76" East longitude in Survey of India Topo sheet no. 64 N/8 at an elevation of 315 AMSL. The ground

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

6.0 There are no notified National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ migratory routes for Birds with in 10 Km. radius of the plant. However, as per the secondary source movement of Elephants is observed within 10 Kms. radius of the plant. Conservation plan is prepared and submitted to Principal Chief Conservator of Forests (PCCF), Raipur. Recommendations / comments of the Principal Chief Conservator of Forests (PCCF), Raipur have been obtained. As per their recommendation, a fund of Rs. 30.00 Lakhs to be spent for the Plan Period i.e. 2 years (2018 to 2019 & 2019 to 2020) and it would be funded by the Project Proponent i.e. M/s. V.A. Power & Steels Pvt. Ltd.Species of bird such as Peacock is reported from the forest areas of the buffer zone are listed in Schedule - 1 of the Indian Wildlife (Protection) Act. Peacock is listed under the Least concern category. The list of flora and fauna during study period in the study area is furnished in the EIA report.

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

S.No.	RAW MATERIAL	QUANTITY (TPA)	SOURCE	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
For Ferro Silicon unit (in the EXISTING FURNACE - 1 x 9 mVA)					
1.	Quartz	8,450	Local	50 Kms.	By Road (Covered trucks)
2.	LAM coke	2,800	Imported from Australia, China	480 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)
3.	MS Scrap	175	Raipur	250 Kms.	By Road (Covered trucks)
4.	Electrode paste	420	Maharashtra / West Bengal	600 – 900 Kms.	By Road (Covered trucks)
For Ferro Chrome unit (in the EXISTING FURNACE - 1 x 9 mVA)					
1.	Chrome ore	40,000	Sukinda (Odisha) Import (Indonesia)	400 Kms. 480 Kms. (from Vizag Port)	By Road (Covered Trucks) From Port By Road (Covered Trucks)
2.	LAM coke	15,750	Imported from Australia, China	480 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)
For Ferro Silicon unit (in the PROPOSED FURNACE - 1 x 9 mVA)					
1	Quartz	8,450	Local	50 Kms.	By Road (Covered trucks)
2	LAM coke	2,800	Imported from Australia, China	480 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)
3	MS Scrap	175	Raipur	250 Kms.	By Road (Covered trucks)
4	Electrode paste	420	Maharashtra / West Bengal	600 – 900 Kms.	By Road (Covered trucks)
For Ferro Manganese unit (in the PROPOSED FURNACE - 1 x 9 mVA)					
1	Manganese Ore	26,650	Balaghat (M.P.)	500 Kms.	By Road (Covered

S.No.	RAW MATERIAL	QUANTITY (TPA)	SOURCE	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
			Imported from South Africa	480 Kms. (from Vizag Port)	Trucks) From Vizag Port by Road (Covered Trucks)
2	LAM coke	15,350	Imported from Australia, China	480 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)
3	MS Scrap	1,030	Raipur	250 Kms.	By Road (Covered trucks)
4	Electrode Paste	3,000	Maharashtra / West Bengal	600 – 900 Kms.	By Road (Covered trucks)
For Silico Manganese unit (in the PROPOSED FURNACE - 1 x 9 mVA)					
1	Manganese Ore	15,850	Balaghat (M.P.) Imported from South Africa	500 Kms. 480 Kms. (from Vizag Port)	By Road (Covered Trucks) From Vizag Port by Road (Covered Trucks)
2	Mn. Slag	9,000	In house generation	---	By Conveyers
3	Quartz	3,900	Local	50 Kms.	By Road (Covered trucks)
4	LAM coke	1,600	Imported from Australia, China	480 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)
For Ferro Chrome unit (in the PROPOSED FURNACE - 1 x 9 mVA)					
1	Chrome ore	40,000	Sukinda (Odisha) Import (Indonesia)	400 Kms. 480 Kms. (from Vizag Port)	By Road (Covered Trucks) From Port By Road (Covered Trucks)
2	LAM coke	15,750	Imported from Australia, China	480 Kms. (from Vizag Port)	From Vizag Port by Road (Covered Trucks)

8.0 The targeted production capacity of the plant after expansion project is production Fe-Mn from 14,400 TPA to 28,800 TPA (OR) Si-Mn from 14,400 TPA to 28,800 TPA (OR) New Product Fe-Cr 30,000 TPA (OR) new product Fe-Si of 14,000 TPA. Major Raw material transportation will be done through Ship from Vizag port, A.P. and from there to Raigarh Railway Station by Rail. The Raw material unloaded at Raigarh Railway Station will be transported to the project site by road through covered trucks, which is at 20 Kms. from the plant.

9.0 Water requirement for the expansion project is estimated as 29 KLD. Total water requirement for the entire project will be 60 KLD, which will be sourced from Groundwater. The permission for drawl of water is approved by CGWA vide NOC no. CGWA/NOC/IND/ORIG/2018/4161.

10.0 Total power required for the proposed expansion project will be Max. of 9.0 MW which will be supplied by M/s. Jindal Steel and Power Limited.

11.0 Baseline Environmental Studies were conducted during winter season i.e. from 1st March 2017 to 31st May 2017. Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated that $PM_{2.5}$ (17.5 to 41.3 mg/m^3), PM_{10} (31.8 to 72.6 µg/m^3), SO_2 (6.9 to 20.5 mg/m^3), NOx (7.2 to 27.1 mg/m^3) & CO (460 to 1205 mg/m^3). The results of the modeling study indicates that the maximum increase of GLC due to the proposed expansion project & Vehicular emissions will be 0.93 µg/m^3 with respect to the PM, Nil with respect to the SO_2, 9.0 µg/m^3 with respect to the NOx & 0.7 µg/m^3 with respect to the CO.

12.0 Ground water quality has been monitored in 8 locations in the study area areanalyzedand the data submitted indicated pH: 7.2 to 7.7, Total Hardness: 217 to 273 mg/l, Chlorides: 119 to 192 mg/l, Fluoride: 0.35 to 0.50 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 8 locations in the study area andanalyzedand the data submitted indicated pH: 7.2 to 8.0 and DO: 3.8 to 5.0 mg/l.

13.0 Noise levels are in the range of 40.86 dB(A) to 59.56 dB(A) during 1st March 2017 to 31st May 2017.

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

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

S.No.	SOLID WASTE	QUANTITY (TPA)	DISPOSAL METHOD
1.	Slag from Ferro Silicon Manufacturing Process	238	Will be given to cast iron foundries of M/s. Taj Traders & M/s. Kapilansh Dhatu Udyog Pvt. Ltd.
2.	Slag from Silico Manganese Manufacturing Process	11300	Will be given to M/s. Taj Traders & M/s. Kapilansh Dhatu Udyog Pvt. Ltd. and also will be used in road construction.
3.	Slag from Ferro Manganese Manufacturing Process	9,000	Will be used in manufacture of Silico manganese as it contains high MnO_2.
4.	Slag from Ferro Chrome Manufacturing Process	12,000	Ferro chrome slag generated will be further processed in Zigging plant for Chrome recovery the non-chrome contents will be sent to common disposal yard within the Industrial Park.
5.	Dust from Bagfilters of SEAF and during tapping	0.05	It will be used in Briquetting Plant (Proposed now)

16.0 It has been reported that an area of 1.00 Hectares (2.5 Acres) has already been developed with greenbelt and another 0.61 Hectares (1.5 Acres) will be developed in the proposed expansion out of total plant area 4.88 Ha. (12.05 Acres) to attenuate the noise levels and trap the dust generated due to the project development activities.

17.0 It has been reported that the Consent To Operate from the Chhattisgarh Environment Conservation Board has been obtained vide order no. 1458/TS / CECB /2018 Naya Raipur dated 09th May 2018 is valid upto 31st October 2020.

18.0 The Public hearing of the project was held on 15th May 2018 at in the premises of Banjari Mata Temple under the chairmanship of Shri. Sanjay Diwan (ADM, Raigarh) for enhancement of Ferro Alloy plant production capacity i.e. *Fe-Mn from 14,400 TPA to 28,800 TPA (OR) Si-Mn from 14,400 TPA to 28,800 TPA (OR) New Product Fe-Cr 30,000 TPA (OR) new product Fe-Si of 14,000 TPA.* The issues raised during public hearing Industrial pollution in the area, Slag disposal, Crop damage, water drawl permission, Conservation measures for elephants, Water cess, Health related problems to students in nearby College, Silicosis disease, Rain water harvesting measures, Ground water availability, CER activities, Employment to local peoples, etc.

S.No.	Issue raised	Response by Project Proponent (After PH)	Time bound action Plan Proposed	Budgetary Provision
1.	There is no mention about the industrial pollution in the area.	The existing Ambient air quality is inclusive of the emissions from the existing other industries in the area. Emissions from other industries have also been considered in the prediction of incremental concentrations along with the emissions from the expansion project and vehicular emissions. The net resultant incremental GLCs are within the National Ambient Air Quality Standards. Hence, there will not be any adverse impact on air environment due to the proposed expansion.	Before commissioning of the plant	Rs. 2.51 Crores will be allocated for Environmental Protection Measures
2.	Disposal of chrome slag, which is hazardous in nature. Whether TCLP for Chrome slag has been carried out?	Slag generated during manufacturing of Ferro chrome will be taken to jigging plant and after crushing and screening chrome will be recovered and as per the TCLP test the remaining material after chrome recovery has chrome content within the permissible levels. This will send to Industrial Park dump yard. TCLP test will be carried out once in a year. In future if chrome content in slag will exceeds the stipulated standard; then this will be sent to nearby	After commencement of present proposal	Rs. 0.65 Crores will be allocated for Solid waste Management

S.No.	Issue raised	Response by Project Proponent (After PH)	Time bound action Plan Proposed	Budgetary Provision
		TSDF.		
3.	Source of water for the existing plant. Whether water drawl permission has been obtained for the existing plant? Are they paying water cess? Whether Water drawl permission for the expansion project is obtained?	Ground water is the source for the existing plant. Water requirement of existing plant is 31 KLD. The plant commenced operation in the year 2006. During that period ground water drawl permission was not required if the ground water with drawl is less than 1000 KLD for SAFE category areas and 100 KLD for Semi Critical areas. The plant falls under Safe category. Hence, water drawl permission has not been obtained for the existing plant. Water cess is being paid by the industry regularly. Source of water for expansion is also ground water. NOC has been obtained from CGWA for drawl of water vide NOC no. CGWA/NOC/IND/ORIG/2018/4161	----	----
4.	Rain water harvesting measures to be taken up	In the existing plant, RWH has been implemented. Now, it is proposed to construct additional 5 no.s RWH tanks and implement ground water recharging measures also. The roof top water will be collected in a tank and will be used to meet the plant water requirement.	Within 2 years from the date of from the date of E.C. / Financial closure	Rs. 0.75 Lakhs for RWH with in the Premises & Rs. 1.0 Lakhs for RWH in the Villages under CER
5.	There is a college close by to the industrial park and the students have health related problems.	College is situated at a distance of 0.70 Kms. in North Eastern direction from the plant. 130 m wide Green belt has been developed towards college side by JSPL in the Industrial park peripherally. In the present proposal air emission control measures such as Bag filters, covered conveyers, dust suppression system will be provided. ZLD will be adopted. Solid waste disposal will be in accordance with the norms. 1/3rd of the plant area is	Before commissioning of the plant	Rs. 2.51 Crores will be allocated for Environmental Protection Measures

S.No.	Issue raised	Response by Project Proponent (After PH)	Time bound action Plan Proposed	Budgetary Provision
		being developed with greenbelt. The existing plant has CTO issued by CECB, which is valid till 31st October 2020.		
6.	Crop damage	In the existing plant air emission control measures such as Bag filters, covered conveyers, dust suppression system have been provided. ZLD is being adopted. Solid waste disposal is in accordance with the norms. 1/3rd of the plant area is being developed with greenbelt. The existing plant has CTO issued by CECB, which is valid till 31st October 2020. Hence, no crop damage occurs due to this industry. In the expansion, also similar practices will be followed. However If any crop damage occurs due to our industry, then compensation will be paid to the affected farmers as per Govt. Rules.	Before commissioning of the plant	Rs. 2.51 Crores will be allocated for Environmental Protection Measures
7.	There is a mention about Elephant Corridor. However, there is no mention about conservation measures for elephants.	As per the secondary sources there is movement of Elephants has been observed within 10 Km. radius of the plant. Conservation Plan has been prepared by Mr. Haresh Chandra Tiwari, I.F.S. (Retd.) and submitted to PCCF, C.G. and Recommendations / comments of the Principal Chief Conservator of Forests (PCCF), Raipur have been obtained and as per the recommendations a budget provision of Rs. 30 Lacs will be earmarked for the Wildlife Conservation and Management Plan for two years.	2 year (2018-19 & 2019 -20)	A budget provision of Rs. 30 Lacs will be earmarked for the Wildlife Conservation and Management Plan for two years.
8.	Regarding Silicosis	Silicosis disease is normally found in people working in Silica sand	Within 2 years from the date	Rs. 2.51 Crores will be

S.No.	Issue raised	Response by Project Proponent (After PH)	Time bound action Plan Proposed	Budgetary Provision
	disease	mining where they are continuously exposed to crystalline silica. In this proposal, Quartz is used as raw material. Hence, no continuous exposure will be there in this plant. Respiratory masks will be provided to employees working in quartz handling areas. Dust suppression system will be provided. In the health checkup, Chest x- ray & Fluoroscopy will be carried out periodically. This will give symptoms of any silicosis.	of from the date of E.C. / Financial closure	allocated for Environmental Protection Measures
9.	Providing Employment to local peoples.	In the existing plant, out of 42 no. of total employees 80 % are from Raigrah District. In the proposed expansion, another 40 no. of employment will be provided.	----	----
10.	Regarding ground water Cess payment.	Company is regularly paying ground water cess to Water resources Department / CECB. Last Water cess was paid on 6th Nov. 2017	----	----
11.	Gram Panchayat NOC has not been obtained.	This land is acquired by CSIDC Limited and given on lease to M/s. Jindal Steel and Power Limited for development of Industrial Park. All the plots within this industrial park are taken on lease. As the land has been acquired by CSIDC, NOC from Gram Panchayat will not be required.	----	----
12.	Impact on Forest and Wildlife	• All the required Air Emissions Control systems will be installed and operated to comply with MoEF&CC / CPCB / CECB norms. • Zero liquid effluent discharge is being maintained in the existing plant and similar practice will be	----	----

S.No.	Issue raised	Response by Project Proponent (After PH)	Time bound action Plan Proposed	Budgetary Provision
		maintained after expansion also. • All solid waste disposal will be in accordance with the norms. • Greenbelt in an area 1.00 Ha. has already been developed in the plant premises and Greenbelt in an area of 0.61 Ha. is proposed to be developed in the proposed expansion proposal. When all norms are compiled and with proper implementation of Environment Management Plan, there will not be any adverse impact on Forest and Wildlife due to the proposed expansion.		

19.0 An amount of Rs.32.5 Lakhs has been earmarked under Corporate Environment Responsibility (CER) based on public hearing issues. The details of CER proposed are as follows:

S.No.	Major Activity Heads	Years (Rs. In Lakhs)		Total Expenditure
		1st	2nd	(Rs. In Lakhs)
A	**Based on need based & Social assessment study**			
1	Community & Infrastructure Development Programmes (Development of village road, renovation of school buildings, providing Street Lights & its maintenance in panchayat area, maintenance of Temples in nearby Villages, sanitation facilities, drainage facilities in nearby villages & schools.	6.0	6.0	12.0
2	Skill & Entrepreneur Development (Skills updation on welder / Fitter / wiremen etc.)	2.0	2.0	4.0
3	Education and Scholarship Programmes (Providing furniture, computers, library, sports equipment etc. for schools, Sponsorship for School Sport events, Merit Scholarships to School Children)	2.0	2.0	4.0
4	Medical & health related activities (Ambulance facilities to villagers)	3.0	3.0	6.0

5	Other requirements as per needs of the nearby Village Panchayat (such as supply of Fertilizers to augment N,P,K)	2.0	2.0	4.0
	SUB TOTAL (A)	**15.0**	**15.0**	30.0
B	**Based on Public Consultation**			
1	Additional Rain water harvesting measures in nearby villages	0.5	0.5	1.0
2	Additional 1.5 acres of greenbelt will be developed as part of expansion proposal.	1.5	--	1.5
	SUB TOTAL (B)	**2.0**	**0.5**	2.5
	TOTAL (A+B)	**17.0**	**15.5**	**32.5**
C	**Expenditure towards implementation of Conservation plan**			
1	For the years 2018 & 2019	23.25	6.75	30.0
	TOTAL (A+B+C)	**40.25**	**22.25**	**62.5**

20.0 The capital cost of the project is Rs.13 Crores and the capital cost for environmental protection measures is proposed as Rs. 2.51 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 37.2 Lakhs /annum. The employment generation is 25 people during operation of the proposed expansion and 115 people during construction, indirectly employed in contract works & transport.The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S.No.	Item	Capital Cost (Rs.in Lakhs)	Recurring Cost / Annum (Rs.in Lakhs)
1.	Air Emission Management		
	• Fume Extraction systems with Bag filters	80.0	10.0
	• Chimney	35.0	1.0
	• Water Sprinklers	5.0	0.1
2.	Wastewater Management • ETP (General)	5.0	1.0
3.	Solid waste Management		
	• Slag Disposal	10.0	---
	• Fe-Cr recovery & its disposal	25.0	5.0
	• Hazardous waste storage & disposal	5.0	5.0
	• Municipal solid waste storage & disposal	--	2.0
	• Briquetting Plant	25.0	---
4.	Greenbelt development, Land scaping, Noise Management, RWH etc.	1.5	2.5
5.	Environmental Monitoring		5.56

S.No.	Item	Capital Cost (Rs.in Lakhs)	Recurring Cost / Annum (Rs.in Lakhs)
	• AAQMS	40.0	
	• CEMS	10.0	
6.	Occupational Health & Safety	10.0	5.0
TOTAL		**251.5**	**37.16**

21.0 Greenbelt has been developed in an area of 1.00 Hectares (2.5 Acres) in the existing plant and another 0.61 Hectares (1.5 Acres) will be developed in the proposed expansion, hence total 1.61 ha. (4.0 acres) of area will be developed with greenbelt. Around 10 m width greenbelt is being developed all around the plant. Total number of plants exists in the premises are 1500 nos., another 2525 no. of sapling will planted in the proposed expansion.

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

23.0 EIA Consultant Organization: Pioneer Enviro Laboratories and Consultants Private Limited, Hyderabad.

24.0 The proposal was considered in 36thEAC meeting held during **9th-10thOctober, 2018.**The committee observed that the submitted action plan and commitments on the issued raised during the public consultation are not satisfactory; the activities proposed under CER shall be based on the issues raised during the public consultation and Social Impact Assessment (SIA); recharging scheme for ground water augmentation is not provided; no agglomeration/briquetting plant was proposed for recycling of fines; etc.

25.0 After detailed deliberation, the Committee sought following additional information for further consideration of the proposal:

1. Revised time bound action plan on the issues raised during the public consultation along with budgetary provisions.

2. Revised Corporate Environment Responsibility based on the issues raised during the public hearing and Social Impact Assessment study.

3. Ambient Air Quality Data of OP Jindal Park for 2014-15 carried by Central Pollution Control Board and Comparison with the existing data.

4. Action plan for the recharging of ground water shall be submitted

5. Briquetting plant shall be envisaged for recycling of the fines generated during the operation.

6. Revised Corporate Environmental Policy prescribing standard procedure and hierarchal system for reporting of non-compliances /infringements, if any to the Board of Directors at a periodical interval.

26.0 Following is the seriatim replies to additional information sought by Ministry vide letter dated **12th November 2018.**

Point No. 1	***Revised time bound action plan along with budget provision on the issues raised by the public during the public consultation.***
Reply No. 1	The following are the Revised time bound action plan along with budget provision on the issues raised by the public during the public consultation

The following are the Revised time bound action plan along with budget provision on the issues raised by the public during the public consultation

S.No.	Issue raised	Response by Project Proponent (After PH)	Time bound action Plan Proposed	Budgetary Provision
1.	Public Hearing has not been completed within 45 days from the date of submission of documents to CECB. Hence, this Public Hearing shall be stalled.	Actually, this provision is only to help the Project proponent and avoid delay in process of obtaining Environmental Clearance.	---	---
2.	Public hearing should be conducted near the plant site	Venue has been fixed by District Administration in consultation with CECB	---	---
3.	Ground water availability status in the area	Ground water table in the area varies from 3 to 14 m bgl in Pre-monsoon to 2 to 6 m bgl m in post monsoon. This area falls under SAFE category as per CGWB report.	---	---
4.	As per EIA notification, 2006 Jindal Industrial Park should have obtained Environmental Clearance. Whether they have obtained Environmental clearance or not?	O.P. Jindal Industrial Park has been established in the year 2004, which is prior to EIA notification dated 14th September 2006. Hence, it was not under the purview of Environmental Clearance.	---	---
5.	There is no mention about the industrial pollution in the area.	The existing Ambient air quality data presented is inclusive of the emissions from the existing unit & other operating units in the area. Emissions from other industries have also been considered in the prediction of incremental concentrations along with the emissions from the expansion project and vehicular emissions. The net resultant incremental GLCs are within the National Ambient air Quality Standards. Hence, there will not be any adverse impact on air environment due to the proposed expansion.	Before commissioning of the plant	₹ 2.51 Crores will be allocated for Environmental Protection Measures
6.	If it is an Industrial Park then common facilities such	O.P. Jindal Industrial Park has common facilities like Solid	---	---

	as solid waste disposal yard, etc. shall be there. Could not locate these facilities in the industrial park.	waste dump yard, etc. A copy of the Industrial Park Lay-out clearly showing Solid waste dump yard is shown in EIA report.		
7.	Disposal of chrome slag, which is hazardous in nature. Whether TCLP for Chrome slag has been carried out?	Slag generated during manufacturing of Ferro chrome will be taken to jigging plant and after crushing and screening chrome will be recovered and TCLP test will be carried out for the remaining material. If the chrome concentration is within the permissible level then it will be send to Industrial Park dump yard/ used in road construction (or) if chrome concentration exceeds the permissible level, then it will be sent to nearest TSDF facility. TCLP test will be carried out once in a year.	After commencement of present proposal	₹ 0.65 Crores will be allocated for Solid waste Management
8.	Ambient air quality data published by CPCB in 2014-15 is much higher than the data presented in this EIA report.	CPCB has Published a book on Ambient Air Quality monitoring data during Normal days and during Diwali days at major cities in India in the year 2014-15 . The AAQ data of Raigarh city is shown in page # 18 of the this publication of CPCB,. AAQ data of Raigarh city as monitored during 2014-15 during normal days and Diwali days is enclosed. (source CPCB publication). Raigarh city is 22 kms, from O.P. jindal industrial park. Subsequently We have approached CPCB regarding the AAQ data of O P Jindal Industrial park . Subsequently CPCB vide letter dated 27-11-2018 has confirmed that Ambient air quality for the state of Chhattisgarh is being carried out by Chhattisgarh Environment Conservation Board (CECB) . The same has been mentioned in Page # 17 of the aforementioned CPCB report. A copy of the CPCB letter is enclosed. Subsequently we have approached CECB for confirmation regarding AAQ data	---	---

		of O.P. Jindal industrial park during the year 2014-15 . **CECB has clarified vide latter dated 28-12-2018 that CECB has not carried out any AAQ monitoring at O.P. Jindal Industrial Park , Punjipathra during the period 2014-15**. Ambient air monitoring at Punjipathra under NAMP has commenced from 01-11-2017. A copy of the CECB letter is enclosed. **Hence it can be confirmed that there is no AAQ data monitored by CPCB (or) CECB at O.P. Jindal industrial Park, Punjipathra during the year 2014-15.**		
9.	Source of water for the existing plant. Whether water drawl permission has been obtained for the existing plant? Are they paying water cess? Whether Water drawl permission for the expansion project is obtained?	Ground water is the source for the existing plant. Water requirement of existing plant is 31 KLD. The plant commenced operation in the year 2006. During that period ground water drawl permission was not required, if the ground water drawl was less than 1000 KLD for SAFE category areas and 100 KLD for Semi Critical areas. The plant falls under Safe category. Hence, water drawl permission has not been obtained for the existing plant. Water cess is being paid by the industry regularly. Source of water for expansion is also ground water. NOC has been obtained from CGWA for drawl of water vide NOC no. CGWA / NOC / IND / ORIG / 2018 / 4161	----	----
10.	Rain water harvesting measures to be taken up	In the existing plant, RWH has been implemented. *Ground water recharge well, recharge pit with tube well, recharge trench in 8 nos. will be constructed.* The roof top water will be collected in a tank and will be used to meet the plant water requirement. RWH measures in punjipathra will also be taken up	Within 2 years from the date of issue of E.C.	₹ 1.5 Lakhs for RWH with in the Premises & ₹ 2.5 Lakhs for RWH in the Villages under CER
11.	There is a college close by to the industrial park and the students have health related	College is situated at a distance of 0.70 Kms. in North Eastern direction from the plant. 130 m	Before commissioning of the plant	₹ 2.51 Crores will be allocated for

	problems.	wide Green belt has been developed towards college side by JSPL in the Industrial park peripherally. In the existing plant air emission control systems such as bagfilters , covered conveyers, dust suppression system have been installed and operated. Accordingly CECB has issued CTO for the existing plant In the present proposal air emission control measures such as Bag filters (PTFE bags with 50% additional bags) , covered conveyers, dust suppression system will be provided. ZLD will be adopted. Solid waste disposal will be in accordance with the norms. 1/3rd of the plant area is developed with greenbelt. College is in **NE direction** w.r.t the plant where as the winds are predominantly blowing from **North East to South West** direction annually.		Environmental Protection Measures
12.	Crop damage	In the existing plant air emission control measures such as Bag filters, covered conveyers, dust suppression system have been provided. Stack monitoring has been conducted by CECB and particulate emission is within the prescribed standards. Net resultant Ground Level concentrations are within the National Ambient Air Quality Standards. However we will be replacing the existing bags with PTFE bags for much better performance. Zero Liquid effluent discharge system is being adopted. Solid waste disposal is in accordance with the norms. 1/3rd of the plant area is being developed with greenbelt. In the expansion, also PTFE bags with 50% additional bags will be provided which significantly improves the efficiency of bagfilters to 99.98%. Additional greenbelt of 0.6 acres will be developed as part of expansion. Hence, no crop damage due to	Before commissioning of the expansion project	₹ 2.51 Crores will be allocated for Environmental Protection Measures

		this industry.		
13.	There is a mention about Elephant Corridor. However, there is no mention about conservation measures for elephants.	As per the secondary sources there is movement of Elephants has been observed within 10 Km. radius of the plant. Conservation Plan has been prepared by Sri. Haresh Chandra Tiwari, I.F.S. (Retd.) and submitted to PCCF, C.G. and Recommendations / comments of the Principal Chief Conservator of Forests (PCCF), Raipur have been obtained and as per the recommendations a budget provision of Rs. 30 Lacs will be earmarked for Elephant Conservation and Management Plan for two years.	2 years (2018-19 & 2019 -20)	A budget provision of ₹ 30 Lacs will be earmarked for the Elephants Conservation and Management Plan for two years.
14.	Regarding Silicosis disease	Silicosis disease is normally found in people working in Silica sand mining where they are continuously exposed to crystalline silica. In this proposal, Quartz is used as raw material. Hence, no continuous exposure will be there in this plant. Respiratory masks will be provided to employees working in quartz handling areas. Dust suppression system will be provided. In the health checkup, Chest x-ray & Fluoroscopy will be carried out periodically. This will give symptoms of any silicosis. A letter given by doctor confirming that there are no cases of silicosis reported in punjipathra is enclosed.	---	---
15.	Regarding Social impact assessment	Social Impact Assessment has been carried out. CER activities were based on the following 1) Based on need based assessment 2) Based on Public consultation 3) Based on Wildlife conservation plan The CER budget based on the above will be spent over a period of 2 years, which is in line with the implementation of the expansion project.	within 2 years from the date of issue of E.C.	₹ 32.5 Lakhs will be allocated for CER activities.

		Detailed Social Impact Assessment has been enumerated in chapter-7 & Chapter-8 of Final EIA report.		
16.	Providing Employment to local peoples.	In the existing plant, out of 42 nos. of total employees , 80 % are from surrounding villages . In the proposed expansion, another 40 nos. will be provided with employment.	----	----
17.	Regarding ground water Cess payment.	Company is regularly paying ground water cess to Water resources Department / CECB. Last Water cess was paid on 6th Nov. 2017	----	----
18.	Regarding Schedule Area	4.88 Ha. (12.05 acres) of land has been taken on lease in the O.P. Jindal industrial Park from M/s. Jindal Steel & Power Limited. Expansion will be taken up in the existing plant premises only. No additional land is envisaged. Entire land for industrial park has been acquired by M/s. CSIDC Limited (Govt. of Chhattisgarh) and thereafter given to M/s. Jindal Steel and Power Limited for development of Industrial Park. Now this has become O.P. Jindal Industrial Park. Since the original land is acquired by CSIDC which is a state Govt. body and gave it on lease to M/s. JSPL. No schedule area in this land. Till date there is no case filed in any court regarding schedule area of this land.	----	----
19.	Gram Panchayat NOC has not been obtained.	This land is acquired by CSIDC Limited and given on lease to M/s. Jindal Steel and Power Limited for development of Industrial Park. All the plots within this industrial park are taken on lease. As the land has been acquired by CSIDC, NOC from Gram Panchayat will not be required.	----	----
20	Lot of accidents are occurring due to plying of heavy vehicles	All the preventive measures such as providing speed breakers at vulnerable points will be adopted to avoid road accidents.	----	----

21	Impact on Forest and Wildlife	• Movement of Elephants has been observed in the area. Accordingly, conservation plan has been prepared and is approved by PCCF, Govt. Of Chhattisgarh with the recommendation to spend Rs 30 lakhs in 2018-19 & 2019-20. This budget will be spend by Govt for construction of earthen tanks for Elephants in compartments, etc. as specified in the PCCF letter. • All the required Air Emissions Control systems will be installed and operated to comply with MoEF&CC / CPCB / CECB norms. Net resultant GLCs are within the National Ambient Air quality Standards. • Zero liquid effluent discharge is being maintained in the existing plant and similar practice will be maintained after expansion also. • All solid waste disposal will be in accordance with the norms. • Greenbelt in an area 1.00 Ha. has already been developed in the plant premises and Greenbelt in an area of 0.61 Ha. is proposed to be developed in the proposed expansion proposal. When all norms are compiled and with proper implementation of Environment Management Plan, there will not be any adverse impact on Forest and Wildlife due to the proposed expansion.	----	----

Point No. 2	**Revised Corporate Environment Responsibility (CER) based on the issues raised during public consultation and social impact Assessment study.**
Reply No. 2	**Revised CER has been shown below**

Cost of the Expansion project : Rs 13 Crores

CER as per TOR condition @ 2.5% of the expansion project cost : Rs 32.5 lakhs

An amount of **Rs.32.5 Lakhs** has been earmarked under Corporate Environment Responsibility (CER) based on Social Impact Assessment and based on the public hearing issues.

CER Budget based on SIA & Public consultation : Rs 32.5 Lakhs
Budget for conservation of Elephants to be spent in 2018-19 & 2019-20 : Rs 30.0 Lakhs
Total CER Budget : Rs 62.5 Lakhs

This CER budget will be implemented in 2years time from the date of issue of EC.

The following is the Revised Cost Break-up of Proposed CER activities

S.No.	Major Activity Heads	Year (Rs. In Lakhs)		Total Expenditure (Rs. In Lakhs)
		1st	2nd	
A	**Based on need based & Social assessment study**			
1	Community & Infrastructure Development Programmes (Development of village road, renovation of school buildings, providing Street Lights & its maintenance in panchayat area, maintenance of Temples in nearby Villages, sanitation facilities, drainage facilities in nearby villages & schools.	12.0	--	12.0
2	Skill & Entrepreneur Development (Skills updation on welder / Fitter / wiremen etc.)	4.0	--	4.0
3	Education and Scholarship Programmes (Providing furniture, computers, library, sports equipment etc. for schools, Sponsorship for School Sport events, Merit Scholarships to School Children)	2.0	2.0	4.0
4	Medical & health related activities (Ambulance facilities to villagers)	3.0	3.0	6.0
5	Other requirements as per needs of the nearby Village Panchayat (such as supply of Fertilizers to augment N,P,K)	2.0	2.0	4.0
	SUB TOTAL (A)	**23.0**	**7.0**	30.0
B	**Based on Public Consultation**			
1	Additional Rain water harvesting measures in nearby villages	1.5	1.0	2.5
	SUB TOTAL (B)	**1.5**	**1.0**	2.5
	TOTAL (A+B)	**24.5**	**8.0**	**32.5**
C	**Expenditure towards implementation of Conservation plan**			
1	For the years 2018 -19 & 2019-20	23.25	6.75	30.0
	TOTAL (A+B+C)	**47.75**	**14.75**	**62.5**

Point No. 3	**Ambient Air Quality data of O P Jindal Industrial Park for 2014-15 carried out by the Central Pollution Control Board (CPCB)and comparison with the existing data**
Reply	We would like to bring to your kind notice that the CPCB has Published a book on Ambient Air Quality Monitoring during Normal days and during Diwali days at

major cities in India in the year 2014-15.
We invite your kind attention to the page # 18 of the aforementioned publication of CPCB, wherein Ambient Air data pertaining to Raigarh city has been shown.
We have approached the CPCB regarding the AAQ data of O. P. Jindal Industrial Park. Subsequently CPCB vide letter dated 27-11-2018 has confirmed that Ambient air quality for the state of Chhattisgarh is being carried out by Chhattisgarh Environment Conservation Board (CECB). The same has been mentioned in Page # 17 of the aforementioned CPCB report submitted**.**
A copy of CPCB letter & CECB letters are enclosed**.**
We also would like to bring to the kind notice that the Ambient Air quality data presented in the aforementioned CPCB report is pertaining Raigarh city which is 22 Kms from O.P. Jindal Industrial Park.
Hence, we submit that there is no AAQ data has been monitored by CPCB during 2014-15.

Baseline Ambient Air Quality data :

- Ambient air quality has been monitored March 2017 to May 2017.
- The following are the AAQ concentrations at all stations in the study area.

Parameter		**Concentration**
$PM_{2.5}$	**:**	**17.5 to 41.3 μg/m^3**
PM_{10}	**:**	**31.8 to 72.6 μg/m^3**
SO_2	**:**	**6.9 to 20.5 μg/m^3**
NO_X	**:**	**7.2 to 27.1 μg/m^3**
CO	**:**	**460 to 1205 μg/m^3**

Point No. 4	**Action Plan for recharging of ground water shall be submitted**
Reply	Ground water recharge well, recharge pit with tube well, recharge trench in 8 nos. will be constructed. The details of ground water recharging measures have been shown below **RAIN WATER HARVESTING MEASURE AT PLANT SITE** In the existing plant also rain water harvesting structure has been constructed. Now as part of expansion additional Rainwater harvesting structures will be constructed to harvest the run-off water from roof tops by laying a separate storm water drainage system for recharging of ground water. It is proposed to construct 8 nos. of Recharge structures and all the Roof water inlet join to Recharge well / Recharge Pits / Recharge Trench so that an approx. **23583 Cum** of Roof top water & surface run-off storm water recharge into ground. The following is the Plan for rain water harvesting measure at plant site. Average annual rainfall = 1241 mm

Quantum of Rain water that can be harvested from the premises
Average annual rainfall = 1.241 m
Runoff co-efficients :
Runoff co-efficient for Roof area = 90%
Runoff co-efficient for Roads and Paved area = 80%
Runoff co-efficient for Open area = 40%
Runoff co-efficient for Green belt area = 20%

Predicted Post Project Runoff from different surfaces

S.No.	Type of area	Total Area (m^2)	Runoff Co-efficient	Rainfall in m	Rainwater Collection Potential (m^3)
1	Roof top area	12,140	0.90	1.24	13548
2	Internal roads	6070	0.80	1.24	6021
3	Greenbelt	16,187	0.20	1.24	4014
	TOTAL				**23,583**

The potential rain water that can be recharged/utilized will be 23583 m^3.
This conserved water will be utilized for plant water requirement.
Accordingly, the net water requirement will reduce.

Point No. 5	**Briquetting plant shall be envisaged for recycling of the fines generated during the operation .**
Reply	We do hereby confirm that a briquetting plant will be provided for effective management of dust.
Point No. 6	**Revised Corporate Environmental Policy prescribing standard procedures and hierarchal system for reporting of non-compliances/infringements, if any to the Board of directors at a periodical interval.**
Reply	Revised Corporate Environmental Policy is submitted, which comprises • The compliance of the EC conditions / SPCB norms will be reported to the Board of Directors every Six (6) months. • Any non-compliance / deviations will be brought to the notice of the Managing Director & Board of Directors. • Appropriate corrective measures will be taken along with sanction of the budget. • Corporate Environment Responsibility

Observations of the Committee: -

27.0 The Committee noted that additional information submitted by the project proponent is satisfactory.

Recommendations of the Committee: -

28.0 After detailed deliberation, the Committee recommended for environmental clearance under the provisions of EIA Notification, 2006 for the proposed expansion of Ferro Alloy Plant manufacturing of FeCr (15,000TPA) or Fe-Si (7000 TPA) in the existing 1x9 MVASEAFA and manufacturing of Si-Mn (14400TPA) or Fe-Mn (14400 TPA) or Fe-Cr (15000 TPA) or Fe-Si (7000 TPA) in the new 1x9 mVA SEAF of M/s. V. A. Power and Steel Private Limited located at Plot No. 143, 144 & 145, Sector – E, O.P. Jindal Industrial Park, Village Punjipathra, Tehsil Gharghoda, District Raigarh, Chhattisgarhsubject to following specific and general conditions:

A. Specific conditions –

i) The amount earmarked for the Corporate Environment Responsbility related activities shall be INR 62.5 lakhs and shall be implemented within the time frame of three years.

ii) Rain water harvesting structures 8 Nos shall be constructed.

iii) Briquetting plant shall be installed for effective management of dust.

B. General Conditions:

I. Statutory compliance:

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

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

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

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to timeand connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

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

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

v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.

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

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

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

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

x. The project proponent shall provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc.

xi. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

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

III. Water quality monitoring and preservation

i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time.

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

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

iv. Adhere to 'Zero Liquid Discharge'.

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

vi. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.

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

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

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

IV. Noise monitoring and prevention

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

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

V. Energy Conservation measures

i. The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.

ii. Practice hot charging of slabs and billets/blooms as far as possible.

iii. Ensure installation of regenerative type burners on all reheating furnaces.

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

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

VI. Waste management

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

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

iii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

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

VII. Green Belt

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

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

VIII. Public hearing and Human health issues

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

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

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

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

IX. Corporate Environment Responsibility

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

ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any

infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholder's / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

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

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

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

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

X. Miscellaneous

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.5 Proposed Expansion of Existing Steel Plant to Integrated Steel Plant located at Bomaloi, Tehsil: Rengali, District: Sambalpur, Odisha of M/s Aryan Ispat & Power Private Limited [Online proposal No. IA/OR/IND/89100/2018; MoEFCC File No. J-11011/60/2007-IA.II (I)] – Terms of Reference.

1.0 The proponent has made online application vide proposal no. **IA/OR/IND/89100/2018**dated 21st December, 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under category 'A' of the Schedule of EIA Notification, 2006. Therefore, the proposal is appraised at the Central Level.

Details submitted by the Project Proponent

2.0 M/s Aryan Ispat & Power Pvt. Limited proposed for expansion of existing Steel Plant to Integrated Steel Plant for production of various Steel Rolled Products of 3,00,000 TPA by production expansion of Sponge Iron Plant (from 1,60,000 TPA to 2,60,000 TPA), Steel Melt Shop through (Zero to 3,00,000 TPA) by new installation of 1 X 350 DRI, 8 X 12 T capacity Induction Furnace, 1 X15 T LRF, 3.00,000 TPA SMS and 2 X 9 MVA SAF for production of High Carbon Ferro Chrome/Ferro Manganese/ Sillico Manganese along with expansion of Captive Power Plant (WHRB from 12 MW to 20 MW & AFBC from 6 MW to 58 MW). It is proposed to be set up the plant for expansion of existing Steel plant based on in house technology.

3.0 The existing project was accorded environmental clearance vide lr.no. J-11011/60/2007-IA-II (I) dated 16th September 2008. Consent to Operate was accorded by Odisha State pollution Control Board vide lr. no. 3791/IND-I-CON-5334 validity of CTO is up to 31/03/2023.

4.0 The proposed unit within the existing premises of the plant will be located at Village: Bomaloi, Taluka: .Rengali, District: Sambalpur, State: Odisha.

5.0 The land area acquired for the proposed plant is 82.78 Ha. No forestland involved. The entire land has been acquired for the project. Of the total area, 27.33ha (33%) land will be used for green belt development.

6.0 The National Park/WL etc are located at a distance of beyond 15.0 Km from the site. No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

7.0 Total project cost is approximately 186.36 Crore rupees. Proposed employment generation from proposed project will be 491 direct employment and313indirect employment.

8.0 The targeted production capacity of the expansion project is 0.3million TPA. The raw material for the plant would be procured from open market. The raw material transportation will be done through Rail and Road. The proposed capacity for different products for proposed expansion site area as below:

Name of Unit	**No of Units (Existing)**	**Capacity of each Unit**	**No of Units (Proposed Addition)**	**No of Units (After Expansion)**	**Capacity of each Unit**	**Production Capacity After Expanssion**
Sponge Iron Plant	3	2 X 100 TPD 1 X 350 TPD	1	4	2 X 100 TPD 2 X 350 TPD	2.60 Lac TPA
Induction Furnace	0	-	8	8	12 T	3.00 Lac TPA
LRF	0	-	1	1	15 T	
Power (WHRB)	1	12 MW	1 X 8 MW	2	1 X 12 MW 1 X 8 MW	20 MW
Power (AFBC)	1	6 MW	1 X 52 MW	2	1 X 6 MW 2 X 26 MW	58 MW
Steel Rolling Mill	0	-	1	1	3.00 Lac TPA	3.00 Lac TPA
Ferro Alloys production of Either or Combination of HCFeCr / FeMn / SiMn as detailed below						
High Carbon Ferro Chrome	0	-	2	2	2 X 9 MVA	24,000 TPA
Ferro Manganese						33500 TPA
Sillico Manganese						23200 TPA

9.0 The electricity load of 78.00 MW will be procured from in house. Company has also provision of 3 X 1250 KVA DG Set for emergency requirement.

10.0 Proposed raw material and fuel requirement for project are Sized Iron Ore, Coal, Dolomite, Coal char, Waste gas, Chrome Ore, Manganese Ore, Reducing Agents, Fluxes and Carbon Electrode Paste etc. Except Waste Gas which is in-house generation requirement of Chrome & Manganese Ore and other materials will be sourced from open markets. Fuel consumption will be mainly HSD of 450 KL per Annum and will be sourced from local market.

11.0 Water Consumption as make up water for the proposed project will be approximately 560 m^3 /Hr and around 130 M3 /Hr of waste water generation which is either reused or recycled with ZERO discharge to outside. Domestic waste water will be treated in Septic tank followed by Soak pit and industrial waste water generated will be treated in ETP and reused for dust suppression and plantation.

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

13.0 EIA Consultat Organization:M/s. ERS(I) Private Limited, Bhubaneshwar.

Observations of the Committee: -

The Committee asked the project proponent to revise the unit configruation of induction furnace and power plant. The committee did not agree for the exemption of the fresh Public Consultation. The revised configuration is as follows:

Sl. No	Project	Existing Facilities	Proposed additional installation	Total Capacity after Expansion
1	Sponge Iron Plant	1,60,000 TPA (2 X 100 TPD and 1 X 350 TPD)	1,00,000 TPA (1 X 350 TPD)	2,60,000 TPA (2 X 100 TPD and 2 X 350 TPD)
2	Induction Furnace	NIL	5 X 15 T	2,50,000 TPA
	LRF	NIL	1 X 15 T	
3	POWER (CPP)	WHRB - 12 MW	8 MW	20 MW
		AFBC – 6 MW	41 MW	47 MW
4	Steel Rolling Mill	NIL	2,50,000 TPA	2,50,000 TPA
5	**Ferro Alloys Plant (2 X 9 MVA)** for production of Either or Combination of HCFeCr / FeMn/SiMn.			
	High Carbon Ferro Chrome	NIL	2 X 9 MVA	24,000 TPA
	Ferro Manganese			33500 TPA
	Silico Manganese			23200 TPA

Recommendations of the Committee: -

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

i. Electric Arc Furnace should be provided with 4th hole extraction system with bagfilters.

ii. Rain water recharge facility shall be included and solar lighting shall be used in the plant.

iii. The plant shall be designed for ZLD.

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

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

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

3.6 Production capacity enhancement in Blast Furnaces 1&2 from 2, 92,000 TPA to 3, 50,000 TPA by process optimization along with production capacity enhancement in Blast Furnaces 3 from 5,40,000 TPA to 6,50,000 TPA through technology up-gradation and setting up additional Oxygen Plant and installation of additional four oven in Met Coke battery-1 to increase production efficiency with Introduction of Ductile Iron Pipe Plant Project with Page 6 of 36 Capacity 3,00,000 TPA and Fe-Si Plant with 5,000 TPA located at village:Amona/ Navelim Taluka: Bicholim Dist: North Goa by M/s Vedanta Limited (Formerly Sesa Goa Limited) (Formerly Sesa Industries Limited) [Online Proposal No. IA/GA/IND/89225/2018; MoEFCC File No. J-11011/946/2007-IA-II(I)]– Terms of Reference.

1.0 The proponent has made online application vide proposal no. **IA/GA/IND/89225/2018** dated 20th December, 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Metallurgical industries (ferrous & non-ferrous) under category 'A' of the Schedule of EIA Notification, 2006. Therefore, the proposal is appraised at the Central Level.

Details submitted by the Project Proponent

2.0 M/s. Vedanta Limited proposed Production Capacity Enhancement of Blast Furnaces 1 & 2 from 2, 92,000 TPA to 3, 50,000 TPA by Process Optimization, along with Production Capacity Enhancement in BF-3 from 0.54 MTPA to 0.65 MTPA through Technology Up gradation and setting up Additional Oxygen Plant, Putting up additional 4 Ovens in Battery 1 to increase production Efficiency, Introduction of Ductile Iron Pipe Plant of 0.30 MTPA capacity and Fe-Si Plant of 0.005 MTPA capacity at Amona /Navelim village, Amona Navelim (Bicholim) Industrial Area, Bicholim Taluka, North Goa district, Goa. Estimated cost of the proposed project is about Rs. 701 Crores.

3.0 Statutory Approvals**:**

- ✓ Environmental Clearance (EC) was awarded for 0.9 MTPA Blast Furnace, 0.6 MTPA Coke Plant, 2MTPA Sinter plant & 60MW waste heat recovery power plant vide letter F.No. J-11011/946/2007-IA.II.(I) dated 3rd June 2009;

- ✓ Amendment in EC dated 3rd June 2009 (Change in plant configuration & implementation of project in two phases) was granted by MoEF & CC vide letter F.No. J-11011/946 /2007-IA.II.(I) dated 25th April 2012;

- ✓ EC transferred from M/s. Sesa Industries' Ltd. to M/s. Sesa Goa Ltd. and enhancement in production capacity in operational BF#3 from 0.45 MTPA to 0.54 MTPA with as per EC was obtained from MoEF&CC vide letter F.No. J-11011/946/2007-IA.II.(I) dated 5th September 2016.

4.0 TORs obtained earlier:

- ✓ TOR-1 : Product diversification/change in product mix by converting 0.3 MTPA hot liquid metal, out of 0.45 MTPA hot liquid metal from blast furnace to ductile iron pipes vide letter no. J-11011/946/2007-IA.II(I) dated 10th August, 2016; and

- ✓ TOR-2: Enhancement in production capacity of pig iron (expansion) for existing blast furnaces from 2,92,000 TPA to 3,50,000 TPA by process optimization and efficiency improvement and Product diversification for High Purity Pig Iron of 1,25,000 TPA and Iron and Alloy powder 50,000 TPA at village Navelim/Amona, Taluka Bicholim, District North Goa vide letter dated by M/s Vedanta Ltd vide ToR letter no. J-11011/211/2016-IA.II(I) dated 11th August, 2016 and 28th April 2017

5.0 The environmental baseline studies were carried out from March 2016 to May 2016 and June 2016 and Draft EIA report was submitted to Goa Pollution Control Board for conducting Public Hearing (PH), however PH could not be conducted.

6.0 In the EAC meeting dated 10th December 2018, for considering Amendment in TOR-I dated 10.08.2016 for Enhancement of production capacity of BF-3 from 5,40,000 TPA to 6,50,000 TPA through technology upgradation, after detailed deliberations, the Committee opined that the project proponent has applied as indicating two separate units. Therefore, the committee advised to make an integrated proposal for prescribing ToRs comprehensively.

7.0 The integrated proposal is presented as below:

Sr. No	Existing Facility (Capacity)	ToR-1 Dated 10.08.2016 Obtained for DI Plant	TOR-2 dated 11.08.2016 Amended on 28.04.2017 for Hot Metal Enhancement & Product Diversification	Integrated TOR sought for
1	Blast Furnace -1 Blast Furnace -2 (2,92,000 TPA)	No Change	2,92,000 TPA to 3,50,000 TPA (With product diversification High Purity Pig Iron- 1,25,000 TPA, Iron and Alloy Powder-50,000 TPA and Pig Iron-1,75,000 TPA)	Enhancement in production capacity from 2,92,000 TPA to 3,50,000 TPA Pig Iron (without product diversification)
2	Blast Furnace -3 (5,40,000 TPA)	No change	No change	5,40,000 TPA to 6,50,000 TPA through Technology up-

				gradation
3	Coke Oven Plant-1 with 84 Ovens (3,22,000 TPA)	No change	No change	4 additional Ovens to increase production efficiency with No Change in production capacity of 3,22,000 TPA
4	Coke Oven Plant-2 with 72 Ovens (3,00,000 TPA)	No change	No change	No change, capacity of Coke Oven Plant -2 will remain 3,00,000 TPA
5	WHRBP-1 (30 MW)	No change	No change	No change, will remain 30 MW
6	WHRBP-2 (35 MW)	No change	No change	No change, will remain, 35 MW
7	Sinter Plant (1 MTPA)	No change	No change	No change, will remain, 1 MTPA
8	Oxygen (100 TPD) and Nitrogen Plant (50 TPD)	No change	No change	Additional Oxygen Plant 150 TPD – Total capacity Oxygen (250 TPD) and Nitrogen Plant (50 TPD)
New Facilities Applied in TOR-1 and Amendment on 10.12.2018				
1	-	DI Plant 3,00,000 TPA (with all facilities like induction furnace, desulphurization and magnesium addition facility, annealing furnace and associated facilities)	No change	DI Plant 3,00,000 TPA (with all facilities like induction furnace, desulphurization and magnesium addition facility, annealing furnace and associated facilities)
2	-	Sought in Amendment dated 10.12.2018, Fe-Si Plant (5,000 TPA)	-	Fe-Si Plant (5,000 TPA)

7.0 The existing plant is located in an area of about 161 ha. The geographical co-ordinates of the plant lies between latitude: $15^0$30'19.81" N to $15^0$31' 39.25" N and longitude: $73^0$58' 53.71" E to $74^0$00' 32.14" E. The proposed activity will be taken up within the existing plant Premise.

8.0 No additional land acquisition involved as the proposed project will be taken up within the existing plant premises.

Sr. No	Details	Existing Area Utilisation in Ha	Proposed Additional Area Utilisation in Ha	Final Area Utilisation in Ha

Sr. No	Details	Existing Area Utilisation in Ha	Proposed Additional Area Utilisation in Ha	Final Area Utilisation in Ha
1	Machinery Setups	20.00	9.52	29.52
2	Raw material storage area and Despatch	26	5.7	31.7
	Finished Product Storage	14.00	2.15	16.15
3	Internal roads	7.0	0	7.0
4	Administration building, canteen, stores,	2.57	0	2.57
4	Green Belt Development	54	0	54
5	Water Harvesting	2.0	2.52	4.52
6	ETP	0	0.32	0.32
7	Vacant Land for Future Use	31.82	-	11.61
8	Utility Area	3.61	0	3.61
	Total	161.0 Ha	20.21	161.00

9.0 Total additional water requirement for proposed expansion project will be 2280 m^3/day with total requirement of 12,744 KLD.Out of this 4320 KLD is from Mandavi Estuary with a blanket permission and rest is from Bandhara on Walwanti River with Permission for 6000 KLD of water obtained from the GWRD vide letter no: 7-5(REV) /AGR /WDI /ACCTS /01/2012-13, dated 19th April, 2012. Additional 4000 KLD application is in advanced stage of approval.

Description	Existing Water Requirement m^3/day	Proposed addition m^3/day	Final Water Requirement m^3/day
Slag Granulation	1920	960	2880
Cooling Tower	3120	0	3120
Gas Cleaning Plant	48	0	48
PCM mould Cooling	1440	240	1680
Coke Quenching & Others	1560	0	1560
Dust Suppression	744	-120	624
DI Plant & Fe-Si Plant	0	1200	1200
DM Plant & Domestic	360	0	360
Cooling tower and blow down	1200	0	1200
Process	72	0	72
Total (m^3/day)	10,464	2,280	12,744
m^3/hour	436	95	531

10.0 28 MW of power is required for the proposed expansion with total consumption of 53 MW. This requirement will be sourced from 65 MW captive power plant.

11.0 Raw Material

A) Pig Iron, Coke & Sinter Production

Sr. No	Material	Unit	Existing	Additional Proposed	Final
1	Iron Ore Fines For Sinter	Tons	875146	280029	1155175
2	Iron Ore Lumps	Tons	658870	44934	703804
3	Coke	Tons	492458	80409	572867
4	PCI	Tons	56225	39275	95500
5	Limestone	Tons	107915	31725	139640
6	Dolomite	Tons	90001	25323	115324
7	Quartzite	Tons	26354	5299	31653
8	Quick Lime	Tons	19211	6147	25358
9	Coke Breeze	Tons	56948	18222	75170
10	Coal for Coke Production	Tons	830000	-	830000
	Total	Tons	2306969	506994	2813963

B) Proposed Raw Material for Ductile Iron Pipe

Sr. No.	Raw Material	kg/t of Cat Pipe	TPA
1	Hot Metal	1083.0	324900
2	MS Scrap	100-130	36000
3	Ferro Silicon	10	3000
4	Zn Wire	1.73	519
5	Bitumen Coal Tar	2.15	645
6	Magnesium	1.3-1.4	405
7	Sand for core making	55	16500
8	Graphite Powder	0.67	201
9	Binder	1.3-1.4	405
10	Catalyst	0.27	81
11	Cement	30	9000
12	Calcium carbide	14-15	4500
13	Sand for Lining	130-165	45000

C) Proposed Raw material requirement Fe-Si

Sr. No.	Raw Material	Kg/ton	Total Requirement, TPA (Approx.)
1	Quartzite	1.782	8910
2.	Charcoal	0.6435	3217.5
3	Coke	0.6435	3217.5
4	Iron Scrap, Mill Scale	0.198	990

Sr. No.	Raw Material	Kg/ton	Total Requirement, TPA (Approx.)
5	Electrode Paste	0.0693	346.5

12.0 Waste Generation and Disposal :

Sr. No.	**Waste quantity**	**Existing TPA**	**Proposed TPA (tentative)**	**Final TPA**	**Mode of Disposal**
1	Used oil	36.5	23.5	60	To recycler registered with CPCB and having valid authorization of SPCB
2	Oil soaked cotton waste	56	0	56	Incinerated in coke oven plant
3	Discarded Paint tins	22	8	30	To recycler
4	Spent ion exchange resin	0.4	0	0.4	To authorized incineration facility/ cement plant for co processing
5	SLAG	341400	58600	4,00,000	Sold to cement industry
6	Flue dust	20000	5000	25000	Recycled back to the process

13.0 Manpower

Details	**Existing**	**Proposed**	**Final**
Direct	700	50	750
Indirect	1300	400	1700
Total	2000	450	2450

14.0 Ecological Sensitivity:

Ecological Sensitivity :Old Goa Church (9.7 km, W), Mhadei WLS boundary (9.8 km, NE), Bondla WLS (10.5 km, SE), Dr.Salim Ali Bird Sanctuary (14 km, W)

Water bodies: Mandovi river (0.4 km, W), Kudne river (1.0 km, N), 3.5 km, N), Valvot river (4.2 km, WSW), Kumbharjua Nadi (6.0 km, SW)

Interstate boundary: Interstate boundary of Karnataka & Maharashtra (9.1 km, N)

Highway: NH-4A (5.2 km, WSW), SH-1 (4.0 km N), SH-4 (4.7 km, N)

15.0 Litigations.

❖ Case-1: Application filed before the NGT V.P Navelim vs GSPCB or ORS which is kept

in Abeyance

- Case-2: Pravir.P.Fadte vs State of Goa & ORS. Hon'ble High court of Mumbai at Goa
- Case3: District Court -Amona Communidade Vs Sesa Goa.

16.0 Consultant: Vimta labs Limited, Hyderabad – NABET accredited consultant

Observations of the Committee: -

17.0 The Committee observed that the habitation is existing near the project boundary and some of the litgations are pending related to the project. The committee did not agree to use the environmental baseline studies carried out from March 2016 to May 2016 and June 2016 for preparation of fresh EMP.

Recommendations of the Committee: -

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

i. The TOR will be subject to the out come of the Courts/Tribunal in litigation cases pending against the project.

ii. The PP shall explore the possibility of the locating the facilties away from the habitation. Revised lay out shall be submitted along with the EIA/EMP.

iii. Baseline shall be collected afresh shall be utilized for the EIA/EMP.

iv. The PP shall carry out study on the proposed project on the Habitat and shall prepare the mitigation plan as per the recommendations of the study.

v. Rain water recharge facility shall be included and solar lighting shall be used in the plant.

vi. The plant shall be designed for ZLD.

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

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

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

3.7 Proposed manufacturing of Manganese oxide and Ferro Alloys [Manganese Oxide powder: 1200 TPA; Ferro Manganese M.C./L.C: 120 TPA; Ferro Chrome L.C.:120 TPA; Ferro Titanium: 120 TPA; Ferro Vanadium: 120 TPA; Ferro Molybdenum: 200 TPA; and Aluminum Ingots120 TPA] by M/s. Shree Pawan Metal & Minerals at Plot No. C-3 MIDC Industrial Area, Deori, Gondia, Maharashtra [Proposal No.

IA/MH/IND/89204/2018; MoEF&CCF.No. IA-J-11011/378/2018-IA-II(I)] – Terms of Reference.

1.0 **M/s Shree Pawan Metal & Minerals** made an application vide online proposal no. **IA/MH/IND/89204/2018** dated 20th December 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006.The proposal is appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. Shree Pawan Metal & Minerals proposes to install a new manufacturing unit for Manganese Oxide and Ferro Alloys (Thermite Process). It is proposed to set up the plant for Manganese Oxide and Ferro Alloys.

3.0 Consent to operate was accorded by Maharashtra State Pollution Control Board vide lr. no. MPCB/UAN No. 46958/1805000221 validity of Cto is up to 30.04.2020.

4.0 The proposed expansion unit will be located at Plot No. C-3 MIDC Industrial Area, Deori, District Gondia Maharashtra.

5.0 MIDC has leased 5402sqmt.(0.54 Ha) land. No forest land involved. The entire land has been acquired for the project. Of the total area 0.54 ha (33%) land will be developed as green belt.

6.0 According to the Notification S.O. 612(E) dated 25th February 2016 Distance from Eco-Sensitive Zone around Nagzira Wildlife Sanctuary, New Nagzira Wildlife Sanctuary, Koka Wildlife Sanctuary, Navegaon Wildlife Sanctuary and Navegaon National Park: 0.2 km. Inter state boundary of Maharashtra Chhattisgarh is at a distance of 7.5 kms (E).

7.0 Total project cost is approx Rs. 2.16 Crore. Proposed employment generation from proposed project will be 40 - 50 nos. of direct employment and indirect employment.

8.0 The targeted production capacity is 3600MTPA Manganese Oxide, 600MTPA Ferro Manganese M.C./L.C OR, 600 TPA Ferro Chrome L.C. OR,600MTPA Ferro Titanium OR, 600MTPA Ferro Vanadium OR, 120MTPA Ferro Molybdenum (Thermite process) and 120 MTPA Aluminum Ingots.

9.0 The power requirement will be 120 KW procured from State Electricity Board.

10.0 Proposed raw materials for project are Manganese Ore, Steam Coal. The requirement would be fulfilled by MOIL as well as Open Market. Fuel consumption will be Steam Coal.

11.0 Water Consumption for the proposed project will be 12 KLD and waste water generation will be 7 KLD. About 1.6 KLD domestic waste water will be treated in Packaged Type STP and industrial waste water generated will be treated in settling tank for further reuse.

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

13.0 Consultant Name: Pollution and Ecology Control Services, Nagpur, Number in QCI List: 119

Observations and Recommendations of the committee:

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

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

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

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

iv. Certificate from DFO stating that the plant site falls outside the boundary of the ESZ along with the extent of distance from the boundary of the ESZ.

v. Study of impact on ESZ shall be carried out.

3.8 Proposed manufacturing of Manganese Oxide and Ferro Alloys [1Manganese Oxide powder: 1200 M.T. per annum, 2. Ferro Manganese M.C./L.C:120 M.T. per annum OR 3. Ferro Titanium: 120 M.T. per annum OR 4. Ferro Vanadium: 120 M.T. per annum OR 5.Ferro Molybdenum: 120 M.T. per annum] by M/s. Janakiji Minerals at Plot No. A-2 M.I.D.C. Area Goregaon, Tahsil-Goregaon, District- Gondia, Maharashtra [Proposal No. IA/MH/IND/89171/2018; MoEF&CCF.No. IA-J-11011/377/2018-IA-II(I)] – Terms of Reference.

1.0 **M/s. Janakiji Minerals** made an application vide online proposal no. **IA/MH/IND/89171/2018** dated 20th December 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006.The proposal is appraised at Central Level.

Details submitted by the project proponent:

2.0 M/s. Jankiji Minerals proposes to install a new manufacturing unit for Manganese Oxide and Ferro Alloys (Thermite Process). It is proposed to set up the plant for Manganese Oxide and Ferro Alloys.

3.0 The proposed unit will be located atPlot No. A-2 MIDC Industrial Area Goregaon, Tahsil-Goregaon, District Gondia, Maharashtra.

4.0 MIDC has leased out 3607 sqmt. (0.36 Ha) land. No forest land involved. The entire land has been acquired for the project. Of the total area 0.36 ha (33%) land will be developed as green belt.

5.0 According to the Notification S.O. 612(E) dated 25th February 2016 Distance from Eco-Sensitive Zone around Nagzira Wildlife Sanctuary, New Nagzira Wildlife Sanctuary, Koka Wildlife Sanctuary, Navegaon Wildlife Sanctuary and Navegaon National Park: 2.9 km.

6.0 Total project cost is approx Rs. 1.55 Crore. Proposed employment generation from proposed project will be 30 - 40 nos. of direct employment and indirect employment.

7.0 The targeted production capacity is 1200 MTPA Manganese Oxide, 120 MTPA Ferro Manganese M.C./L.C OR, 120 MTPA Ferro Titanium OR, 120 MTPA Ferro Vanadium OR, 120 MTPA Ferro Molybdenum. (By Thermite process).

8.0 The power requirement will be 120 KW procured from State Electricity Board.

9.0 Proposed raw materials for project are Manganese Ore, Steam Coal. The requirement would be fulfilled by MOIL as well as Open Market. Fuel consumption will be Steam Coal.

10.0 Water Consumption for the proposed project will be 9 KLD and waste water generation will be 5 KLD. About 1.6 KLD domestic waste water will be treated in Packaged Type STP and industrial waste water generated will be treated in settling tank for further use.

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

12.0 Consultant Name: Pollution and Ecology Control Services, Nagpur, Number in QCI List: 119

Observations and Recommendations of the committee:

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

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

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

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

iv. Certificate from DFO stating that the plant site falls outside the boundary of the ESZ along with the extent of distance from the boundary of the ESZ.

v. Study of impact on ESZ shall be carried out.

3.9 Manufacturing of 1200 TPM manganese oxide at survey No. 7/2, village Bahmani, Post Bokhedi, Dist. Nagpur, Maharashtra by M/s Shree Hanuman Minerals [Proposal No. IA/MH/IND/89190/2018; IA-J-11011/374/2018-IA-II(I)]- Terms of Reference.

1.0 The proponent has made online application vide proposal no. **IA/MH/IND/89190/2018**dated 20thDecember, 2018along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & nonferrous) under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

Details submitted by the Project Proponent

2.0 M/s. Shree Hanuman Minerals proposes to install a new manufacturing unit for Manganese Oxide. It is proposed to set up the plant for 14400 TPA Manganese Oxide.

3.0 Consent to operate was accorded by Maharashtra State Pollution Control Board vide lr. no. MPCB/UAN No.57945/1810000756 validity of CtO is up to 31.03.2020.

4.0 The proposed expansion unit will be located at Survey No. 7/2, At Village Bahmani, Post Borkhedi, District Nagpur, Maharashtra

5.0 The land in possession for the proposed expansion plant is 1.42 Ha. No forest land involved. The entire land has been acquired for the project. Of the total area 1.42 ha (33%) land will be developed as green belt.

5.0 No National Park, Wild Life Sanctuary, Biosphere Reserve, Tiger / Elephant Reserve, Wildlife Corridor etcare reported to be located in the core and buffer zone of the project.

6.0 Total project cost is approx. Rs. 3.0 Crore. Proposed employment generation from proposed project will be 10 - 20 nos. of direct employment and indirect employment.

7.0 The targeted production capacity is 14400 TPA Manganese Oxide.

8.0 The electricity load of 80 KW will be procured from State Electricity Board.

9.0 Proposed raw materials for project are Manganese Ore, Steam Coal. The requirement would be fulfilled by vendors as well as Open Market. Fuel consumption will be Steam Coal.

10.0 Water Consumption for the proposed project will be 3 KLD and waste water generation will be 1 KLD. About 0.8 KLD domestic waste water will be treated in Packaged Type STP and

industrial waste water generated will be treated in settling tank and reused in process. Ground water will be extracted for industrial use.

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

12.0 Name of the Consultant: Pollution and Ecology Control Services, Nagpur, Number in QCI List: 119

Observations and Recommendations of the committee:

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

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

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

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

3.10 Increase in production capacity of Asbestos Corrugated Sheets from 1,44,000 TPA to 1,95,000 TPA and installation of pre-coloured galvanized MS profile sheet plant (non-asbestos) of 25000 TPA of M/s U.P. Asbestos Ltd., located at Mohanlalganj, Lucknow [Online Proposal No. IA/UP/IND/89102/2011; MoEFCC File No. J-11011/567/2011-IA.II(I)] – Terms of Reference.

1.0 The proponent has made online application vide proposal no. **IA/UP/IND/89102/2011**dated 20th December, 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 4(c) Asbestos milling and asbestos based products under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

Details submitted by the project proponent:

2.0 M/s. U.P. Asbestos Limited (UPAL) proposes to install an expansion of existing manufacturing unit for Asbestos Corrugated Sheets and pre-coloured galvanized MS Profile Sheet Plant (non-asbestos). It is proposed to set up the plant for 1,95,000 TPA (Asbestos Corrugated Sheets) and 25000 TPA (pre-coloured galvanized MS profile sheet plant) based on Hatschek process technology.

3.0 The existing project was accorded environmental clearance vide lr. no. nil dated12.06.2015. Consent to Operate was accorded by Uttar Pradesh State Pollution Control Board vide lr. no. 409770 for water and 409771 for air. Validity of CtO was up to 31.12.2018.

4.0 The proposed unit will be located at Plot No.: Series 8,6/2 and 9/2, Village: Mau, Taluka: Mohanlalganj, District: Lucknow, State:Uttar Pradesh.

5.0 The land area acquired for the proposed plant is 18.89 Ha. No forestland involved. The entire land has been acquired for the project. Of thetotal area 8.90 ha (47.11%) land will be used for green belt development.

6.0 No nationalpark/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported tobe located in the core and buffer zone of the project. The area also does not report to formcorridor for Schedule-I fauna.

7.0 Total project cost is approx. 5.29 Crore rupees. Proposed employment generation fromproposed project will be 15 direct employments and 30 indirect employment.

8.0 The targeted production capacity of the Asbestos Corrugated Sheets is 0.1950 million TPA. The ore for the plant wouldbe procured from (linkages nil). The ore transportation will be donethrough nil (Rail/Road/Conveyor/Slurry Pipeline). The proposed capacity for differentproducts for new site area as below:

Name of unit	**No. of units**	**Capacity of each Unit (TPA)**	**Production Capacity (TPA)**
Asbestos Unit including existing plus proposed	Unit-1 Unit-2 Unit-3	65,000 65,000 65,000	195000
Profile sheet plant unit (New)	1	25000	25000

9.0 The electricity load of 1.35 MW will be procured from Lucknow Electricity Supply Administration (LESA). Company has also proposed to install 1250 KVA, 625 KVA and 200 KVA DG Sets.

10.0 Proposed raw material and fuel requirement for project are 79657.5 TPA O.P.C. cement, 11100 TPA Chrysotile Asbestos Fibre, 52455 TPA Fly Ash, 5000 TPA Cotton Rag Pulp, 600 TPA Reliance Synthetic Fibre, 25000.54 TPA MS profile sheets and 72000 ltrs. The requirementwould be fulfilled by Russia, Brazil and Kazakhstan (Chrysotile Asbestos Fibre), A.C.C & J.P. Associates, J. K. Laxmi, Ultra Tech. Cement (O.P.C. Cement), NTPC's Thermal Plant Unchahar, Shaktinagar & Rihand (fly ash), Reliance Industries Ltd., Deva Road, Barabanki (Synthetic Fibre) as well as Unnao/from our own captive plant at our premises (Cotton Rag Pulp). Fuel consumption will be mainly diesel.

11.0 Water Consumption for the proposed project will be 317 KLD and waste water generationwill be nil. Domestic waste water will be treated septic tank & soak pit and industrial wastewater generated will be recycled and reused 25 KLD.

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

13.0 EIA Consultant: Ecomen Laboratories Pvt. Ltd., Sl. no. 43 in list -1 of QCI/NABET list updated on 17.12.2018.

Observations and Recommendations of the committee:

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

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

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

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

3.11 Existing Low Ash Metallurgical Coke - 84640MT/Annum and Proposed Capacity of Silico Manganese Alloy (Ferro Alloy)- 44640MT/Annum ha by M/s. Sauraushtra Fuels Limited at Survey No. 164, 165, 166/1,166/2, 167,168, 170, 171, 172, 219/2, 269 Part, 37/1, 38, 39, 40/2, 44, 45, 42, 43, 50 Baraya – Patri Road, Village: Lakhapar, Taluka: Mundra, Dist: Kutch. [Proposal No. IA/GJ/IND/87299/2018; MoEF&CCF.No. IA-J-11011/399/2018-IA.II(I)] – Terms of Reference.

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

2.12 Expansion of Ferro Alloys unit with 5x9 MVA submerged electric arc furnaces (SiMn- 84,474 TPA, FeMn - 1,03,958 TPA) and Captive Power Plant of 62 MW (including existing 12 MW power plant) at villageManuapalli, Tehsil & district - Raigarh, Chhattisgarh by M/s MSP Sponge Iron Limited [(Online proposal No. IA/CG/IND/89345/2018; MoEFCC File No. J11011/178/2010-IA.II(I)] –Change of product mix in Environmental clearance under clause 7(ii) of EIA Notification, 2006.

1.0 M/s MSP Sponge Iron Limited made an application vide online proposal no. IA/CG/IND/89345/2018 dated 22nd December, 2018 seekling change of product mix in Environmental clearance accorded vide letter no. J-11011/178/2010-IA.II(I) dated 23/08/2012 under clause 7(ii) of EIA Notification, 2006.

Details submitted by the project proponent:

2.0 M/s. MSP Sponge Iron Limited has established a Ferro-Alloy unit having 2 x 7.5 MVA and 1 x 9 MVA Submerged Electric Arc Furnace (SEAF) in its factory situated at Manuapalli Village, in Raigarh District, Chhattisgarh in phased manner to produce Silico Manganese (29,034 TPA) and Ferro Manganese 29,978 TPA). Following are the chronology of permissions / clearances obtained from Chhattisgarh Environment Conservation Board (CECB), Raipur and Ministry of Environment, Forest and Climate Change New Delhi pertaining to the project:

- Consent to Establish (CTE) obtained from Chhattisgarh Environment Conservation Board (CECB) for establishment of 2x7.5 MVA Submerged Electric Arc Furnaces and Coal and Char based captive power plant of 12 MW vide order No. 1492/TS/ CECB/ 2005 dated 01/04/2005.

- 1stConsent to Operate (CTO) obtained from Chhattisgarh Environment Conservation Board (CECB) for 2x7.5 MVA Submerged Electric Arc Furnaces vide order No. 1859/TS/CECB/2007, dated 13.04.2007.

- Consent to Operate (CTO) obtained from Chhattisgarh Environment Conservation Board (CECB) for 12 MW Coal and Char based captive power plant vide order No. 5609/TS/CECB/2007, dated 09.10.2007.

- Environmental clearance was issued by the Ministry of Environment, Forest and Climate Change New Delhi vide No J-11011/178/2010-IA II (I) dated 23rd August 2012 for expansion of Ferro Alloys unit with 5 x 9 MVA Submerged Electric Arc Furnaces (SiMn- 84,474 TPA, FeMn – 1,03,958 TPA) and Captive Power Plant of 62 MW (including existing 12 MW power plant).

- Public Hearing has been conducted by CECB for the expansion proposal on 16-12-2011 as per the provisions of EIA notification, 2006 and its subsequent amendments.

- Consent to Establish (CTE) has been obtained from CECB vide No. 1492/TS/CECB/2005 dated 04.04.2005 for expansion of existing ***5 x 9 MVA Submerged Electric Arc Furnaces for production of*** (***SiMn- 84,474 TPA, FeMn – 1,03,958 TPA) and Captive Power Plant of 62 MW (including existing 12 MW power plant)***.

- 1st Consent to Operate (CTO) has been obtained from CECB vide No. 3000/TS/CECB/2014 Naya Raipur dated 21-08-2014 for expansion of existing ***1 x 9 MVA Submerged Electric Arc Furnace for production of*** Silico Manganese (Si Mn) 13,860 TPA and Ferro Manganese (Fe Mn) 18,495 TPA. The same has been renewed vide No. 1493/TS/CECB/2017 Naya Raipur dated 29-06-2017, which is valid up to 21-08-2019.

- Latest Consent to Operate (CTO) obtained from Chhattisgarh Environment Conservation Board (CECB) for 2x7.5 MVA Submerged Electric Arc Furnaces and 12 MW Power plant vide order No. 199/TS/CECB/2018, dated 03/04/2018, which is valid up to 31/03/2019.

3.0 Compliance Status of EC compliance: Regional Office of MOEF&CC, Nagpur has issued Certified compliance report on earlier EC conditions vide dated 23rd August 2012. There were certain observations/partial compliances in the certified compliance report and accordingly PP has submitted a letter to the Regional office of MOEF&CC, requesting for issue of closure report on Non-compliances/partial compliances as per report dated 02nd June, 2018. Closure report has been issued by the Regional office of MOEF&CC vide F. NO. 5-51/2012(ENV)/4371 dated 26th September, 2018.

4.0 Request for Change of product mix: As a synergistic measure, without adding to any pollution load, now it is proposed to manufacture Ferro Chrome (FeCr) product also in the existing 2x7.5 MVA & 1 x 9 MVA Submerged Electric Arc Furnace along with SiMn & FeMn products, as product mix, permissible under the provision of clause 7(ii)(c) of the MoEF Notification vide S.O. 3518(E) dt. 23.11.2016.

- The existing 2x7.5 MVA and 1 x 9 MVA Furnace are capable of producing FeMn & SiMn or High Carbon Ferro Chrome.
- Capacity utilization is similar.
- No design changes are required to the Submerged Electric Arc Furnaces to manufacture High Carbon Ferro Chrome.
- Power consumption to manufacture one ton of Silico Manganese (SiMn) is around 4000 units where as the power consumption for production of one ton of High Carbon Ferro Chrome will also be around 4000 units.
- **The following is existing and proposed change of product mix**

S. N.	Unit/Plant	Products	Existing capacity for which CTE obtained from CECB vide dated 01/04/2005	Existing capacity for which EC obtained from MOEF&CC vide dated 23/08/2012	Total units implemented (CTO obtained from CECB)		Proposed amendment		Final
1	Submerged Electric Arc Furnace		2x7.5 MVA	5x9 MVA	2x7.5 MVA	1x9 MVA	2x7.5 MVA	1x9 MVA	2x7.5 & 1x9 MVA
		Silico Manganese (Si Mn)	15,174 TPA	69,300 TPA	15,174 TPA	13,860 TPA	--	--	29,034 TPA

		Ferro Manganese (Fe Mn)	11,483 TPA	92,475 TPA	11,483 TPA	18,495 TPA	--	--	29,978 TPA
		(OR)							
		Ferro Chrome (FeCr)	--	--	--	--	**40,027 TPA**	**24,016TPA**	**64,043TPA**

5.0 COMPARISION OF ENVIRONMENTAL PARAMETERS

The following is the comparison of environmental parameters with production of FeMn & Si Mn or Fe-Cr production.

Environmental Parameter	**Due to FeMn & SiMn (2 x 7.5 MVA & 1 x 9 MVA)**	**Due to FeCr production (2 x 7.5 MVA & 1 x 9 MVA)**	**Remarks**
Water requirement	80 KLD	80 KLD	**No increase in water consumption**
Waste water	Closed circuit cooling system is adopted. Hence no wastewater discharge.	Closed circuit cooling system will be adopted. Hence no wastewater discharge.	**ZLD will be followed even after the present proposal.**
Solid waste disposal	Slag produced from Ferro Manganese production is utilizing in Silico Manganese production. Slag produced from Silico Manganese production is utilized in road construction/landfill.	Ferro chrome slag of 27,500TPA will be generated & will be further processed in Zigging plant for Chrome recovery. TCLP test will be conducted for the remaining material. If chrome content is within the permissible level it will be utilized as landfill/ as base material in road laying or else it will be sent to the nearest TSDF facility. Disposal of slag will be in accordance with the permissible norms.	No solid waste disposal issue w.r.t solid waste disposal.
Particulate Emission load	5.04 Kg/hr	5.04 Kg/hr	No increase in particulate emission
Any additional	Not Applicable	No additional land	No increase in land

Environmental Parameter	**Due to FeMn & SiMn (2 x 7.5 MVA & 1 x 9 MVA)**	**Due to FeCr production (2 x 7.5 MVA & 1 x 9 MVA)**	**Remarks**
Land acquisition		acquisition is envisaged as it is only a change of product mix.	due to the present proposal

6.0 Public hearing has been carried out for the expansion proposal as per the provisions of EIA Notification, 2006 and its subsequent amendments on 16-12-2011.

7.0 It was submitted that in the instant proposal no additional land; additional water; increase in air emissions load; effluent discharge outside the plant. Zero liquid effluent discharge is maintained due to manufacture of Ferro Chrome.

8.0 Request to consider under 7 (ii) due to the following:

1. Present proposal is only change of product mix by using the existing Submerged Arc Furnaces.
2. Public Hearing has been carried out on 16-12-2011 as per the provisions of EIA Notification 2006 and its subsequent amendments.
3. No additional land envisaged.
4. No additional water envisaged.
5. No additional wastewater. ZLD will be continued after expansion also.
6. No increase in air emission load

Observations and recommendations of the Committee: -

8.0 After detailed deliberations, the committee recommended for environmental clearance for change in product-mix for manufacture Ferro Chrome (Fe-Cr) in the existing 2x7.5 MVA & 1 x 9 MVA Submerged Electric Arc Furnaces along with Si-Mn & Fe-Mn products of the plant without any modifications to the Existing Submerged Arc Furnacesunder para 7(ii) of the EIA Notification, 2006 subject to following additional conditions:

i. ZLD would be maintained.

ii. Particulate emission from the stacks shall be less than 30 mg/Nm^3.

iii. All bag filters shall be fitted with fiber glass filters to maintain above emission norms.

iv. Water sprinkler shall be provided around the slag storage yard of jigging plant to contain fugitive emissions.

v. No ground water shall be abstracted.

vi. Industrial vacuum cleaners shall be used to control the road dust within the plant and its vicinity.

vii. All other terms and conditions mentioned in the earlier environmental clearance accorded vide letter no. J-11011/178/2010-IA.II(I) dated 23/08/2012 shall remain unchanged.

10thJanuary, 2019 (Teesta)

3.13 Greenfield Copper Refinery Plant (10 MTPA) project of M/s Adani Enterprises Limited located at Adani Port Special Economic Zone Land in Village(s) Siracha and Navinal, Taluka Mundra, District Kutch, Gujarat by M/s Adani Limited [Online proposal No.IA/GJ/IND/86812/2016; MoEFCC File No. J-11011/113/2016-IA.II(I)] – Environmental clearance.

1.0 M/s. Adani Limitedhas made online application vide proposal no. IA/GJ/IND/86812/2016dated 6th December 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The Greenfield Copper Refinery of 1 (One) Million Tons Per Annum (MTPA) project by M/s Adani Enterprises Limited, proposed at Adani Ports and Special Economic Zone land in village(s) Siracha and Navinal, Taluka Mundra, District Kutch, State Gujarat was initially received in the Ministry on 21st April 2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 6thmeeting held on 4thMay 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest & Climate Change had prescribed ToRs to the project on 21st June 2016 vide Lr. No. F. No. J-11011/113/2016 IA.II (I).

3.0 The project of M/s. Adani Enterprises Limited located in Villages of Siracha and Navinal, Taluka Mundra, District Kutch, State of Gujarat is for setting up of a new Copper Refinery for production of 1 million tonnes per annum (million TPA) of Copper Cathode. The detail of overall plant configuration as below:

Sr. No.	Plant	Units	Phase-I	Phase-II	Overall Plant Configuration
1	Copper Smelter Plant	TPA	4,50,000	4,50,000	9,00,000
2	Copper Refinery Plant	TPA	5,00,000	5,00,000	10,00,000
3	Continuous Cast Copper Rod Plant	TPA	2,50,000	2,50,000	5,00,000
4	Copper Scrap & E-Scrap Melting Facility	TPA	50,000	50,000	1,00,000
5	Sulphuric Acid Plant	TPA	15,00,000	15,00,000	30,00,000
6	Phosphoric Acid Plant (100% P_2O_5)	TPA	2,50,000	2,50,000	5,00,000
7	Aluminum Fluoride Plant	TPA	15,000	15,000	30,000
8	Oxygen (Industrial) Plant	TPM	48,000	48,000	96,000

9	Precious Metal Recovery Plant				
a	Gold	TPA	25	25	50
b	Silver	TPA	250	250	500
c	Selenium	TPA	144	144	288
10	Waste Heat recovery boiler based power plant	MW	20	20	40

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

Sr. No.	Products	Units	Phase-I	Phase-II	Overall Plant Capacity
I	Main Products				
1	Copper Cathode	TPA	5,00,000	5,00,000	10,00,000
2	Sulphuric Acid (> 98%)	TPA	15,00,000	15,00,000	30,00,000
3	Continuous Cast Copper Wire Rod	TPA	2,50,000	2,50,000	5,00,000
4	Gold	TPA	25	25	50
5	Silver	TPA	250	250	500
6	Phosphoric Acid (as 100% P_2O_5)	TPA	2,50,000	2,50,000	5,00,000
7	Aluminum Fluoride	TPA	15,000	15,000	30,000
II	By-Products				
8	Anode Slime	TPM	250	250	500
9	Selenium	TPM	12	12	24
10	PGM Concentrate	TPM	3	3	6
11	Ferro Sand/ Iron Silicate - Copper Slag (Granulated)	TPM	92,500	92,500	1,85,000
12	Phosphogypsum	TPM	1,04,167	1,04,167	2,08,334
13	Hydro Fluro Silicic Acid (~20% as H_2SiF_6)	TPM	1,250	1,250	2,500
14	Copper Telluride	TPM	21	21	42
15	Tellurium	TPM	4	4	8
16	Nickel	TPM	8	8	16
17	Bismuth Bisulphate	TPM	60	60	120
18	Calomel (Mercury Chloride)	TPM	9	9	18
19	Mercury	TPM	8	8	16
20	CCR Mill Scale	TPM	25	25	50

5.0 The total land required for the project is 256.58 ha, out of which zero (0) ha is an agricultural land, zero (0) ha is grazing land, 102.39 ha forest land applied for diversion by APSEZ and 154.19 ha is non-forest land already notified as SEZ. The non-forest land has been acquired by APSEZ and in-principle approval for diversion of forest land has been obtained by APSEZ and committed to provide this land for the project. The Dhaneswari (Dhenderi) River passes through the project area which will be suitably trained and maintained.

6.0 The topography of the area is flat and slightly undulating and ranges between 22°48’13.26"N to 22°50‘01.88"NLatitude and 69°33'34.74"Eto 69°35‘08.42"ELongitude in Survey of India topo sheet No. F42J9 & 10, at an elevation of 7-10 m AMSL. The ground water

table ranges between 2-10 m below the land surface during the post-monsoon season and 2-20 m below the land surface during the pre-monsoon season. The stage of groundwater development in Mundra Taluka is reported to be 63.28% and designated as safe areas as per Technical Report Series, Ground Water Brochure of Kutch District by CGWB – 2013. No groundwater is proposed for either construction or operation phase of the project.

7.0 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the core and buffer zone within the 10 km radius of the project. The area also does not report to form corridor for Schedule-I fauna. Floral species are mainly dominated by *Prosopis juliflora* and *Acacia Senegal*. The faunal species were categorized as per conservation status of Wildlife Protection Act, 1972 and reveals that peacock is the only Scheduled-I species in the study area and the conservation plan with Rs. 40 lakhs tentative budget is proposed in Section 3.9 of EIA Report.

8.0 The proposed Copper refinery plant with various facilities will be using following raw materials:

a. Copper Concentrate: Production of Copper, Sulphuric Acid, Gold, Silver and other by products such as Ferro sand (Iron Silicate/ Copper Slag), Selenium, Copper Telluride, Nickel / Nickel Sludge (Nickel Sulphate/ Nickel Carbonate), production of electricity from waste heat recovery system, etc.

b. Rock Phosphate: Production of Phosphoric Acid and by product Hydro Fluro Silicic Acid and Phospho Gypsum.

c. Aluminum Hydrate: Production of Aluminum Flouride

d. Quick Lime: For Effluent Treatment Plant

Following fuel will be used as per process Requirement:

a. LPG/ PNG

b. Furnace Oil

c. High Speed Diesel

d. Met Coke

e. Coal/ Pet Coke

During the manufacturing Process, following waste will be generated, which will be recycled in the process or will be sent to authorised recyclers:

a. Nickel Sulphate Sludge

b. Arsenic Bearing Sludge – As-Cu Precipitate

c. Used Oil

d. Oil Sludge

During the manufacturing Process, following Hazardous waste will be generated and will be stored in Secured Landfill (SLF) designed in accordance with CPCB Guidelines:

a. ETP Waste sludge and Scrubber Waste

b. Spent Catalyst

c. Spent resins from DM, RO & Refinery Plant

d. Salts from Multi Effect Evaporator

10.0 The proposed project to adopt pyros melting technology and electro refining process to produce copper cathode. The sulphur dioxide generated during the smelting of copper concentrate is converted into sulphuric acid by Double Conversion Double Absorption (DCDA) process. Part of the sulphuric acid is utilized for production of phosphoric acid within the plant.

11.0 Plant is designed on Zero Liquid Discharge concept design and hence no process or treated water will be discharged outside the plant. The treated water will be recycled within the process and to address treated water balance a Reverse Osmosis plant with Multi Effect Evaporator will be installed.

12.0 Copper Concentrate will be largely imported from various countries across the globe such as Chile, Peru, Brazil, Australia, Africa, Indonesia, etc. and Rock Phosphate is imported from countries like Jordan, Morocco, Australia, etc. Copper Concentrate & Rock Phosphate will be unloaded from the ship and transported to the closed warehouse either by pipe conveyor or through covered trucks. The principal raw material for the production of copper metal is copper concentrate blend containing about 25-35% copper, 25-34% sulphur, iron 25-35% and 7-10% moisture. Approximately, 3 LTPA copper scrap and electronic scrap is also used as input to proposed copper smelting plant and copper scrap melting facility.

13.0 The major steps in copper extraction,*inter alia*, including Blending of different grades of concentrates;Smelting of concentrate in smelting furnace to produce an intermediate copper rich product known as ”matte” containing 58 - 63% copper;Converting of liquid matte to blister copper (98 - 99% Cu) in Pierce-Smith converter;Fire refining of blister copper to produce anode copper (99.5% Cu) in anode furnace and casting of the anodes; andElectrolytic refining of anodes to produce copper cathodes (99.99% Cu).In the process of extraction of copper metal, sulphuric acid is recovered as a byproduct from the off-gases generated from the smelting and converting furnaces. A part of sulphuric acid produced is utilized for phosphoric acid production and rest will be sold in the market based on market requirement. Phosphoric Acid (PA) Plant uses sulphuric acid produced within the plant and imported rock phosphate to produce Phosphoric Acid. Phosphoric Acid is largely used in fertiliser industries to make phosphatic fertilisers. During the process fluorine gases are recovered as hydrofluro silicic acid (HFSA) through scrubbing system. HFSA is one of the major raw materials for production of Flouride

based chemicals. Hydro fluro silicic acid generated from phosphoric acid plant will be partly sold to fluoride based industries and rest will be converted in value added aluminum fluoride. Aluminum Fluoride plant will be using HFSA produced in PA Plant and Aluminum Hydrate to produce Aluminum Fluoride. Aluminum Fluoride is an important material in production of Aluminum Metal. Aluminum fluoride produced will be sold to aluminum manufacturing companies. The precious metal in the form of anode slime is collected during electrolytic refining of copper will be processed to produce gold, silver and Platinum Group of Metals (PGM) concentrate as well as recovery of minor metals such as Tellurium, Bismuth, Nickel, etc). The copper cathode produced from copper refinery will be melted and drawn in the form of copper wire rod on continuous basis from a continuous casting and rolling machine. Copper rod will be of various sizes as per market requirement such as 8 to 32 mm.

14.0 The wastewater generated from copper smelter, sulphuric acid plant, copper refinery, Phosphoric Acid Plant and Aluminum Fluoride plant will be treated in state of art effluent treatment facility. Treated effluent will be consumed within the plant operations to maximum extent. A Reverse Osmosis plant with Multi effect evaporator will be installed at the outlet of treated effluent to reuse water internally and reduce water consumption. This will ensure the plant as a Zero Liquid Discharge facility.

15.0 The major technological units envisaged for the copper refinery project are: Raw material handling system; Smelting furnace; Pierce smith converter; Ferro Sand Cleaning Furnace (FSCF); Copper scrap & E-scrap melting system; Anode furnace & anode casting wheel; Off gas handling;Sulphuric acid plant;Oxygen plant;Copper Refinery Plant;Precious metal recovery plant;Continuous cast copper wire rod plant;Phosphoric acid plant; Aluminum fluoride plant; andEffluent Treatment Plant (ETP),Utilities like Power, Water, Air and Fuel

16.0 The targeted production capacity of the proposed project is 1.0 million TPA. The raw material for the plant would be procured from open market. The raw material transportation will be by pipe conveyor or covered trucks from port to plant.

17.0 The water requirement of the project is estimated as approx. 32800 m3/day of fresh water requirement will be obtained from the desalination plant of Adani Port Special Economic Zone (APSEZ). 5,418 m3 /day treated water from ETP & STP will be utilized for plant operation.

18.0 The power requirement of the project is estimated as 300 MW, out of which 260 MW will be obtained from the APSEZ through MUPL and 40 MW would be generated from waste heat recovery system.

19.0 Baseline Environmental Studies were conducted during post-monsoon and partly winter season i.e. from 1st October to 31st December, 2016 Ambient air quality monitoring has been carried out at 8 locations during 1st October to 31st December, 2016 and the data submitted indicated: PM10 (35.2 to 84.2 µg/m3), PM2.5 (19.2 to 43.9 µg/m3), SO2 (14.8 to 42.6 µg/m3) and NOx (13.1 to 32.8 µg/m3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.52 µg/m3 with respect to the PM2.5, 1.27 µg/m3 with respect to the PM10, 10.37 µg/m3 with respect to the SO2 and 0.23 µg/m3 with respect to the NOx.

20.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.3 to 7.8, Total Hardness: 125 to 392 mg/l, Chlorides: 282.6 to 978.4 mg/l, Fluoride: 0.9 to 1.5 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 4 locations. pH: 7.2 to 8.0; DO: 5.6 to 5.9 mg/l and BOD: <3 mg/l. COD from 60 to 80 mg/l.

21.0 Noise levels are in the range of 48.5 to 56.6 dB(A) for daytime and 42.3 to 48.8 dB(A) for night time.

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

23.0 It has been reported that a total of 225694 tons per annum of waste will be generated due to the project, out of which 9274 tonnes per annum will be recycled through authorised recyclers and within the process. Rest will be stored in the secured landfill (SLF). It has been envisaged that an area of 85.79ha 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.

24.0 It has been reported that the Consent to Establish/Consent to Operate from the Gujarat State Pollution Control Board / Pollution Control Committee will be obtained as per applicable requirements after obtaining the Environmental Clearance.

25.0 The Public hearing of the project was held on 29 April 2017at Community Premises Centre Samajvadi Opposite Tunda Primary Schoolunder the chairmanship of Shri D R Patel (GAS)(Additional District Magistrate and Resident Additional Collector) for production of 1.0 million TPA of setting up of Copper Refinery plant, under the chairmanship of Additional District Magistrate and Resident Additional Collector. The issues raised during public hearing were mainly about Employment, Environmental Protection and Rural infrastructure. An amount of Rs. 4000Lakhs has been earmarked for Corporate Environment Responsibility (CER) based on public hearing issues.

Sr. No.	**Public Hearing Issues**	**Capital Budget for Corporate Environment Responsibility (CER) in Rs Cr/ Year**					**Total Proposed Expenditure in Rs Cr**
		1	**2**	**3**	**4**	**5**	
1	Sustainable livelihood generation for locals including fishermen and Women Empowerment	1.0	1.0	1.0	1.0	1.0	5.0
2	Education and skills development of locals	1.0	1.0	1.0	1.0	1.0	5.0
3	Community Health Initiatives	2.0	2.0	2.0	2.0	2.0	10.0
4	Community Rural Infrastructure Development	4.0	4.0	4.0	4.0	4.0	20.0

	Total CER Budget	**8.0**	**8.0**	**8.0**	**8.0**	**8.0**	**40.0**
5	Environmental control measures for proposed project and environmental protection	Separate Rs 1,040 Cr budget has been kept for pollution control measures and environment management plan					

Recurring CSR expenditure in operation phase shall be governed as per CSR Rules under the Companies Act. **Time Bound Action Plan with Budget for issues raised in PH is proposed as following:**

S.N	Issue	**Time Bound Action Plan within Construction Phase of the Project**	Budget
	Employment for Locals including Fisherman and Sustainable Livelihood Generation	The requirements of skilled/unskilled manpower during operation will be met from nearby villages as far as possible. Locals will be given preference to employment based on skill set & eligibility requirement as per the job and the vacancies available. During construction phase of the project, there will be around 400 employees and 2600 contract workforce. During operation phase of the project, there will be around 1000 employees and another 1000 contract workmen directly working for the plant. This is estimated that another 5000 persons in the area will get benefited from the project by indirect engagement and business increased due to this project. Following activities are proposed in this area: ➢ Extend assistance to start SHGs to empower women and material and financial support to take up self-employment. ➢ Amenities like equipment support, sanitation facilities, approach roads, fish lending sheds, fisher-folk vasahats (Settlements); training for livelihood, Insurance etc. ➢ Skill Development Centre (SDC) to make the youth for achieving their Goals in life by becoming Skilled Professionals. ➢ Provision of fodder support, promote bio-gas installation in agri and animal husbandry based families' households. Construction of cattle sheds, Awareness meetings and exposure visits for animal husbandry. ➢ Support for Drip irrigation and Tissue Culture Training.	Capital budget of Rs 5 Cr during the project construction period has been kept. Recurring CSR expenditure in operation phase shall be governed as per CSR Rules under the Companies Act.
	Education and	As part of improving employability within local	Capital budget of

	skills development of locals	youth including the youth from the fishing community also, there is a plan to set up a Skill Development Centre through Adani Foundation. Various activities are proposed in this area; ➢ Supporting in creation of assembly halls, prayer hall, classrooms, computer labs, space for mid-day meal, playground, school walls etc. for government school. ➢ Igniting mind of students through science on wheels, UDAN schemes. ➢ Educational Vocational Guidance Fair (EVGF) for career talk. ➢ Balwadis for the kids of fisher-folk community to provide awareness about education, health, hygiene, and discipline. ➢ Programme for skills improvements of teaching staffs in govt. schools. ➢ Linkages will be established with the employment exchange and the registered persons having appropriate qualification shall be given priority.	Rs 5 Cr during the project construction period has been kept. Recurring CSR expenditure in operation phase shall be governed as per CSR Rules under the Companies Act.
	Community health care and insurance support for community members including fishermen	AEL commits to extensively work for corporate environment and social responsibility in the area and improve quality of people's life. Company have started key initiatives in support of sustainable development. AEL has a CSR policy and commit to work in following area for this project. ➢ Senior Citizen Health Card Scheme to address the needs of the senior citizens including the fishermen community. ➢ Various health camps organization at regular intervals i.e. Gynaecological care, Blood donation, Health awareness programs, HIV/AIDS, Cataract detection. ➢ Provision of Free Mobile Health Care Units (MHCU). ➢ Promotion of awareness of malnutrition and anaemia. ➢ Setting up rural clinics to ensures outreach services.	Capital budget of Rs 10 Cr during the project construction period has been kept. Recurring CSR expenditure in operation phase shall be governed as per CSR Rules under the Companies Act.
	Rural Infrastructure Development and access to Fishermen community for	The roads used by fishermen will not be disturbed due to the proposed copper refinery project. Disaster management group and insurance scheme shall be initiated to support fishermen. Following activities are identified and proposed in this area: ➢ To provide facility for potable drinking water	Capital budget of Rs 20 Cr during the project construction period has been kept.

	fishing and harbours	by providing RO Plants, drinking water supply system, overhead tank and underground pump. ➢ Creation of clean and hygienic environment by proper drainage systems, sewage treatment plants, community led sanitation campaign ➢ Construction of various community centers to facilitate social activities, upgradation of facility at crematoriums, Gaushala etc. ➢ Conservation of water by construction of check dams and pond. ➢ Upgradation of primary health centers, renovation of roads and expansion of roads, construction of toilet facilities etc. ➢ Provision of solar street lighting, green nurturing programs, implementation of swachchh bharat initiatives.	Recurring CSR expenditure in operation phase shall be governed as per CSR Rules under the Companies Act.
	Environmental control measures for proposed project and environmental protection	➢ Environment friendly technology will be selected and pollution control measures will be implemented to comply emissions as per the prescribed standards by CPCB. Further, it will comply with all the conditions stipulated by GPCB and MoEF&CC. ➢ The proposed project will be designed as per the latest technology with all in built pollution control measures. ➢ The plant will be operated on zero liquid discharge principle. ➢ Secured Land Fill (SLF) is proposed within the project premises for disposal of ETP waste sludge. SLF shall be constructed as per the CPCB guidelines. Other hazardous waste will be disposed through the approved recyclers. ➢ About 85.79 ha of project area (33% of the project area) will be developed with greenbelt / green cover as per prevailing guidelines from GPCB/CPCB/MoEF&CC.	Rs 1,040 Cr of capital budget is kept for installation of environmental protection measures within the plant.

26.0 The capital cost of the project is Rs. 10,000 Crores and the capital cost for environmental protection measures is proposed as Rs. 104400 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 500 Lakhs.The detailed CSR plan has been provided in the EMP in its page No. C6-8. The employment generation from the proposed project / expansion is direct employment and about 5000 indirect employment during operation phase.

27.0 Greenbelt will be developed in 85.79Ha which is about 33.43% of the total acquired area. Peripheral greenbelt, consisting of at least 3 tiers around plant boundary will be developed

as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 225000 saplings will be planted and nurtured in 85.79 hectares.

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

29.0 EIA Consultat Organization:M/s. Vimta Labs, Hyderabad.

Observations of the Committee: -

30.0 After detailed delibrations, the Committee observed following issues:

i. According to the EIA report, the land requirement for the project is 256.58 Ha. Out of 256.58 Ha, 154.19 Ha is APSEZ area and 102.39 Ha is a Forest land. The land use conversion plan of 154.19 Ha for industrial purpose has not been obtained from the Competent Authority concerned. Further, PP has obtained stage I forest land diversion approval for 1576.81 ha in the name of M/s. Adani Ports and SEZ Limited. The factual agreement between M/s. Adani Enterprises Limited and M/s. Adani Ports and SEZ Limited for the utilization of 102.39 Ha is a Forest land is not clear.

ii. CRZ map inter-alia including demarcation of HTL/LTL/CRZ land classification along with super imposition of plant site through competent agencies has not been submitted.

iii. Source of copper ore concentrate, characteristics, mode of transportation from source to plant site, confirmed ore linkage document has not been submitted.

iv. Water consumption of 10 LTPA Copper smelter is 32790 KLD whereas the water requirement for existing 4.5 LTPA copper smelter unit is only 10,000 KLD. Hence, water requirement for the proposed plant has to be reworked out.

v. According to the EIA records, Dhaneshwari river is passing through the project site and the mangrove reserve forest is existing within the project site. Quantification of these mangroves and conservation measures for mangroves and the river stream has not been submitted.

vi. Storage arrangements made for the raw materials are found to be not adequate. Open storage of raw materials such as coal, limestone etc., shall be avoided.

vii. Sulfur balance of the copper smelter unit has not been submitted.

viii. Copper slag disposal site co-ordinates, concrete mode of utilization, maximum time frame envisaged for the storage at the disposal yard i.e., one month (or) 15 days has not been submitted.

ix. Phospo-gypsum disposal site co-ordinates, concrete mode of utilization, maximum time frame envisaged for the storage at the disposal yard i.e., one month (or) 15 days has not been submitted.

x. Lining details for Phospo-gypsum disposal yard, leachate collection system envisaged and details of piezo-well installation has not been made available.

xi. Secured land fill site co-ordinates, lining details, leachate collection system envisaged and details of piezo-well installation has not been made available.

xii. Baseline health status of the people living in the study area of the project site has not been collected.

xiii. Details regarding disposal of arsenic bearing sludge has not been submitted.

xiv. Mercury in ambient air has not been monitored.

xv. Conservation plan prepared for the Schedule-I species is not meeting the requirement of the conservation of the species that are identified. Therefore, the plan shall be revised considering the requirements of the conservation of the species identified and shall be approved by the competent authority concerned.

xvi. Collection of run off water from the raw material storage area, slag and gypsum storage yard and its treatment has not been submitted.

xvii. Study on installation of rain water harvesting structure based on annual rain fall pattern and details regarding amount of water to be conserved has not made available.

xviii. Impact on hydro geology regime of the project site has not submitted.

xix. Occupational health assessment envisaged for the employees and workers has not been submitted.

xx. As per the Public hearing proceedings, it is noted that there are strong oppositions from the stake holders against the installation of copper smelter unit. Consolidated list of point-wise issues raised and response provided along with action plan for implementation has not been submitted.

xxi. The Chapter-5 consists of only listing of alternative technologies. The committee opiened that the PP shall select out of alternative technologies available, based on the selection of the technology, the impact prediction shall be made and mitigation measures shall be proposed.

xxii. Quanititative representation of mitigation measures was not presented.

xxiii. Revised water balance shall be submitted.

xxiv. HIRA shall be prepared for worst case scenario

xxv. Management of white shall shall be spelledout

xxvi. Material balance shall be revised.

xxvii. The involvement of geological expert shall be provided.

xxviii. The compliance of specific consitions of the environmental clearance of the SEZ shall be provided.

xxix. The reply to TOR point No. (4) is not proper.

xxx. The data retrieved from the LULC studies shall be utilized for the prediction of impacts and mitigation measures.

xxxi. The Air Quality modeling studies shall be re-worked out including the mercury and keeping the mixing height in view.

xxxii. The Environmental Policy of the Organization is not meeting the requirements given in ToR Point No. 9(i), 9(ii), 9(iii), 9(iv).

xxxiii. The CER shall be calculated on the slab rates as per the Office memorandum issued on 1st may, 2018.

The committee also felt that in view of the complexity involvd in the project, the committee proposed for site visit by the sub-committee of the EAC.

Recommendations of the Committee:

After detailed deliberations, the committee advised to submit the information on the observations of the committee. The committee also suggested having a site visit by the sub-committee of EAC paraleely. Therfore, the proposal will be re-considered after submission of the information by the project proponent and also the submission of the report by the sub-committee based on the site visit.

3.14 Proposed Mill Expansion Plan of Unit-2, Installation of Paper Machine, Pulp Mill, Chemical Recovery Island, and Augmentation of Co-Generation Plant and utilities at TNPL, Unit 2, Mondipatti, Trichy by M/s Tamil Nadu Newsprint and Papers Limited [Online proposal No. IA/TN/IND/88943/2013; MoEFCC File No. J-11011/172/2017-IA-II (I)] – Environmental Clearance.

1.0 M/s. Tamil Nadu Newsprint and Papers Limitedhas made online application vide proposal no. **IA/TN/IND/88943/2013** dated 19th December, 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above.The proposed project activity is listed at Sl. No. 5(i) Pulp and Paper Industry under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent:

2.0 TheProposed Mill Expansion Plan (MEP) of Unit-2, comprising of Installation of Paper Machine, Pulp Mill, Chemical Recovery Island, and Augmentation of Co-Generation Plant and utilities at TNPL, Unit 2, Mondipatti, Trichy of M/s Tamil Nadu Newsprint and Papers Limited located in Village Mondipatti, Tehsil Manaparai, District Tiruchirappalli, StateTamil Nadu was initially received in the Ministry on 27/03/2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 18th meeting held on 4th May 2017 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 22nd May, 2017 vide Lr. No. J-11011/172/2017-IA-II(I).

3.0 The project of M/s Tamil Nadu Newsprint and Papers Limited located in Mondipatti Village, Manaparai Tehsil, Tiruchirappalli District, Tamil Nadu State is a Mill Expansion Plan (MEP) which includes installation of Printing &Writing paper machine of capacity 1,65,000 tpa to increase the total paper production capacity to 3,65,000 tpa (increase by 1,65,000 tpa) along with ECF Chemical Wood Pulp Mill of capacity 1,40,000 tpa, chemical recovery section of 1100 TPD of black liquor solids, lime kiln and augmentation of existing Captive Power Plant, Effluent Treatment Plant and other infrastructure. The existing project was accorded environmental clearance vide letter.no. SEIAA-TN/F.No.1203/2013/5(i)&1(d)/EC-11/2014 dated 6th February, 2014. The compliance of earlier EC was obtained from Regional Office, Chennai vide Letter. No. EP/12.1/2016-17/SEIAA/24/TN, dated 14thDecember 2018.There are no non-compliances reportedby Regional officer.

4.0 The overview of the proposed capacities as against the existing capacities are as below:

Description	Unit	Existing	Incremental	Post MEP	MEP Proposal
Paper Machines					
Board Production	tpa	2,00,000	--	--	No Change
Printing & Writing Paper machine	tpa		1,65,000	1,65,000	New proposal
Total Board/Paper Production	tpa	2,00,000	1,65,000	3,65,000	--
ECF Chemical Wood Pulp Mill	BD tpa	--	1,40,000	1,40,000	New proposal
Recovery plant, including Recovery Boiler	tpd of black liquor solids	--	1,100	1,100	New proposal
Lime kiln	tpd of lime	--	250	250	New proposal
Power Boilers					
- Power Boiler s	tph of steam	2 x 90=180	1 x 130	310	Expansion
- Turbo Generators	MW of power	30	50 (1 x 30 MW +1 x 20 MW)	80	Expansion

Description	Unit	Existing	Incremental	Post MEP	MEP Proposal
Waste Water Treatment	m^3/day	9000	From 9000 to 12,000 + addition of new 15,000	27,000	Augmentation of existing ETP and addition of new ETP for pulp mill stream

5.0 No additional land has been acquired for the project. Unit 2 has total land of 874.46 acres, with vacant spaces and well covered with greenery. The entire land has been already acquired and is under the industrial use.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.

6.0 The topography of the existing mill area is flat and reported to lie between 10° 41' 13.434" Nto 10° 40' 47.7912" Latitude and 78° 27' 10.4976" E to 78° 25' 49.6164" E Longitude in Survey of India topo sheet No. 58 J /6, at an elevation of 145 m AMSL. The ground water table reported to ranges between 4 to 9 m below the land surface during the post-monsoon season and 8.2 to 12.6 m below the land surface during the pre-monsoon season. Further, the stage of groundwater development in Manaparai is reported to be 102 Ham and thereby the area falls under over exploited category from groundwater development point of view.

7.0 There are no National Park/Wild Life Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. No schedule I fauna in the study area were observed.

8.0 The wood requirement for the project is in the order of 5,70,000 TPA, which will be procured from TAFCORN, captive plantations and farm forestry. Chemical wood pulp mill consists of wood chipping, cooking, brown stock washing, oxygen delignification and bleaching.Wood is debarked and chipped in chippers. The wood chips are then taken into digester(s), where it is cooked. The pulp from digester is screened and then washed in washers. After washing the pulp is taken for oxygen delignification which is performed with oxygen (O_2) and caustic (NaOH) serving as the active chemicals.Pulp, after oxygen delignification, is led to a post oxygen washer and then bleached to a brightness level of minimum 88% ISO, by employing an ECF bleaching sequence. After bleaching, the pulp is washed and discharged into a bleached pulp storage tower which is then utilized for paper making.

9.0 The targeted paper production capacity Post MEP is 3,65,000 TPA. The increased pulp demand is met by installing ECF Chemical Wood Pulp Mill of capacity 1,40,000 BD tpa (400 tpd). The steam requirement of the proposed MEP will be met by the additional power boiler and chemical recovery boiler. Additional coal of 1,40,000 tpa is required for the proposed MEP which will be imported from Indonesia. the required quantity of coal will be received at Tuticorin port and transported by road trucks to the Mondipatti plant site.

10.0 The fresh water requirement after MEP will be around 20,700 m³/day.Fresh water will be sourced from River Cauvery through existing collector wells. Water requirement will be within water drawl permission of 23,100 m3/day.The permission for water drawlis obtained from Public Works Department, Tamil Nadu vide Lr. No. G.O. (Ms) No.18 dated 22nd January, 2015.

11.0 In order to meet the power requirement post MEP, it is proposed to increase the captive power generation capacity from 30 MW to 80 MW, by installing two new Turbo Generators of total capacity 50 MW.

12.0 Baseline Environmental Studies were conducted during post monsoon season i.e.from 8th June to 6th September, 2017. Ambient air quality monitoring has been carried out at 8 locations during 8th June 2017 to 6th September2017 and the data submitted indicated average PM_{10} (49.3 µg/m^3 to 68.0 µg/m^3), $PM_{2.5}$ (22.1 to 33.7µg/m^3), SO_2 (3.5 to 8.0 µg/m^3) and NOx (12.0 to 23.2 µg/m^3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.42 µg/m^3 with respect to the PM_{10}, 10.64. µg/m^3 with respect to the $SO_2$and 4.36 µg/m^3 with respect to the NOx.

13.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.8 to 8.2, Total Hardness: 154 to 1368 mg/l, Chlorides: 93 to 1050 mg/l,Fluoride: 0.21 to 0.24 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 6 locations. pH: 6.6 to 7.6; DO: < 2 mg/l, BOD: <4 mg/l.

14.0 Noise levels are in the range of 50.0 to 59.2 dBA for daytime and 39.5 to 47 dBA for night time.

15.0 No R&R is involved as no additional land is required for the project.

16.0 The additional boiler ash of 40 TPD generated post MEP will be sent to TNPL's own cement manufacturing unit at Kagithapuram, Karur. The additional primary clarifier sludge of the ETP of 35 TPD will be fired in boiler as fuel or disposed to cardboard manufacturing units. Additional Secondary Clarifier sludge from ETP of 5 TPD will be composted and used as manure for Green Cover. It has been envisaged that an area of 32 acres will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

17.0 The facility is granted Consent to Operate from TNPCB vide their Consent NoT1/TNPCB/F.0145TRY/RL/TRY/W/2017 dated10th July 2018 and T1/TNPCB/F.0142TRY/RL/TRY/A/2018 dated, 10th July 2018, valid up to 31st March 2019under Water (Prevention and Control of Pollution) Act 1974 and Air (Prevention and Control of Pollution) Act 1981 respectively as amended.

18.0 The Public hearing of the project was held on 6th September, 2018 at Arulmigu Mariamman Thirukkoil Thirumana Mandapam, Manapparai, Trichy under the chairmanship of District Collector for the proposed Mill Expansion Plan (MEP) which includes installation of P&W paper machine of capacity 1,65,000 tpa to increase the total paper production capacity to 3,65,000 tpa (increase by 1,65,000 tpa) along with ECF Chemical Wood

Pulp Mill of capacity 1,40,000 tpa, chemical recovery section of 1100 TPD of black liquor solids, lime kiln and augmentation of existing Captive Power Plant, Effluent Treatment Plant and other infrastructure. The issues raised during public hearing were related to disbursement of land compensation for 2015-16 green field project, employment opportunities to the local people, environmental impacts and implementation of CSR programs. The capital Corporate Environment Responsibility (CER) budget of Rs. 6.3 Crores has been embarked for the local community development within the vicinity of the study area for a period of 5 years which is arrived by considering 0.25 % of the total project cost.

The issues raised during Public Hearing held by TNPL, Unit 2 on 06/09/2018 and commitment of Project Proponent (PP) along with time bound action plan and financial allocation

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
1	Issues related to disbursement of land compensation for 2015-16 green field project	- Compensation is settled for 5 blocks covering 152 persons and Rs. 5.5 crores. - It was scheduled to pass final award for 12 blocks during the month of October to December 2018 and rest of the blocks will be completed by June 2019. - The reason for the payment staggering upto June 2019 is due to preparation of final valuation by collecting three years sales data from the Sub Registrar's Office, preparation of a combined sketch for a radius of 1.6 kms and marking the sale details in it for each block by the Special Deputy Collector (Land Acquisition) and scrutiny by the District Collectors Office for onward transmission to Commissioner of Land Administration (CLA), Chennai.	- On receiving the approval from the CLA, the DRO will pass the final award for that particular block. - Passing of award for each block will take an average of 20 days. - Though there is delay in processing, the payment is calculated with eligible interest till the date of final disbursement.	Time frame: Before end of June 2019 Budget: Will be as paid as per Government Order
2	Employment opportunities to the local people	- As per TNPL Board resolution 221 persons were eligible to secure employment under the land given category. - Out of the total strength of 627 employees, 92 persons have already been provided with employment under land given category, since 2015. - The balance eligible persons will be employed as and when they apply with necessary educational qualification certificates based on the requirement.	The employment opportunities given to the people under land given category are on the basis of qualification and TNPL HR policies. As per the commitment from TNPL, preferences will be given to the local people for fulfilling the manpower requirement.	Time frame- Ongoing, (whenever vacancy arises priority will be given to the local people) Budget: Not Applicable

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
		- The total contract employees engaged are around 1450. Out of this, about 60% of the persons belong to villages/towns within 15 KM radius of the Project area.		
3	Possible environmental impacts on local community – Treated wastewater utilization for irrigation, fugitive dust emissions from coal handling etc.	- Treated wastewater utilization*:* 1. The wastewater generated from the pulp mill and power plant will be separated and treated in the proposed new ETP. 2. No treated wastewater will be discharged into the water body. 3. The entire treated wastewater generated from the facility during post MEP will be completely utilized for irrigation as is done in the existing facility. 4. The total land requirement for irrigation using treated wastewater of 16,000 m^3/day (post MEP) will be about 1100 acres. 5. Ground water modeling was conducted to identify any adverse effect of TDS on ground water due to the application of treated wastewater for irrigation. For worst case scenario highest TDS level of 2100 mg/l in treated wastewater was considered and as per the results the maximum TDS of 1000 mg/l was observed in the ground water which is well within the permissible limit of drinking water standards of 2000 mg/l (IS 10500: 2012) - Fugitive Dust Emissions: 1. TNPL has already implemented various fugitive emission control measures in the existing facility and similar practices will be continued post MEP. Extension of coal handling plant with necessary dust	- Treated wastewater utilization: 1. While the existing green cover / plantation area is 650 acres, MoUs will be obtained for additional 500 acres for contract farming/formation of society with the surrounding farmers as done in TNPL Unit-1. 2. The wastewater will be treated to conform the statutory standards of inland surface water discharge of SPCB/CPCB before discharging for irrigation, ash quenching and plantation. 4. TNPL has engaged Department of Soil Science and Agricultural Chemistry, M/s Anbil Dharmalingam Agricultural College and Research Institute (ADAC&RI), Tamil Nadu Agricultural University (TNAU), Navalur Kuttapattu, Trichy to carry out a detailed study of Environmental quality assessment for the use of treated effluent discharged from the unit for irrigation/green belt development areas. The same practices will be continued post MEP. - Fugitive Dust Emissions: 1. Green belt has already been developed in and around plant premises in about 650 acres land which will be grown denser in the coming years and will be maintained to achieve	An estimated investment of about Rs. 200 crores is allocated towards pollution control equipment and implementation of environmental pollution control measures before the commencement of project

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
		controls for the proposed new boiler is envisaged with a dedicated water sprinkling system along with proper enclosures to control the fugitive dust emissions.	efficient fugitive dust emission control. 2. Existing closed conveyor belts will be extended up to the new boiler	
4	Concerns related to the implementation of CSR programs	- TNPL Unit-II has taken up community welfare activities for the benefit of people living in nearby Panchayats. - TNPL Unit II CSR covers five major sectors, viz., Education, Health care, Culture & Heritage, Socio Economic Development and Environment. - TNPL Unit II has started the CSR activities from 2015. - In the past three years of CSR implementation TNPL had invested about Rs.477 Lakhs in the local community development. - Out of the total CSR budget spent, about Rs. 54.51 Lakhs was spent during 2017-18 in the Panchayats in the Project area i.e. Chettichatram Panchayat, K.Periyapatti Panchayat and Mondipatti Panchayat. - As a part of green belt development, TNPL Unit 2 has planted total of about 6.65 lakh trees. Out of which 1.72 lakh trees were planted in the community area under social forestry program which is currently maintained by TNPL.	The capital Corporate Environment Responsibility (CER) budget of Rs. 6.3 Crores has been embarked for the local community development within the vicinity of the study area for a period of 5 years which is arrived by considering 0.25 % of the total project cost.	The capital Corporate Environment Responsibility (CER) budget of Rs. 6.3 Crores has been embarked for the local community development within the vicinity of the study area for a period of 5 years which is arrived by considering 0.25 % of the total project cost.

19.0 Activities and budget provision for CER:

S.No	Sector	Year wise CER Budget (Rs. in Lakhs)					
		2019-20	2020-21	2021-22	2022-23	2023-24	Total
1	Education	22.1	22.1	25.2	28.4	28.4	126
2	Health care	11.0	11.0	12.6	14.2	14.2	63
3	Socio-Economic	55.1	55.1	63.0	70.9	70.9	315

	Development and Security						
4	Environment	5.5	5.5	6.3	7.1	7.1	31.5
5	Cultural & Heritage	5.5	5.5	6.3	7.1	7.1	31.5
6	Soil & water Conservation	11.0	11.0	12.6	14.2	14.2	63
	Total	110.3	110.3	126.0	141.8	141.8	630.0

20.0 The capital cost of the project is Rs 2520 Crores and the capital cost for environmental protection measures is proposed as Rs 200 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 200 Crores.The detailed CSR plan has been provided in the EMP in its page No. 292 to 294. The employment generation from the proposed MEP is about 400 persons (direct) and 1000 persons (indirect).

SI. No	**Description**	**Capital Cost (In Crores)**
1	Power boiler ESP, stack and other control measures	15
2	Recovery Island	140
3	Ash handling	4
4	Sludge handling and dewatering	10
5	Effluent treatment Plant	20
6	Water conservation and recycling in paper machine section	6
7	Online environmental protection and monitoring	5
8	**Total**	**200**

21.0 Green belt has already been developed in and around the Plant premises in about 650 Acres out of the total land of 874.46 acres, which is about 74% of the total acquired area. A sum of about six lakhs plants belonging to 79 species have been planted among them species like Ficus, Eucalyptus, Neem, Ashok, Citrus, Coconut, Artocarpus, Dalbergia, Melia, Pongamia, Syzygium etc. are some of them.Total no. of 28,000plants will be planted and nurtured in 32 acres as a part of the expansion.A fund of 8.43 lakhs has been allocated for the same.

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

22.0 Name of the EIA Consultant: M/s. Cholamandalam MS Risk Services Limited, Chennai.

Observations of the Committee: -

23.0 The Committee sought information regarding Effluent Treatment Plant technology, CER budget, specific water consumption, Environmental policy and management of non-condensable gases. The information furnished by the proponent are summarized as below:

1. **Details of the proposed wastewater treatment system:**Wastewater generated from board and paper machines will be separated and will be treated in the existing ETP. Existing ETP

will be augmented from 9000 m^3/day to 12,0000m^3/day as against the estimated wastewater flow of 7,880 m^3/day. A dedicated ETP for treating for treating wastewater generated from the proposed hardwood pulp mill, chemical recovery and power plant effluents will be installed with a treatment capacity of 15,000 m^3/day. The proposed treatment system consists of primary clarifier, cooling tower, MBBR and activated biological sludge treatment plant and dissolved air floatation system. The treatment facility will be designed to meet the discharge norms prescribed by CPCB/TNPCB.

2. CER Budget shall be estimated as per the office memorandum issued by MoEF&CC DATED 1st May 2018 and the budget shall be spent during the project execution period:

The total estimated cost of the project is Rs. 2,520 Cr and the estimated CER as per the MoEF&CC notification on CER is 0.25% for brown-filed project with project capital cost falling in the range of Rs.1,000 Cr to 10,000/- Cr. Based on this notification the estimated CER budget for the proposed project is Rs. 6.3 Cr, however as per the earlier commitment made, Rs. 10.5 Cr has been budgeted towards CER, which is higher than that of the suggested minimum CER as per the MoEF&CC notification. The project will be developed in two successive phases over a period of 5 years with pulp mill during the first phase and paper mill in the second phase. Hence the CER spending plan for the next five years is presented in the following table:

S.No	Sector	Year wise CER Budget (Rs. in Lakhs)					
		2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total**
1	Education	36.8	36.8	42.0	47.3	47.3	210
2	Health care	18.4	18.4	21.0	23.6	23.6	105
3	Socio-Economic Development and Security	91.9	91.9	105.0	118.1	118.1	525
4	Environment	27.6	27.6	31.5	35.4	35.4	157.5
5	Cultural & Heritage	9.2	9.2	10.5	11.8	11.8	52.5
	Total	**183.8**	**183.8**	**210.0**	**236.3**	**236.3**	**1050.0**

3. Fresh water consumption: As a part of MEP, water conservation and recycling programs will be implemented to achieve specific water consumption not more than 20 m^3/t during the post MEP with total fresh water consumption of about 20,700 m^3/day.

4. **Environmental policy and environmental cell:**Revised and authenticated policy is enclosed as Annexure. A dedicated environmental cell will be formed and the head of the environmental cell will report to board of director of the company.

5. **NCG Gas treatment:**As per the USEPA published emission factors, the estimated NCG emissions will be in the order of 1,000 Kg/day from the proposed facility. NCG gases collected from digester relief and digester pulp discharge tanks, evaporator condenser and Brown stock and other sources will be collected and fired in the lime kiln and also provision

will be made for firing in the recovery boiler. NGS gases react with lime and sulfur compounds will be converted into sulfate salts within the lime kiln.

Recommendations of the committee:

25.0 After detailed deliberations, the Committee recommended for environmental clearance for the proposed Mill Expansion Plan of Unit-2, Installation of Paper Machine, Pulp Mill, Chemical Recovery Island, and Augmentation of Co-Generation Plant and utilities at TNPL, Unit 2, Mondipatti, Trichy by M/s Tamil Nadu Newsprint and Papers Limited under the provisions of EIA Notification, 2006 subject to following specific and general conditions:

A. Specific conditions:

i) The project proponent shall take necessary steps for control of odour.

ii) The PP shall adhere to Zero Liqud Discharge.

B. General Conditions:

I. **Statutory compliance**:

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

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

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

II. **Air quality monitoring and preservation**

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7thDecember 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and the systems be calibrated according to equipment supplier's specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

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

PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.

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

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

vi. The project proponent shall install high volume, low concentration NCG collection & destruction system to mitigate all malodorous gases emitted.

vii. Emissions shall be controlled from chemical recovery section through primary and secondary venturi scrubbers.

viii. Pollution control system in the pulp and paper plant shall be provided as per the CREP Guidelines of CPCB.

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

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

xi. In case of treatment process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.

xii. The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1 kg/tonne of paper production

xiii. Elemental Chlorine Free (ECF) technology shall be used and lime kiln shall be installed to manage lime sludge

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7thDecember 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

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

iv. The project proponent shall provide the ETP to meet the standards prescribed in vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7thDecember 2015 (Thermal Power Plants) as amended from time to time.

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

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

vii. Tyre washing facilities shall be provided at the entrance of the plant gate(s).

viii. Ensure that there is no black liquor spillage in the area of pulp mill, no use of elemental chlorine for bleaching in mill, installation of hypo preparation plant.

ix. Ensure that no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE in the Chemical recovery process directly to ETP

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

xi. Water meters shall be provided at the inlet to all unit processes in the steel plants.

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

IV. Noise monitoring and prevention

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

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

V. Energy Conservation measures

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

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

VI. Waste management

i. Deinking sludge and fine sludge from ETP shall be disposed through TSDF.

ii. Black Liquor shall be separately processed for recovery of energy and chemical in a Chemical Recovery Process.

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

iv. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office. (in case of CPP)

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

VII. Green Belt

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

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

VIII. Public hearing and Human health issues

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

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

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

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

v. The proponent shall follow International Standards of safety for ClO_2 generation and storage system, and ozone plant, and certification on regular basis may be submitted. Provision for adequate safety for personnel in case of any accidental leakage should be in place

IX. Corporate Environment Responsibility

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

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

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

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

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

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

X. Miscellaneous

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.15 Expansion of production capacity of Sponge Iron: 2,25,000 TPA to 3,73,500 TPA, TMT Bars: 3,30,000 TPA to 4,22,400 TPA, M.S. Billet/ S.S. Billets: 3,36,600 TPA to4,29,000 TPA, MS Rolled Bars: 6,483 TPA, Coal based Captive Power Plant (AFBC): 35MW and WHRB: 16 MW located at Village Samkhaiyali, Tehsil Bhachau, District Kutch, Gujarat by M/s Gallant Metal Limited [Online proposal No. IA/GJ/IND/5472/2013; MoEFCC File No. J-11011/52/2013-IA-II(I)]- Environmental Clearance.

1.0 M/s Gallant Metal Limited has made online application vide proposal no. IA/GJ/IND/5472/2013dated 24.12.2018along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 The proposed expansion in manufacturing of Sponge Iron, M.S. Billet/ S.S. Billets-, MS Rolled Bars, Runner & Raiser of M/s Gallantt Metal Limited located at Khasra No.-175/1 in Village- Samakhiyali, Tehsil- Bhachau, District – Kutch, State-Gujarat, was initially received in the Ministry on 10.11.2017for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry). [EAC (I)] during its 26th meeting held 12.12.2017and prescribed ToRS to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRS to the project on 19.12.2017 vide Lr. No. J-11011/52/2013-IA.II(I).

3.0 The project of M/s Gallantt Metal Limited located at Khasra No.175/1 in Village-Samakhiyali, Tehsil- Bhachau, District – Kutch, State-Gujarat is for setting up of a expansion for production of Sponge Iron- From 2,25,000TPA to 3,73,500TPA, M.S. Billets-From 3,36,600TPA to 4,29,000TPA, TMT Bars - From 3,30,000TPA to 4,22,400TPA, M S Rolled

Bar- From 5346TP to 6,843TPA, Runner & Raiser- From- 891 to 891(No Change), Power Plant (AFBC/CFBC)- From 25MW to 35MW, Power Plant (WHRB) from8MW to 16MW.The existing project was accorded environment clearance vide lr. no. J-11011/52/2013-IA.II(I) dated 19.05.2016. the Status of compliance of earlier EC was obtained from Regional Office, Bhopal vide letter No.-4-24/2007(Env.)/568 dated 18.10.2018. There are no non-compliances reported by Regional officer. The proposed capacity for different products for expansion area as below:

S. No.	Product	Existing (TPA)	Proposed (TPA)	Total After Expansion (TPA)
1.	Sponge Iron	2,25,000	1,48,500	3,73,500
2.	M.S. Billets	3,36,600	92,400	4,29,000
3.	TMT Bars	3,30,000	92,400	4,22,400
4	M S Rolled Bar	5346	1,497	6,843
5	Runner & Raiser	891	No change	891
Power Generation				
6	Power Plant (AFBC/CFBC)	25 MW	10MW	35 MW
7.	Power Plant (WHRB)	8MW	8MW	16MW

4.0 The total land required for the project is 18.58 Ha. out of 46.9435 ha (116 Acre), No forestland involved. The entire land has been acquired. No river passes through the project area. It has reported that Adhoi Nadi – 2.80Km, WSW, Gupt Nadi- 4.50Km, SW, Gorasar Talav-4.50Km, SSE, Pipla Talav-6.06Km, E, Kara Vokra-7.60Km, WSW, Amliyara Nadi-8.15Km,S, Khari River-9.82 Km, E, Vango Nadi-10.45 Km, SE, Babudi Nadi- 13.50Km, E water body/water exists around the project and no modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is flat and reported to lies between 23°18'32.58" N to23°19'04.47" N Latitude and 70°29'28.95" E to 70°29'41.87" E Longitude in Survey of India topo sheet no. 41I/7, 8, 11 & 12. at an elevation of 42m AMSL. The ground water table reported to ranges between10-20mbelow the land surface during the post-monsoon season and 15-20bellow and land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be none in core zone. Further, the stage of groundwater development is reported to be 24.40%% in Lakhpat taluka to 107.98% in Bhachau taluka (***Source: Kutch Ground Water Brochure***) in buffer zone respectively and thereby these are designated as overexploited exploited areas.

6.0 No National Park/WL etc are located at a distance of 10 KM from the site/No national park/wildlife sanctuary/biosphere/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also report to form corridor for Schedule-I fauna of Indian Pea – Fowl (*Pavo cristatus*) &Painted Stork. The authenticated list of flora and fauna provided through the Chief Conservator of Forest, Kutch Circle reporting presence of schedule-I fauna in the study are (Annexure- XIV of EIA).

7.0 The process of project showing the basic raw material- Iron ore- Total- 5,97,600 existing- 3,60,000 TPA, proposed – 2,37,600TPA, Sponge-Total- 3,73,500TPA(Existing-

2,25,360TPA, Proposed- 1,48,140TPA, Scrap- Total- 1,56,660TPA(Existing-1,56,660TPA, Proposed- Nil) M.S. Billets- Total-4,49,000TPA(Existing- 3,41,976TPA, Proposed - 87,024TPA), Coal Char- Total- 9,3513TPA(Existing- 66,795TPA, Proposed- 26,718TPA), Coal- Total 663057TPA(Existing- 4,28,818TPA, Proposed- 2,34,239TPA) used and the various processes involved to produce the final output, waste generated in process.

8.0 The targeted production capacity of Sponge Iron- From 2,25,000TPA to 3,73,500TPA, M.S. Billets-From 3,36,600TPA to 4,29,000TPA, TMT Bars - From 3,30,000TPA to 4,22,400TPA, M S Rolled Bar- From 5346TP to 6,843TPA, Runner & Raiser- From- 891 to 891(No Change), Power Plant (AFBC/CFBC)- From 25MW to 35MW, Power Plant (WHRB) from8MW to 16MW. The ore for the plant would be procured from Jindal Saw Limted. (MoU). The ore transportation will be done through Road.

9.0 The water requirement of the project is estimated as 1,855m^3/day(Fresh 1661 m^3/day, Recycled - 194 m^3/day. Fresh water requirement will be obtained from the GWIL(Gujarat Water Infrastructure limited. The permission for drawl of surface water is obtained from GWIL vide letter no.-GWIL/Kutch/Ind. Connect./3000 dated 31.12.2010.

10.0 The total power requirement of the project is estimated as 51MWH(Existing- 33MWH, Proposed-18MWH), Electricity is sourced from Captive Power Plant and remaining will be met from State grid (as and when required).

11.0 Baseline Environmental Studies were conducted during Winter season i.e. from December'2017to January, February 2018. Ambient air quality monitoring has been carried out at 8 locations during 01.12.2017to 28.02.2018 and the data submitted indicated: PM10 (63.20ug/m3 to 80.40ug/m3), PM 2.5 (32.20 ug/m3 to 43.70.ug/m3), SO_2 (7.20 ug/m3 to 15.70ug/m3) and NOx (14.00 ug/m3to 23.40ug/m3). The results of the modeling study indicated that the maximum increase of GLC for the proposed project is 0.7ug/m3 with respect to the PM10 is 0.48ug/m3 with respect to the SO_2 3.06ug/m3 with respect to the NOx is 4.5 ug/m3.

12.0 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 6.60 to 7.14, Total Hardness: 70mg/l to 950mg/l, Chlorides: 40mg/l to 1610mg/l, Fluoride: 0.07to 0.9mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 6locations. pH: 6.44 to 7.17; DO: 6.4mg/l -6.80mg/l and BOD : 8mg/l.-21mg/l COD from 24mg/l to 208mg/l.

13.0 Noise levels are in the range of 60.2 to 71dB(A) for daytime and 57.3 to 69.0dB(A) for nighttime.

14.0 It has been reported that there are none people in the core zone of the project. No/R%R is involved. It has been envisaged that none families to be rehabilitated, which will be provided compensation and preference in the employment.

15.0 It has been reported that total Slag – 27083 TPA of waste will be generated due to the project will be sold to road construction activity, Total Ash-99000TPA will be sold to brick manufacturing and sent to TSDF site for utilization of fly ash as binding material for solidification and stabilization, Coal Char-96761TPA, 100% reused in Power plant as a fuel,

Accretion-1550TPA will be used in Land filling activity and municipal Solid Waste - 375Kg/Day Sent to Municipal Council Bhachau, District –Kutch, Gujarat.

16.0 It has been envisaged that an area of 15.4914 Ha ha will developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

17.0 It has been reported that the Consent to Operate from the Gujarat State Pollution Control Board has been obtained vide Lr. No. PC/ CCA-KUTCH-341(5)/GPCB ID 17845/349490 dated 21.03.2016 & Order No. AWH/ 76789 dated 29.02.2016 which is valid up to 27.12.2020 and Amendment in Consent & Authorization was sanctioned for increase in product manufacturing capacity vide letter No. PC/CCA-Kutch-341(5)/GPCB ID17845/364967 dated 01.08.2016 which is valid for 27.12.2020.

18.0 The Public hearing of the project was held on 31.07.2018 at 11.00A.M. in the plant premises under the chairmanship of Ms. Remya Mohan(IAS), DM, Bhuj, District- Kutch and Regional Officer- Shri K.B Choudhary of Regional Office, Kucth (East) for production Sponge Iron- From 2,25,000TPA to 3,73,500TPA, M.S. Billets-From 3,36,600TPA to 4,29,000TPA, TMT Bars - From 3,30,000TPA to 4,22,400TPA, M S Rolled Bar- From 5346TP to 6,843TPA, Runner & Raiser- From- 891 to 891(No Change), Power Plant (AFBC/CFBC)- From 25MW to 35MW, Power Plant (WHRB) from8MW to 16MW for setting up of expansion capacity of plant under the EIA Notification 2006 and its subsequent amendments. The issues during public hearing are employment, air pollution, Health. An amount of 3, 12.50Lakhs (2% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

19.0 The capital cost of the project is Rs. 596Cores (Existing -380Crore Proposed-216Crore) and the capital cost for environmental protection measures is proposed as Rs 740.0 Lakhs.. The annual recurring cost towards the environmental protection measures is proposed as Rs 65.0Lakhs. The detailed CSR plan has been provided in the EMP in its page No. 264-264. The employment generation from the proposed project /expansion is 290.

20.0 Greenbelt will be developed in 15.4914 Ha. (38.28 Acre which is about 33 % of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEFCC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 6200 saplings will be planted and nurtured in 4.1278 Ha. (10.20 Acre) in 5 years.

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

22.0 Name of EIA consultant: M/s. Enkay Enviro Services Pvt. Ltd., Jaipur QCI Accredited (SI.No.45, at QCI list dated 11/12/2018).

Observations of the Committee: -

23.0 The committee observed that the noise monitoring data, ground water quality monioted data and the action plan to the issues raised during the public consultation etc., are not adequately covered in the EIA/EMP report.

Recommendations of the Committee: -

24.0 After detailed delibrations, the Committee sought following additional information for further reconsideration of the proposal:

i. Revised noise monitoring data.

ii. Revised ground water quality monitored data.

iii. Study on drainage pattern of the study area.

iv. Revised action plan to the issues raised during the public hearing.

v. Revised action plan for implementation of Corporate Environmental Responsbility related activities.

3.16 Expansion of Steel Melting Shop (IF with LF & CCM: from 135000 TPA to 375000; Rolling Mill: from 90000 TPA to 297000; Coal Drawing Workshop: 33000TPA located at Nakrajoria, PS-Salanpur Dist:-Burdwan(W), West Bengal by M/s Maithan Steel & Power Limited [Online proposal No. IA/WB/IND/88715/2017; MoEFCC File No. J-11011/679/2008- IA-II(I)]- Environmental Clearance.

1.0 M/s Maithan Steel & Power Limited has made online application vide proposal no. IA/WB/IND/88715/2017 dated 17th December 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 Theexpansionprojectof M/s. Maithan Steel & Power Ltd located in Village-Nakrajoria, PS-Salanpur, District-Paschim Bardhaman, State-West Bengal was initially received in the Ministry on15.12.2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 27th meeting held on 03.01.2018 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 16.01.2018vide Lr. No. J-11011/679/2008-IA-II(I)].

3.0 The project of M/s. Maithan Steel & Power Ltd. located in Village- Nakrajoria, ,PS-Salanpur, District-Paschim Bardhaman, State- West Bengal is for enhancement of steel production capacity from 0.135 MTPA to 0.375 MTPA. The existing project was accorded environmental clearance vide Lr.no J-11011/679/2008-IA II (I) dated 27.08.2010.The Status of

compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide Lr. No.102-309/08/EPE/3618, dated05.12.2018.There is no non-compliances reported by Regional officer. The proposed capacity for different products for new site area (including existing units) as below:

Units	**Existing Facilities as per EC-J-11011/679/2008-IA II(I)**	**Existing capacity**	**Proposed** facilities	**Proposed Capacity** In TPA	**Final configuration**	**Final** Capacity In TPA	**End use**
IF with LF & CCM	3x15 T IF + 1 CCM	1,35,000 billets	5x15T IF + 1 CCM + LRF	2,40,000 billet	8x15T IF + 2 CCM + LRF	3,75,000 billet	Rolling Mill & Sale
Rolling mill	1x300 TPD	90,000 hot rolled products	600 TPD (Existing 300 TPD RM to be expanded to 600 TPD and 1x300 TPD new to be installed.)	2,07,000 Long & flat product	1x600 TPD 1x300 TPD	2,97,000 Long products like TMT, Ms Round wire rod and Structural steel &flat product like strips	Sale
Cold drawing workshop	Nil	Nil	1x100 TPD	33,000	1x100 TPD	33000 Cold drawn Torkari (Ribbed bar), Black wire. Nails, corrugated sheets, Wire Mesh, Black pipes etc.	Sale

4.0 The total land required for the project is 10.27ha industrial land. No forestland involved. The entire land has been acquired for the project. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is flatand reported to lies between to 23^0 46' 27.36'' Nto23^0 46' 43.85'' N Latitude and 86^0 52' 0.19'' E to 86^0 52' 53.32'' E Longitude in Survey of India topo sheet No. F45 C 13 & F45 C 14 at an elevation of 153m AMSL. The ground water table reported to ranges between 2.0m – 5.0m below the land surface during the post-monsoon season

and 10m – 17m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be75m. Further, the stage of groundwater development is reported to be43% and 45-60% in core and buffer zone respectively and thereby these are designated as safeareas.

6.0 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported tobelocatedinthecoreandbuffer zoneoftheproject.Theareaalso does not reporttoform corridors for Schedule-I fauna. The authenticated list of flora and fauna provided through the Base Line study reporting presence of no Schedule-I fauna in the study area given in section 3.3.11of chapter 3 in the EIA/EMP report

7.0 The process of project:Sponge iron, Pig iron and iron scrap mixture in the mass percentage ratio of approx85:10:5 will be meltedusing eddy current of coreless, medium frequency Induction Furnace.Slag deposit over molten metal will be scooped out and ferroalloys to be added to molten metal as per demand thenmolten metal will be casted to billet in continuous billet caster. Slag will be cooled down, groundand residual ironto be recovered from slag using magnetic separator. Red hot billets to be drawn in rod rolling mill, quenched in water bath for short period and thus TMT rods & Coils areto be produced. From red hot billet flat products will also be rolled in rolling mill complex. Scrap from billet cutting, iron recovered from slag to be recycled to IF for melting along with fresh feed. Slag to be used for construction work and land fill. In cold drawing workshop low carbon steel purchased from outside to be drawn into products like Torkari, Black wire, corrugated sheet, wire mesh and nail etc.

8.0 The targeted production capacity of the projectis0.33 MTPA Long & Flat hot rolled, Coils& Cold Drawn Products and 0.375 MTPA Billets taken together. Sponge Iron ore& pig for the plant would be purchased from sister concern/open market.The material transportation will be done through Road.

9.0 The fresh water requirement of the project is estimated at 1,250 m^3 /day;At present the water is being drawn from Water reservoir/pond inside the plant. Application has been made to Damodar Valley Reservoir Regulation Committee for supplying water for the project,

10.0 The power requirement of the project is estimated as 44MVA.At present agreement has been made for drawl of 25 MVAfromDVC, vide Lr no-Coml/CD/18-19/ Kalyaneshwari/ MSPL/2770 dt.03.08.2018. Application has been made for enhancement.

11.0 Baseline Environmental Studies were conducted during winterseason i.e. 1st December 2017 to 28th February 2018.Ambient air quality monitoring has been carried out at 8 locations during 01.12.2017to 28.02.2018, and the data submitted indicated: PM_{10} (66.6 to 93.6 µg/m^3), $PM_{2.5}$ (31.3 to 56.4µg/m^3), SO_2 (12.1 to 22.8µg/m^3) and NOx (14.4µg/m^3to27.6 µg/m^3). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 0.75 µg/m^3 with respect to the PM_{10}**,** 0.57 µg/m^3 with respect to $PM_{2.5}$.

12.0 Ground water quality has been monitored in 8locations in the study area and analysed. pH:7.2to 7.5, Total Hardness116 to 144 mg/l, Chlorides: 46.4 to 51.6mg/l, Fluoride:0.35 to 0.48 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 7.2 to 7.8; DO: 5.2to 6.6mg/l and BOD: 4.8 to 7.2mg/l& no COD: 29.1 to 40.3mg/l.

13.0 Noise levels are in the range of 49.5to 65.2 dB(A) for daytime and 42.3to 50.8 dB(A) for night time.

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

15.0 It has been reported that a total of 50,500 TPA of solid waste will be generated due to the project, which will be used as construction material. It has been envisaged that an area of 3.4ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

16.0 IthasbeenreportedthattheConsenttoOperatefromthe West Bengal. State Pollution Control Board obtained videC0110133dated 30.07.2018and consent is valid up to **30.06.2023**

17. The Public hearing of the project was held on 17.08.2018at-Conference Hall of Panaroma Country club & Resort,Salanpurunder the chairmanship of Kaushik Mukharjee, WBCS(Exe), representative of District Magistrate for production of 0.33 MTPA Long & Flat hot rolled, Coils& Cold Drawn Products and 0.375 MTPA Billets under theexpansion. The issues raised during public hearing are as follows.

Sl.No	Name of Person	Points/questions raised by Public	Commitment of P P
1	Sumit Mondal, Salanpur Dulal Chand Khan, Dendua	Increase in pollution load due to expansion of the project	As the expansion is introduction of Induction Furnace. So, there will be no use of fossil fuel. Emission during charging will be taken care by dust arresters, bag filters attached to stacks.
2	Pachu Baroi, Salanpur	Power consumption by the plant may cause power shortage for general public.	Power will be purchased from DVC which is dedicated for industries and the plant will have its own transformer which will not cause any power shortage for the domestic utilization
3	Jitu Ghosal, Dendua Md Mobin khan, Kalyaneshwari Somnath Bauri, Salanpur	Employment provisions for the local unemployed	Local youth will be preferred as per their qualification and skill
4	Bibek Sen, Dhundabad	Status of replacement of the vegetation that will be removed due to the expansion.	Tree cutting is not envisaged as expansion will take place in the vacant space only. Existing green belt will not be affected

5	Somnath Mondal, Maheshpur Sailendra Prasad, Nakrajoria	Concern on Solid waste generation due to the expansion	The only solid waste that will be generated will be IF slag. The remaining iron will be removed and slag dust will be used as a construction material.
6	Sauresh Mondal, Dendua	Peripheral development to be carried out after the expansion.	As per the CER norms the company will spend for the peripheral development with consultation of local authorities.
7	Sibunath Gorei, Banditi	Enquired about the source of water for the expansion project and its impact on water regime	Water will be sourced from DVC which will have no effect on the ground water regime
8	Akshay Kumar Layak kalyaneshwari	Concern regarding health effects due to pollution	Control measures will be taken for air pollution like bag filters system, Water sprinkling and increase in green belt.
9	Ujjwal Mondal, Salanpur	Asked whether provision for health & education is only for employees or for general people	Health camps are organized in regular intervals for the general public and educational support will be given after consultation with local authorities

18.0 An amount of 127Lakhs (1% of 100 cr + 0.75 % of next 36.5 cr Project cost) has been earmarked for CER based on public hearing issues and socio economic study report.CER Budget is as follows:

S.No.	Item	Description	IstYr (in lacs)	2nd Yr (in lacs)	Total (in lacs)
1	Drinking water	Sinking of new bore wells, pipelines in villages.	20	15	35
2	Women Empowerment	Engaging under privilege women in self help group to make them sustainable	7	3	10
3	Support to Local Farmers	Providing supports & awareness to local farmers.	3	2	05
4	Strengthening of approaching road	Strengthening of villages approach roads, making drainages etc.	15	10	25
5	Health	Health Camp and Health Care facilities to villages	8	7	15
6	Plantation	Avenue plantation & plantation in community	6	4	10
7	Primary School renovation	Infrastructure developments & assisting school in other	12	8	20

		renovation job.			
8	Others	Miscellaneous Expenses	6	4	10
	TOTAL		**130**		

19.0 The capital cost of the project is Rs136.5 Crore and the capital cost for environmental protection measures is proposed as Rs.550.Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 60.00lakhs. The detailed CER plan has been provided in EMP in its section 7.9 of Chapter-7.

20.0 Greenbelt will be developed in **3.4 ha** which is about **33%** of the total acquired area. A wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEFCC, New Delhi guidelines. Local and native species will be planted with a density of 1500 trees per hectare. Total no. of 5,116saplings will be planted and nurtured in 3.4 hectares of land.

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

22.0 EIA Consultant: Global Tech Enviro Experts Pvt. Ltd., Bhubaneshwar.

Observations of the Committee: -

23.0 The committee observed that the public hearing was chaired by Shri Kaushik Mukherjee, Dy Magistrate & Dy Collector, who is below the rank of ADM. The committee noted that the Addl Chief Secretary, West Bengal has requested the ministry to consider the public hearing chaired by the Dy. Collector as the district has formed newly and shortage of ADM level officers. The competent authrotiy has approved for consideration of the pubic consultation conviened under chairmanship of Dy. Collector. The committee also observed that the impact prediction for the NOx was not presented and advised the project proponent to submit the impact prediction of the NOx. Accordingly, the PP submitted the impact prediction of the NOx during the course of the meeting.

Recommendations of the Committee: -

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

A. Speicific conditions:

i. The project propnet shall plan for re-charging of rain water equalent to the amount of the water abstracted from ground.

ii. 100% hot charging has to be done and no reheating furnace will be used.

B. General Conditions:

I. Statutory compliance:

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

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

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

II. Air quality monitoring and preservation

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

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

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

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

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

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

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

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

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

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

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

III. Water quality monitoring and preservation

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

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

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

iv. Adhere to 'Zero Liquid Discharge'.

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

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

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

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

IV. Noise monitoring and prevention

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

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

V. Energy Conservation measures

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

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

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

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

VI. Waste management

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

ii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

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

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

VII. Green Belt

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

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

VIII. Public hearing and Human health issues

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

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

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

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

IX. Corporate Environment Responsibility

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

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

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

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

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

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

X. Miscellaneous

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.17 Expansion of mini integrated steel plant at village Taraimal, P.O.Gerwani, Tehsil Gharghoda, District Raigarh, Chhattisgarh by M/s Singhal Enterprises Private Limited [Online Proposal No. IA/CG/IND/88614/2018; MoEFCC File No. J-11011/195/2007- IA.II(I)] – Change of product mix under clause 7(ii) of EIA Notification, 2006.

1.0 The proponent has made online application vide proposal no. **IA/CG/IND/88614/2018** dated 15.12.2018 seeking amendment in environmental clearance of expansion of mini integrated steel plant at village Taraimal, P.O.Gerwani, Tehsil Gharghoda, District Raigarh, Chhattisgarh under the provisions of clause 7(ii) of EIA Notification, 2006. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006 and appraised at the Central level.

Details submitted by the Project Proponent

2.0 M/s. Singhal Enterprises Private Limited proposed for Expansion of mini integrated steel plant at Taraimal village, P.O.Gerwani, , Gharghoda Tehsil, District Raigarh, Chhattisgarh. EC issued by Ministry for the Expansion proposal vide No. J-11011/195/2007- IA.II (I) dated 23rd July, 2018. Proposal submitted vide proposal no. IA/CG/IND/53125/2016 dated 30th August 2018. EDS issued on 1st October 2018. Proposal submitted for amendment to manufacture of 24,000 TPA of M.S. Billets / Ingots through Induction Furnace & 90,000 TPA of TMT

Bars/Structural steels through hot charging instead of manufacturing of 1,20,000 TPA of M.S. Billets / Ingots through Induction Furnace under 7 (ii) category vide dt. 30th August 2018 there by 6000 TPA reduction in Production capacities.

3.0 Compliance Status of EC compliance:Regional Office of MOEF&CC, Nagpur has issued Certified compliance report on earlier EC conditions vide dated 27-07-2017. There were certain non-compliances /partial compliances in the certified compliance report and accordingly PP have submitted a letter to the Regional office of MOEF&CC vide dated 4th November, 2017 requesting for issue of closure report on non-compliances/partial compliances. Closure report has been issued by the Regional office of MOEF&CC vide F. NO. 5-34/2008(ENV)/3801 dated 7th June, 2018.

4.0 As per the EC accorded on 23rd July, 2018, it was granted permission to establish 1,20,000 TPA of M.S. Billets / Ingots through Induction furnace. Now, it is proposed to go for hot charging of hot metal into Rolling mill directly to produce TMT Bars/ Structural steels of 90,000 TPA capacity.

5.0 Out of 1,20,000 TPA, 96,000 TPA of hot metal will be taken to Rolling Mill to produce 90,0000 TPA of TMT Bars/ Structural steels and remaining 24,000 TPA will used for manufacturing of M.S. Billets / Ingots. Estimated project cost for the proposal is Rs. 20 crores**.**

6.0 Change in raw materials: Overall external Raw material requirement will reduce by 2500 TPA. The Hot metal produced from Induction Furnace will be partly utilized for manufacturing of M.S. Billets / Ingots of 24,000 TPA & remaining will be sent to Rolling mill for Direct Rolling / Hot Charging to produce 90,000 TPA of Rolled Products.

7.0 **Advantages of using direct hot charging instead of making M.S. Billets / Ingots:**

A. Energy Conservation Measures proposed

- It is a green technology of Direct Rolling of hot continuous cast billet to produce TMT bars and therefore, completely avoided usage of Furnace Oil in reheating furnace. This would save about 3000 KL of Furnace Oil and reduce around 9,000 tons of CO_2 per annum.
- Cast billet Temperature of around 1100 degree C.
- Modification in the caster as compared to the conventional caster are speed of casting, water pressure & temperature, cooling zone, water circulation system etc. including PLC based complete automation and control system for operation of CCM.
- High speed billet conveyor with VFD drives with insulated cover.
- VFD for Water pumps in TMT system to reduce power consumption.

B. Environmental advantages are

- Energy conservation by eliminating the cooling of hot metal and making of Billets.
- Energy conservation as Reheating of Billets is eliminated
- No requirement for reheating furnace. Hence fuel conservation.
- As no reheating furnace and no fuel, there will be no air emissions from the fuel burning.

Hence this is an environmentally very beneficial technology**.**

8.0 Proposed mitigation plan for dealing of additional pollution load: The following is the comparison of environmental parameters of Billet manufacturing through IF & Rolled product manufacturing through hot charging:

Environmental Parameter	**As per E.C.**	**Proposal for Change od product mix**	**Remarks**
Production capacity	Billets through IF - 1,20,000 TPA	Billets of 24,000 TPA Rolled Product – 90,000 TPA (without Reheating Furnace, through Hot charging)	5% reduction in Production capacity
Raw material Consumption (TPA)	1,49,300 TPA	1,46,800 TPA (after considering recycling of End Cuttings as input to IF)	1.7 % reduction in External Raw material requirement.
Water requirement	100 KLD	75 KLD	25% reduction in water Consumption
Wastewater	Closed circuit cooling system will be adopted. Hence no wastewater discharge.	Oils separator and Settling tank will be provided as ETP to treat the wastewater generated. Closed circuit cooling system will be adopted. Mill scales generated will be reused in the SMS. Hence no wastewater discharge out side.	----
Heat loss	Heat loss due to cooling of Billets will be there.	No heat loss as hot metal from IF will be directly taken to the Rolling Mill without Reheating Furnace.	Significant Heat conservation
Solid waste disposal	Slag will be crushed and after recovery of metallic content it will be given to brick manufacturer.	Slag will be crushed and after recovery of metallic content it will be given to brick manufacturers. End cuttings will be reused into SMS.	No solid waste disposal issue w.r.t solid waste disposal.

Particulate Emission load	5.4 Kg/hr	There will be marginal decrease in Particulate emission load due to reduction in Scrap requirement.	---
Vehicular Emissions	1,20,000 TPA of Billets proposed to be sent to Raipur which is about 200 Kms. from the plant	Now only 24,000 TPA of Billets are proposed to be sent to Raipur & Remaining 90,000 TPA of Rolled Products will be sold in Raigarh which is 20 Kms. only.	Eliminates Long distance transport of End product.
Any additional Land acquisition	Not Applicable	No additional land acquisition is envisaged for Rolling mill and will be established within the existing plant premises.	---
Greenbelt	Existing Greenbelt is 50 Ha.	Proposed to be increased by 1.0 Ha.	2 % increase in greenbelt
Solar power generation	Not existing	Will be generated for common areas, lights along road sides	Energy conservation through provision of LED lights.
Energy conservation	Not existing	All lights will be converted to LED	

9.0 **The following are the salient features of the present proposal**:

- Present proposal is only change of product mix with **5% reduction** in production capacity by 6000 TPA.
- Public Hearing has been carried out on 06-10-2007 as per the provisions of EIA Notification 2006 and its subsequent amendments.
- No additional land envisaged.
- 1.7% reduction in external Raw material requirement.
- 25% reduction in water consumption.
- No additional wastewater.
- No increase in air emission load.
- No increase in Vehicular emissions.
- 2 % increase in greenbelt.

10.0 Requested change of product-mix:Permission to manufacture of

(i) 24,000 TPA of M.S. Billets / Ingots through Induction Furnace

(ii) 90,000 TPA of TMT Bars/Structural steels

10.0 EIA Consultant: M/s. Pioneer Enviro Laboratories & Consultants (P) Ltd., Hyderabad;

Observation and recommendations of the Committee:

11. After detailed deliberations, the committee recommended for environmental clearance for change in product-mix for manufacture manufacture of 24,000 TPA of M.S. Billets / Ingots through Induction Furnace and 90,000 TPA of TMT Bars/Structural steelsunder para 7(ii) of the EIA Notification, 2006 subject to following additional conditions:

i. Particulate emission from the stacks shall be less than 30 mg/Nm^3.

ii. All bag filters shall be fitted with fiber glass filters to maintain above emission norms.

iii. All other terms and conditions mentioned in the earlier environmental clearance accorded vide letter no. J-11011/195/2007- IA.II (I) dated 23rd July, 2018shall remain unchanged.

3.18 Mineral beneficiation of M/s. Vedanta Washery and Logistic Solutions Private Limited located at village Kunkuni, Tehsil Kharsia, District Raigarh Chhattisgarh (1.2 MTPA iron ore and iron ore fines beneficiation unit) - [Online Proposal No. IA/CG/MIN/25101/2014; MoEF&CC F. No. J-11015/346/2014-IA.II(M)] – Validity extension of Terms of Reference.

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. After detailed delibrations, the Committee recommended to return the proposal in present form.

3.19 Proposed Expansion of Steel Plant by enhancement of existing 2X250 M3 Blast Furnace volume to 2X300 M3 Blast Furnace volume, installation of 3x4 MVA Ferro Alloys Plant, 0.6 Page 6 of 37 MTPA Sinter Plant and 2,52,000 TPA DI Pipe Plant at the existing premises located at Banskopa, P.O. Rajbandh, Tehsil & P.S. Kanksa, District Paschim Burdwan, West Bengal by M/s Jai Balaji Industries Ltd [Online Proposal No. IA/WB/IND/88661/2018; J11011/724/2008-IA.II(I)] – Terms of Reference.

1.0 The proponent has made online application vide proposal no. **IA/WB/IND/88661/2018** dated 15th December, 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & nonferrous) under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

Details submitted by the Project Proponent

2.0 M/s. Jai Balaji Industries Ltd. proposes expansion of Steel Plant by enhancement of existing 2X250 M3 Blast Furnace volume to 2X300 M3 Blast Furnace volume, installation of 3x4 MVA (39,600 TPA) Electric Arc Furnaces, 0.6 MTPA Sinter Plant and 2,52,000 TPA DI Pipe Plant at the existing premises.

3.0 The Company obtained Environment Clearance from MoEF&CC dated 30th August, 2010. Now, the Company is planning to set up few new units in the existing plant premises. The overall project scenario is as given below:

Sl. No.	Facilities	Capacity as per EC from MoEF&CC Dt. 30-10-2010 (TPA)		Proposed Capacity		Ultimate Capacity (TPA)	Remarks
		Units as per EC	Existing Capacity	Existing Capacity Enhancement	New Installation		
1.	Iron ore beneficiation	6,00,000	-	-	-	-	Dropped
2.	Pellet Plant	6,00,000	-	-	-	-	Dropped
3.	Sinter Plant	6,08,256	6,08,256	-	6,00,000	12,08,256	New Installation
4.	Blast Furnace	5,04,000 (2 X 250 M^3)	5,04,000 (2 X 250 M^3)	1,08,500 TPA (By increasing MBF capacity from 2x250 M^3 to 2x300 M^3)	-	6,12,500 (2x300 M^3)	Enhancement of Existing 2X250 M^3 Blast Furnace volume to 2X300 M^3 Blast Furnace.
6.	Pulverized Coal Injection (PCI)	97,200	97,200	-	-	97,200	-
7.	Desulpherization	5,04,000	-	-	-	-	Dropped
8.	Electric Arc Furnace for Steel making	4,50,000 (1x60 T)	4,50,000 (1x60 T)	-	-	4,50,000 (1x60 T)	-
10	Electric Arc	-	-	-	3 X 4 MVA	Ferro-Chrome –	New Installatio

	Furnace for Ferro Alloy				Electric Arc Furnace	39,600	n
10.	Oxygen Plant	58,320	58,320	-	-	58,320	-
11.	Lime Kiln	54,000	-	-	-	-	Dropped
12.	Ductile Iron Pipe	2,52,000	2,52,000	-	2,52,000	5,04,000	New Installation
13.	Rolling Mill	6,00,000	-	-	-	-	Dropped
14.	Producer Gas Plant	4x3000 M^3	-	-	-	-	Dropped

4.0 The proposed unit is located at Banskopa, P.O.- Rajbandh, Tehsil & P.S. Kanksa, District – Paschim Bardhaman of West Bengal. The geographical co-ordinates are Latitude 23°28'52.79"N to 23°29'36.17"N&Longitude - 87°21'57.33"E to 87°22'22.76"E with Above Mean Sea Level (AMSL) of 65 m to 73 m.

5.0 The proposed expansion project will be installed on the available land within the existing plant premises, comprising total72.84 hectares (180 acres) of land. No forest land involved. The entire land has been acquired for the project.

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

7.0 Total project cost is approx. Rs. 258.7 Crores. Manpower, to the tune of 700 persons will be required for the plant operations.

8.0 The targeted production capacity of the proposed Sinter Plant is 12,08,256 TPA in total, Enhancement of Existing 2X250 M3 Blast Furnace volume to 2X300 M3 Blast Furnace,Ferro-Chrome – 39,600 TPA,DI Plant - 5,04,000 TPA in total. The ore transportation will be done through Rail and road.

9.0 The estimated power requirement of the proposed expansion project is about 23.1 MVA. The above power requirement for the plant is proposed to be met from DVC state grid through 220 kV double circuit overhead line.

10.0 Proposed raw materials and fuel requirement for major products of the project are as follows:

RAW MATERIAL	QUANTITY (TPA	SOURCE	TRANSPORTATION
SINTER PLANT			

IRON ORE FINES	11,40,000	Barbil	Rail
LIME STONE WITH FINES	1,66,000	Katni	Rail
DOLOMITE	1,16,000	Bhutan	Rail / Road
COKE BREEZE	1,14,000	Local Market	Road
BLAST FURNACE			
SINTER	9,80,000	In house sinter plant	-
IRON ORE LUMP	2,45,000	Barbil	Rail
COKE	3,67,500	Local Market	Rail / Road
PULVERISED COAL	42,900	In house PCI plant	-
QUARTZITE	1,225	Local market	Road
DUCTILE IRON PIPE			
HOT METAL	5,04,000	In house MBF	-
LOW CARBON FERRO CHROME			
CHROME ORE	59,000	Orissa	Rail
SILICON CHROME ALLOY	25,000	Local Market	Road
LIME	43,500	Local Market	Road

11.0 The total requirement of make-up water to meet process make-up and drinking needs of the proposed new facilities will be 33 m3/hr, to be sourced from Asansol Durgapur Development Authority (ADDA) water supply facilities.Domestic wastewater will be treated in septic tank-soak pit system. and industrial waste water generated will be treated in water treatment facility and reused completely.

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

13.0 EIA Consultatant: Envirotech East Pvt. Ltd., NABET Accreditation as per QCI NABET list of 17th December, 2018: Sl. No. 54, Page No.: 55, Sector No. 8, Metallurgical Industries (Ferrous & Non-ferrous) - both Primary & Secondary, Category-A

Recommendations of the committee:

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

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

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

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

iv. The PP shall submit the compliance of the conditions of earlier EC certified by the regional officer of MoEFCC along with the EIA/EMP.

3.20 Proposed Cement project for enhancement of production capacity (2000 TPD) by M/s Trumboo Industries Pvt. Ltd. (TIPL) village-Khrew, Tehsil-Pampore, District Pulwama, State J & K. [Online Proposal No. IA/JK/IND/53478/2016; MoEFCC File No. J11011/204/2016-IA-II] – Amendments in ToR.

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. Futher the committee noted that the project proponent has not attended in earlier meetings alos. After detailed delibrations, the Committee recommended to return the proposal in present form.

3.21 Iron Ore Pelletisation plant (4 MTPA) of M/s Brahmani River Pellets Ltd. located at Khurunti, Kalinga Nagar, Jajpur, Odisha.[Online Proposal No. IA/OR/IND/24543/2014; MoEFCC File No. J-11011/295/2014-IA.II(I)] – Amendment in Environmental Clearance.

1.0 M/s Brahrnani River Pellets Limited has made application vide online proposa no. IA/OR/IND/24543/2014 dated 4th December, 2018 seeking an amendment in environmental clearance conditions stipulated vide F.No. J-11011/295/2014-IA.II(I) dated 06.04.2016 for the Iron Ore Pelletisation plant (4 MTPA) of M/s Brahmani River Pellets Ltd. located at Khurunti, Kalinga Nagar, Jajpur, Odisha.

Details submitted by the project proponent:

2.0 M/s Brahrnani River Pellets Limited located in Village Khurunti, Tehsil Sukinda, District Jajpur, operating iron ore pellet plant for production of 4.0 million tonnes per annum (million TPA) TPA of Iron ore Pellets.

3.0 The total land acquired for the project is 35.61 ha, which is an industrial land allotted to BRPL by Odisha Industrial Infrastructure Development Corporation (IDCO).

4.0 River Brahmani is at a distance of 9. 7 Km from the project site. There is no National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger Reserve, Elephant Reserve etc. within the project as well as 10 km radius buffer zone of the project site.

5.0 The total cost of the project is Rs. 644 Cr. The capital cost for environmental protection measures is Rs.3864 Lakhs. The annual recurring cost towards the environmental protection measures is calculated as Rs. 628 Lakhs.

6.0 The production capacity of the Pellets is 4.0 million TPA. The ore for the plant is getting in the form of iron ore concentrate from BRPL's Beneficiation plant at Barbil, State Odisha. The ore transportation is being done through underground slurry pipeline from Barbil to Jajpur.

7.0 M/s Brahmani River Pellets Ltd.(BRPL) has obtained Environmental Clearance for total capacity of 4.0 MTPA Pellets Vide File No. J-11011/295/2014-IA-II (I), Dated 06/04/2016.

8.0 Statutory Clearance for BRPL

F.No.J-11011/295/2014-IA-II(I) Date 06-04-2016	MoEF & CC Environmental Clearance for BRPL 4.0 MTPA Pellet Plant at Kalinga Nagar Industrial Complex, Jajpur
F.No.J-11015/121/2007-IA-II(M) Date 19-02-2009	MoEF & CC Environmental Clearance for BRPL 4.75 MTPA Beneficiation Plant at Tanto & Tailing Pond at Nalda under Barbil Tehsil in Keonjhar District
No.14729/IND-I-CON-6109 Date 29-09-2016	OSPCB Consent to Operate for BRPL Pellet Plant at Kalinga Nagar Industrial Complex, Jajpur valid upto 31-3-2021
No.15958/IND-I-CON-6348 Date 02-11-2016	OSPCB Consent to Operate for BRPL Beneficiation Plant at Tanto & Tailing Pond at Nalda under Barbil Tehsil in Keonjhar District va;id upto 31-3-2020

9.0 As on date the unit has installed and operating Pellet Plant with capacity 2.5 MTPA and complying with the conditions as mentioned in the above Environmental Clearance.

10.0 With implementation of efficient equipments and various other environmental safeguards such as Pucca Roads, Paved area for parking, proper implementation for rain water harvesting, recycle/ reuse of water has decreased the overall demand of water requirement for the unit. Water Balance for 2.5 MTPA operational capacity is enclosed along with.

11.0 BRPL uses eco-friendly mode of iron ore transportation. It has a long-distance underground slurry pipeline for transportation of iron ore.

12.0 The pipeline uses water as carrier of ore. There is only physical mixing of water with grinded iron ore. This mixture (not compound) is then separated through a cloth filter at the terminal station. Both mixing water with iron ore and separation of ore from slurry are physical processes. The water that is available after filtering out iron ore is of very good quality. In that sense, water available after filtration is not really process water, but actually “carrier water”.

13.0 Under current setup, BRPL is able to use entire carrier water internally for its pellet manufacturing process. The drawback is that BRPL is running at sub-optimal capacity utilization of about 60-70% only. For full capacity utilization, more carrier water is needed. Because of zero discharge condition, BRPL is unable to achieve its full capacity utilization. BRPL is now proposing a win-win environment friendly solution to this problem through this application for modification of the special condition of zero liquid discharge. BRPL is situated inside a steel

industry complex called "Kalinga Nagar Industrial Complex". It has about 13 big and medium industries which all need water.

14.0 On discussions with these industries like Tata Steel, Jindal Stainless, Neelachal Ispat, and Industrial Development Corporation of Odisha, it came out that all these industries and IDCO are more than happy to use the good quality carrier water from BRPL for their manufacturing processes and reduce the direct intake of surface water from various rivers. This carrier water is of very good quality and in high demand for use in the steel and cement industry.

15.0 In view of the above it may not be feasible to maintain Zero Liquid Discharge (ZLD) at full capacity utilization of 4.0 MTPA. Both the Water Balance Diagrams (Initially Submitted along with EIA/EMP and as proposed now) are also attached along with. The unit proposes to utilise the excess water for supply to nearby industries for their consumption and reducing pumping/ Intake of surface water directly by them.

16.0 Proposed Water Balance Table:

Particulars	**Incoming Water for 4 MTPA (Cum/hr)**	**Water Use Proposed now for 4 MTPA (Cum/hr)**
Water in Slurry available	**280**	-
Process	-	60
Cooling Tower	-	38
Dust Suppression	-	87
Quenching	-	4
Filter Washing	-	8
Floor Washing	-	2
Domestic and Canteen	-	4
Plantation	-	0
Water to be supplied outside units	-	**77**
Total	**280**	**280**

17.0 Rainwater issue: At this juncture, BRPL would bring to the notice of MoEF&CC that it is located at the lowest elevation among all nearby industries. BRPL elevation relative to other industries from is as follows:

Industry	**Elevation (m)**
BRPL	46

Mesco Steel	60
Jindal Stainless	68
Tata Steel	72
Neelachal Ispat	75
Gadapur hill	112

As clear from above, the project is located at the lowest elevation relative to its nearby industries. Thus all the runoff water passes through BRPL premises. BRPL has already have a 250 KLD ETP for treating the surface run-off water, so there is no pollution load from plant on the natural stream.

18.0 M/s Brahmani River Pellets Ltd. (BRPL) as an eco-friendly solution to surplus water problem, requests to modify:

1) EC Special Condition (vii) from -

"Zero effluent Discharge shall be strictly followed and no waste water shall be discharged outside the premises."

As - **"Zero effluent Discharge shsall be strictly followed by utilizing the waste water in-house or supply to nearby industries for consumption."**

2) EC General Condition (vii) from -

"The Company Shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season beside recharging the ground water table."

As - **"The Company Shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season beside recharging the ground water table andthe rainwater from nearby industries entering BRPL premises to be channelized to the natural stream after proper treatment."**

With this modification, BRPL will be able to utilize its full capacity.

Observations of the committee:

19.0 After detailed deliberations, the committee opined that the proposed utilizing the waste water in-house or supply to nearby industries for their consumption will be help in water conservation, therefore, the proposal may be recommended. Whereas, the mandment sough for the rain water harvesting inorder to allow the water entering into the premis from surrounding industries may not comes under the perview of the committee.

Recommendations of the committee:

20.0 Inlight of the above, the committee recommended for modification of environmental condition (vii) as follows as requested at para 18(i) with following additional conditions;

For	Read as
Zero effluent Discharge shall be strictly followed and no waste water shall be discharged outside the premises	**Zero effluent Discharge shsall be strictly followed by utilizing the waste water in-house or supply to nearby industries for consumption**

i) The project proponent shall make a MoU with all the waste water reciving industries including with Industrial Development Corporation (IDCO).

3.22 Expansion of Integrated Steel Plant (from existing 0.074 MTPA Steel Billets to 0.3 MTPA Rolled products and 0.2 MTPA Billet) with captive power plant of 99 MW [65 MW (6 MW existing + 59 MW proposed) from AFBC and 34 MW (6 MW existing + 28 MW proposed) from WHRB] of M/s Shakambhari Ispat and Power Ltd., located at Village Pavatpur, Radhamadhabpur, Madandih, PO–Bortoria, District Purulia, West Bengal [Online Proposal No. IA/WB/IND/48189/2014; MoEFCC File No. J-11011/201/2013-IA.II(I)]– Amendment in Environmental Clearance.

1.0 M/s Shakambhari Ispat & Power Limited made an application vide online proposal no. IA/CG/IND/48189/2014 dated 30th November, 2018 sought amendment in the environmental clearance accorded by the MoEF&CC, New Delhi on 21st December, 2016 vide letter No. J-11011/201/2013-IA II(I) accorded for expansion of Integrated Steel Plant (from existing 0.074 MTPA Steel Billets to 0.3 MTPA Rolled products and 0.2 MTPA Billet) with captive power plant of 99 MW [65 MW (6 MW existing + 59 MW proposed) from AFBC and 34 MW (6 MW existing + 28 MW proposed) from WHRB] located at Village Pavatpur, Radhamadhabpur, Madandih, PO–Bortoria, District Purulia, West Bengal.

Details submitted by the project proponent:

2.0 M/s Shakambhari Ispat & Power Limited has implemented some of the facilties and some of the facilties are yet to be implemented. It is proased to change some of the configuration without increasing the overall production capacities.

3.0 The units / capacities for which Environmental clearance has been accorded from MoEF&CC, the implemented units, the units not implemented along with amendment required for units, are presented below:

Sl. No.	Facilities	Capacities as per Environment Clearance from MoEF&CC vide File No. J-11011/201/2013-IAII(I) dated 21.12.2016		Existing Status		Amendment Required (Final Configuration)		Remarks
				Implemented capacities	Unit not yet Implemented			
		Configur	Producti			Configur	Producti	

		ation	on			ation	on	
1	2	3	4	5	6	7	8	9
1	Induction Furnace with Caster	1x8 T 2X15 T 2x12 T 2x35T 4x25T	5,23,950 TPA	1x8T 2X15 T 2x12T 2x25T	2x25T 2x35T	9x25 T	5,23,950 TPA	5x25T Induction Furnaces shall be installed by replacing already impleme nted 1x8T, 2x12T, 2X15 T and by revising 2x35T capacity furnaces, which is yet to be impleme nted. Total number of units reduced from 11 to 9.
		232 T		112 T	120 T	225 T		
2	Sponge Iron / DRI with Pre-Heater	3x100 TPD 4x350 TPD	5,44,000 TPA	3x100 TPD, 2x350 TPD	2x350 TPD	3x100 TPD, 2x350 TPD, 1x600 TPD, 1X100 TPD	5,44,000 TPA	1x600 TPD and 1x100 TPD DRI Kiln shall be installed instead of 2x350 TPD DRI Kilns (not yet impleme nted) to achieve
		1700 TPD		1000 TPD	700 TPD	1700 TPD		

								better productivity, high steam generation, less land & water requirement.
3	AFBC / CFBC	65 MW	65 MW	32 MW	33 MW	62 MW	62 MW	Capacity of AFBC/CFBC reduced from 65 MW to 62 MW. Capacity of WHRB increased from 34 MW to 37 MW due to improved steam generation from proposed combination of (1x600TPD +1 x100 TPD) DRI.
	WHRB	34 MW	34 MW	20 MW	14 MW	37 MW	37 MW	
	TOTAL CPP	99 MW		52 MW	47 MW	99 MW		

4.	Ferro Alloy Plant	2x12 MVA 2x12 MVA	FeMn-36,608TPA SiMn-26,542 TPA	-	2x12 MVA 2x12 MVA	4x9 MVA FeMn / SiMn/ FeCr/ FeSi /Pig Iron	63150 TPA	Size of each SAF is reduced from 12 MVA to 9MVA, thereby reducing the total installed capacity from 48MVA to 36 MVA.
		4X12 MVA	63150 TPA		4X12 MVA		63150 TPA	
5.	Rolling Mill	1000 TPD	3,00,000 TPA	600 TPD	400 TPD	1000 TPD	3,00,000 TPA	No Change
6	Coal Washery	0.74 MTPA	Clean Coal-0.33MTPA Middlings-0.28MTPA Rejects-0.05 MTPA	-	0.74 MTPA	0.74 MTPA	Clean Coal-0.33MTPA Middlings-0.28MTPA Rejects-0.05 MTPA	
7	Iron Ore Beneficiation	0.63 MTPA	Beneficiated IO-0.394 MTPA Tailings – 0.236 MTPA	-	0.63 MTPA	0.63 MTPA	Beneficiated IO-0.394 MTPA Tailings – 0.236 MTPA	
8	Sinter Plant	1x20 m^2	1,98,000 TPA	-	1x20 m^2	1x20 m^2	1,98,000 TPA	
9	Pellet Plant	1x1870 TPD	5,82,000 TPA	-	1x1870 TPD	1x1870 TPD	5,82,000 TPA	
10	MBF	1x350 m^3	2,49,900 TPA	-	1x350 m^3	1x350 m^3	2,49,900 TPA	
11	Oxygen Plant	225 m^3	-	-	225 m^3	225 m^3	-	
12	Lime Plant	250 TPD	80,000 TPA	-	250 TPD	250 TPD	80,000 TPA	

4.0 The salient features of the amendment proposal are as follows,

- ✓ Overall coal consumption shall be reduced by 38,160 TPA resulting in reduced pollution load.
- ✓ Overall Dust load shall be reduced by 11,515 kg/annum
- ✓ Land requirement shall be reduced by 2.25 acres.
- ✓ Power generation shall be increased by 3 MW through WHRB and reducing same through CFBC Boiler.
- ✓ Rolling Mill based on direct charging of hot Billets. No Reheating Furnace.
- ✓ DRI Dolochar shall be 100% consumed in the Power Plant. Other iron bearing dust and mill scales shall be consumed in Sinter Plant.

5.0 EIA Consultant: Envirotech East Pvt. Ltd., NABET Accreditation as per QCI NABET list of 17th December, 2018.

Observations of the committee:

6.0 The committee observed that the overall production capacity will remain unchanged and the larger configuration will reduce the pollution load.

Recommendations of the committee:

7.0 After detailed deliberations, the committee recommended for amendment in the configuration as proposed in the table.

11thJanuary, 2019 (Teesta)

3.23 Expansion of Sponge Iron/Sponge Pellets, CPP and Waste Heat Recovery Boiler Manufacturing Unit in existing premises at survey No. 394/2, 398-400, NH-8A, Village: Chhadawada. Taluka: Bhachau, Dist. Kutch, Gujarat of M/S. ASR Multimetals Private Limited. [Proposal No. IA/GJ/IND/85547/2015; MoEFCC File No. J-11011/251/2007-IA- (II)] – Environmental Clearance.

1.0 The proponent has made online application vide proposal no. **IA/GJ/IND/85547/2015** dated 26th December 2018 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2.0 M/s ASR Multimetals Private Limited located in Village Chhadawada Tehsil Bhachau District Kutch, State Gujarat was initially received in the Ministry on 28.04.2015 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 39th meeting held on 20.05.2015 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 07.07.2015 vide Lr. No. J – 11011/251/2007-IA II (I).

3.0 The project of M/s ASR Multimetals Private Limited located in Chhadawada Village, Bhachau Tehsil, Kutch District, Gujarat State is for enhancement of production of MS Rods, MS Wires, MS Flats & Re Rolled Steel Products MS (i.e. Channels, Angles, Bars, Rounds, Sections & Profiles etc) from 144000 MTto288000 MTper annum (TPA) (Total 432000 MT), Sponge Iron from 66000 MT to 180000 MT per annum (TPA) (Total 246000 MT), Power from WHRB (Waste Heat Gases Rotary Kiln) from 4 MW to 8 MW (Total 12 MW), Steel Billets/ Ingots (Semi finished product) from 147996 MT to 288000 MT per annum (TPA) (Total 435996 MT) and Power from AFBC Boiler (Coal Base) from 4 MW to 17 MW (Total 21 MW). The existing project wasaccordedenvironmentalclearancevidelr.no. J – 11011/251/2007-IA II (I) dated 31.March,2008.The Status of compliance of earlier EC was obtained from Regional Bhopal Office vide Lr. No. 5-49/2009(ENV)/519 dated 26.09.2018. There is no non-compliances reported by Regional officer. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Rotary Kiln	02	250MT	180000 MT per Annum
WHRB	01	08MWH	08MWH
Induction Furnace	02	30MT	288000 MT per Annum
Rolling Mill (MS Rods, Wires, Flats,)	01	24000 per Month	288000 MT per Annum
AFBC Boiler	01	17MWH	17MWH

4.0 The total land required for the project is 31.37736 ha, out of which 25.7834 ha is an agricultural land, 0.020 ha is grazing land and 5.57396 ha is others (0 Government Land). No forestland is involved. The entire land has been acquired for the project. The No River passes through the project area (p./c). It has been reported that no water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is Flat (flat/undulated) and reported to lies between 23.30’48” to 23.31’06” N Latitude and 70.46’54” to 70.46’73” E Longitude in Survey of India topo sheet No. NF42-3, at an elevation of 44m AMSL The ground water table reported to ranges between 25.05 to 37.64 below the land surface during the post-monsoon season and 13.71 to 27.43 below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be NIL. Further, the stage of groundwater development is reported to be 0% and 0% in core and buffer zone respectively and thereby these are designated as safe/critically exploited areas.

6.0 The National Park/WL etc are located at a distance of None within 10 KM from the site. No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna provided through the reporting presence of no Schedule-I fauna in the study area (As per Annexure-15 of EIA).

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

8.0 The targeted production capacity of the (as per above mention point number 3 details) is million TPA. The ore for the plant would be procured from (linkages 24000MT per Month Form Jindal saw Ltd, Imported / Domestic). The ore transportation will be done through Road/Sea (Rail/Road/Conveyor/Slurry Pipeline).

9.0 The water requirement of the project is estimated as 1000 m^3/day, out of which 1540m^3 /day of fresh water requirement will be obtained from the GWIL and the remaining requirement of 540m^3/day will be met from the GWIL. The permission for drawl of groundwater / surface water is obtained from NIL Vide Lr. No. NIL date NIL.

10.0 The power requirement of the project is estimated as 31MW, out of which 46.5MW will be obtained from the SEB /GRID & Captive Power Plant.

11.0 Baseline Environmental Studies were conducted during summer season i.e. from 15 March 2015 to 15 June 2015. Ambient air quality monitoring has been carried out at 8 locations during 15 March 2015 to 15 June 2015 and the data submitted indicated: PM10 (60µg/m3 to 99 µg/m3), PM2.5 (20 to 55µg/m3), SO2 (3.37 to 26.14 µg/m3) and NOx (8.31 to 35.02 µg/m3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is with respect to the PM10,86.637 µg/m3 with respect to the SO2 20.898 µg/m3 with respect to the NOx 33.267 µg/m3.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.22 to7.93 , Total Hardness: 144 to 718 mg/l, Chlorides: 7.85 to 1417 mg/l, Fluoride: 0.84 to 1.52 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 4 locations pH: 6.70 to 7.43; DO: 0 to 0 mg/l and BOD: 0.6 to 16 mg/l. COD from 20 to 160 mg/l.

13.0 Noise levels are in the range of 52.1 to 70.9 dB(A) for daytime and 36.2 to 51 dB(A) for Night time/

14.0 It has been reported that there are 199 people in the core zone of the project. No R&R is involved. It has been envisaged that 180 families to be rehabilitated, which will be provided compensation and preference in the employment.

15.0 It has been reported that a total of 287541.365 tons/m^3 of waste will be generated due to the project, out of which 72600 will be used in Power Plant as a Raw Material And 111.365 will be dumped at TSDF Site in the earmarked dump yard. It has been envisaged that an area of

14.4753 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

16.0 It has been reported that the Consent to Establish/Consent to Operate from the Gujarat State Pollution Control Board / Pollution Control Committee obtained vide Lr. No AWH-93776 dated 20 June 2018 and consent is valid up to 13 May 2023.

17.0 The Public hearing of the project was held on 07.08.2018 at 11:00 hrs Project site of M/s ASR Multimetals Private Limited National Highway 8A Near RTO check post village Chhadawada Taluka Bhachau Dist. Kutch (Gujarat) – 370140 under the chairmanship of GPCB RO Gandhidham/DM Bhuj (designation) for production(enhancement) of MS Rods, MS Wires, MS Flats & Re Rolled Steel products MS (i.e. Channels, Angles, Bars, Rounds, Sections &Profiles etc) from 144000 MT to288000 MT per annum (TPA) (Total 432000 MT), Sponge Iron from 66000 MT to 180000 MT per annum (TPA) (Total 246000 MT), Power from WHRB (Waste Heat Gases Rotary Kiln) from 4 MW to 8 MW (Total 12 MW), Steel Billets/ Ingots (Semi finished product) from 147996 MT to 288000 MT per annum (TPA) (Total 435996 MT) and Power from AFBC Boiler (Coal Base) from 4 MW to 17 MW (Total 21 MW), under the Public Hearing. The issues raised during public hearing are Less amount of CSR Fund were spent &Dust particles were observed in near villages . Local people be considered for employment. Rain scarce area, hence affecting crops. Local villagers ask company to. An amount of 120 Lakhs (0.48% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

18.0 The capital cost of the project is Rs 250 Crores and the capital cost for environmental protection measures is proposed as Rs 357 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 60 Lakhs The detailed CSR plan has been provided in the EMP in its page No. 137 to 149 in EIA report. The employment generation from the proposed project / expansion is 400 Nos (Approx).

19.0 Greenbelt will be developed in 14.4753 hectares which is about 47 % of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 35000 samplings will be planted and nurtured in 14 hectares in 5 years.

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

Observations of the committee:

21.0 The committee noted that the baseline data is more than three years old; the EIA report is not in as per the generic structure as mandated in the Appendix –III of EIA Notification 2006; number of ToRs prescribed were not properly addressed. The committee noted that the baseline data shall not be older than 3 years by the time of application for EC to the Ministry as per the Office memerundum issued by the Ministry. Further the committee observed that the details made in the presentation and EIA EMP report is not matching.

Recommendations of the committee:

22.0 In light of the above, the committee recommended for rejection of the proposal and advised the PP to obtain the fresh ToRs.

3.24 Enhancement in Cement production capacity (2.5 MTPA to 3.0 MTPA) at Villages: Risda&Dhandhani, Tehsil: Balodabazar, District: Balodabazar - Bhatapara (Chhattisgarh) by M/s. Emami Cement Ltd. [Proposal No.IA/CG/IND/89610/2018; MoEFCC File No.J-11011/309/2013-IAII(I) – Environmental Clearance under para7(ii) of EIA Notification, 2006

1.0 M/s Emami Cement Limited made an application vide online proposal no. IA/CG/IND/89610/2018dated 25.12.2018 seeking environmental clearance for enhancement in Cement production capacity from 2.5 MTPA to 3.0 MTPA at existing cement plant located at villages: Risda&Dhandhani, Tehsil: Balodabazar, District: Balodabazar – Bhatapara, Chhattisgarh under the provisions of 7(ii) of EIA Notification, 2006. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent:

2.0 M/s. Emami Cement Limited has an existing Integrated Cement Plant with a capacity of 3.2 MTPA Clinker; 2.5 MTPA Cement; 30 MW CPP; and 9 MW WHRB located at villages - Risda & Dhandhani, Tehsil -Balodabazar, District - Balodabazar – Bhatapara of Chhattisgarh. The following Environmental Clearance for the existing plant was issued by MoEFCC, New Delhi:

- Cement (2.5 MTPA) & CPP (30 MW): Vide letter no. J-11011/372/2007-IA (II) dated 31st Oct., 2011; which was subsequently amended on 30th Dec., 2013 (reg. plant area & type of cement manufactured) & 01st Feb., 2016 (reg. outsourcing of clinker, use of Petcoke & Agro waste and change in configuration of CPP).

- Clinker (3.2 MTPA) & WHRB (9 MW): Vide letter no. J-11011/309/2013-IA (II) dated 08th Sept., 2016 and amended on 06th Nov., 2017 (reg. outsourcing of limestone in existing cement plant).

3.0 Certified compliance for the existing ECs was obtained from Regional Office of MoEFCC, Nagpur vide letter no. 5-62/2011(ENV)/4580 dated 13th Nov., 2018 and closure report of all the observations made during the issuance of certified compliance report vide letter no. 5-62/2011(ENV) dated 03rd Jan., 2019.

4.0 M/s. Emami Cement Limited is proposing an enhancement in production capacity of Cement from 2.5 MTPA to 3.0 MTPA by process optimization & modification in the existing cement plant at Villages: Risda & Dhandhani, Tehsil: Balodabazar, District: Balodabazar - Bhatapara (Chhattisgarh). For this proposed enhancement, there will be no additional requirement of land.

5.0 Currently, Cement Mill is operating at 335 Tons Per Hour (TPH), considering twenty and half hour (201/2) daily running, it is capable of producing 2.5 Million Tons Per Annum; which is as per the conditions stipulated in the CTO granted to ECL. Now, it is proposed to increase Cement Mill throughput to 401 TPH, so as to enhance capacity to **3.0 Million Tons Per Annum** by doing following process optimizations and modifications:

- Increasing Hydraulic Pressure from 180 to 195 bar for grinding
- Increasing Nozzle Velocity 43 m/s to 54 m/s by reducing mill nozzle area
- Optimizing Dam Ring Height - Dam ring height will be increased from present 290 to 320 mm for better stability of the material bed as well as smooth operation of the mill
- Optimizing present water flow - water flow in water spray system will be increased from 9.0 m3/h to 12.0 m3/h
- Mill product bucket elevator capacity will be enhanced by replacing drive motor (110 kW to 132 kW) and gearbox
- Fly Ash feed bucket elevator capacity will be enhanced by replacing drive motor (55 kW to 75 kW)

6.0 Also, there will be no additional pollution load. However, specific power consumption will be reduced from 29 to 27 KWH/ton of cement. Therefore, with proposed process optimization & modification, the company will be able to achieve enhanced capacity of cement (i.e. from 2.5 MTPA to 3.0 MTPA).

7.0 Capital Cost of the proposed enhancement project is Rs. 50 Lacs. Out of which capital cost for environment protection measure will be Rs. 5 Lacs and recurring cost/annum: Rs. 0.5 Lacs / annum.

8.0 Proposed mitigation plan for dealing of additional pollution load: Bag House has already been installed along with Cement Mill stack to control the emissions within prescribed limit. Current Process Fan will be sufficient to handle increased air & material flow inside the mill after proposed enhancement. With the increased production, Emission load (gm / T of Mill feed) will decrease from 69.79 to 64.32 gm / T.Bag Filters (18 in nos.) has been installed at all material transfer points to reduce dust emission. Currently, all the bag filters are operating at half of its capacity; thus, the same need not to be upgraded with the enhance capacity.

Observations of the committee:

9.0 The proposed expansion for the cement production is without incease in the clinker production for which the EC has accorded for 3.2 MTPA.

Recommendations of the committee:

10.0 In light of the above, the committee recommended the proposal for expansion of cement production from 2.5 MTPA to 3.0 MTPA with the following specific conditions.

i. Stregthing of APCD for further reduction of pollution loads and limit the emission to 25 mg/Nm3 by replacement of the bags.

ii. The PP shall carry out an additional green blet in 5 Ha out sude the premises.

iii. The PP shall replace all the lights used in office and all other ancillary facilties of the plant with LED lights.

iv. The PP shall utlize alteast 2% of alternate fuel (waste) for co-processing.

3.25 Zinc smelter of 210000 TPA(170000 TPA+ 40000 TPA debottlenecked) and CPP (154 MW), to include one fumer plant 1 to eliminate the generation of Jarosite and for production of clean slag. by M/s. Hindustan Zinc Limited [Proposal No. IA/RJ/IND/72454/2004; MoEF File No. J11011/158/2003 IAII(I) - Amendment in Environment Clearance.

The PP didi not attend consequetively for three meetings. Therefore, the committee return the proposal in present form.

3.26 Greenfield integrated cement project consisting of clinker (2.4 MTPA), cement (4MTPA), captive power plant (25 MW) and waste heat recovery power generation (15 MW) of M/s Shree Cement Ltd near village Pedagarlapadu, MamdalKarempudi, District Guntur, Andhra Pradesh [Proposal No. IA/AP/IND/26358/2014; MoEFCC File No. J-11011/165/2014-IAII(I)- Further consideration for EC.

The proponent has made online application vide proposal no. **IA/AP/IND/26358/2014** along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plantsunder category 'A' of the Schedule of EIA Notification, 2006. Therefore, the proposal is appraised at the Central Level.

Details submitted by the Project Proponent

2.0 The Proposed Greenfield Integrated Cement Plant Project of M/s Shree Cement Limited located in Village Pedagarlapedu Tehsil Dachepalli District Guntur State Andhra Pradesh was initially received in the Ministry on 15th April 2014 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC (I)] during its meeting held on 23rd June 2014 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 11th August 2014 vide Lr. No. J.11011/165/2014-IA.II (I).

3.0 Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 23rd February 2016 vide Online Application No. IA/AP/IND/26358/2014. Proposal was considered by the EAC on dt 12th June 2018 vide agenda item no. 32.23 and based on the presentation made and detailed deliberations, the Committee desired that the project proponent should provide the documents relating to acquisition of the land for further consideration of the project. Accordingly, land documents were submitted to MoEF&CC vide letter SCL/EC/AP/2018-19 dated 26th December 2018.

4.0 The project of M/s Shree Cement Ltd. located in Village Pedagarlapedu, Tehsil Dachepalli, District Guntur, AP is for setting up of a new Greenfield integrated Cement Plant for production of 2.4 Million Tons Per Annum Clinker, 4.0 Million Tons Per Annum Cement, 25 MW Captive Power Plant (CPP), 15 MW Waste Heat Recovery Power Generation (WHRS) and Residential Colony.

5.0 The total land required for the project is 142.79 ha (Plant: 100.49 ha and Residential colony: 42.30 ha), out of which 102.92 ha (72.09%) is agricultural land, no, grazing land and 39.87 ha (27.92%) is other land (4.896 ha is Government Land). No forestland is involved. Out of total required 142.79 ha land, 122.55 ha has been purchased on mutual basis, agreement has been made of 15.34 ha and allotment of 4. 9 ha Government land is under process. No river passes through the project area. It has been reported that a village pond is exist near the project area and modification/diversion in the existing drainage pattern at any stage has not been proposed.

6.0 The topography of the area is flat and reported to lies between 16° 30' 51" N to 16 31' 25" N and 79° 43' 48" E to 79 44' 40" E for Plant Site and 16°30’46” to 16°31’ 13” N and 79°44’25” to 79°44’56” E for Residential colony in Survey of India Topo Sheet No. 56P/10 at an elevation of 120 m AMSL. The ground water table reported to ranges between 10 to14 m below the land surface during the post-monsoon season and 12 to18 m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 364 m. Further, the stage of groundwater development is reported to be 80% and 34% in core and buffer zone respectively and thereby these are designated as safe areas.

7.0 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The list of flora and fauna provided through the Ecology Expert reporting presence of no schedule-I fauna in the study area (Section-3.8, Chapter-3 of EIA Report).

8.0 The process of project: Limestone, gypsum (chemical gypsum, synthetic gypsum and Indian & imported mineral gypsum), bauxite, iron ore and fly ash and pond ash are the raw materials/additives required for the cement plant. Coal (Indian and imported) & pet coke (Indian and imported) will be used as feedstock for cement plant and Coal will be used as fuel for the power generation. Pre-calciner dry process technology will be used for Clinkerization. VRM and Ball mill will be used for cement grinding. Air cooled condenser technology will be used for power generation and waste heat recovery unit will be installed.

9.0 The targeted production capacity of the Clinker is 2.4 Million Tons Per Annum, Cement 4.0 Million Tons Per Annum, 25 MW Captive Power Plant (CPP), 15 MW Waste Heat Recovery Power Generation (WHRS) and Residential Colony. The limestone for the plant would be sourced from adjacent Captive Limestone Mines. The ore (bauxite, iron) transportation will be done through road and rail.

10.0 The total water requirement of the project is estimated as 1350 m^3/day, which will be obtained from the groundwater. The permission for drawl of groundwater is obtained from CGWA vide Letter No. 21-4 (283)/SR/CGWA/2012-1687 dated 20th September 2013 and renewal application submitted on 20th February 2016 & 1st November 2018.

11.0 The power requirement of the project is estimated as 35 MW, which will be obtained from the proposed CPP, WHRS and Power Grid.

12.0 Baseline Environmental Studies were conducted during winter season i.e from December 2014 to February 2015. Ambient air quality monitoring has been carried out at 8 locations during December 2014 to February 2015 and the data submitted indicated: PM10 (38 µg/m^3 to 73 µg/m^3), $PM_{2.5}$ (18 to 41 µg/m^3), SO_2 (4 to 8.6 µg/m^3) and NOx (9 to 13.8 µg/m^3. The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 1.1 µg/m^3 with respect to the PM_{10}, 0.4 µg/m^3 with respect to the SO_2 1.4 µg/m^3 with respect to the NOx.

13.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.23 to 7.59, Total Hardness: 350 to 590 mg/l, Chlorides: 84 to 476 mg/l, Fluoride: 0.68 to 0.96 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 6 locations. pH: 7.16 to 7.51; DO: 3.9 to 4.8 mg/l and BOD: from 3.1 to 4.1 mg/l. COD from 8.4 to 9.8 mg/l.

14.0 Noise levels are in the range of 51.2 to 62.7dB(A) for daytime and 40.8 to 53.3 dB(A) for nighttime.

15.0 It has been reported that people in the core zone of the project is nil. Hence, no R&R is involved. It has been envisaged that families to be rehabilitated is nil.

16.0 It has been reported that a total of 30,000 tons/year ash will be generated from CPP, out of which 100% will be used in cement making. No solid wastes will be dumped in the earmarked dump yard. It has been envisaged that an area of 47 ha will be developed as greenbelt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

17.0 It has been reported that the Consent to Establish/ Consent to Operate from the Andhra Pradesh State Pollution Control Board/ Pollution Control Committee will be obtained after getting EC.

18.0 The Public hearing of the project was held on 30th October 2015 under the chairmanship of Sri M. Venkateshwara Rao (Joint Collector – 2, Guntur District) for setting up of Integrated Cement Plant, Captive Power Plant and Residential Colony. Issues raised during public hearing were; land owners may cultivate the land till start of construction activity, employment and doing CSR activities. An amount of Rs.14.17 Crores has been earmarked for Enterprise Social Commitment based on public hearing issues.

19.0 The capital cost of the project is Rs.1234 Crores and the capital cost for environmental protection measures is proposed as Rs. 50 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. One Crore. The detailed CER plan has been submitted as per OM dated 01.05.2018 in the meeting. The employment generation from the proposed project is about 500 persons during construction phase and 413 persons during the operational phase.

SN	Particular	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amt Rs in Lacs
Health & Family Welfare							
1	Health infrastructure such as Ambulance, Medical equipement and building etc.	15.00	15.00	20.00	20.00	20.00	90.00
Sub Total		15.00	15.00	20.00	20.00	20.00	90.00
Education Promotion							
1	Educational infrastructure such as seating facilities, liabrary, play ground, computer lab and building etc.	20.00	20.00	20.00	25.00	25.00	110.00
2	Infrastructure for skill development center	10.00	10.00	10.00	15.00	15.00	60.00
Sub Total		30	30	30	40	40	170.00
Community Infrastructure Development Projects							
1	Construction of roads and community centers	200.00	200.00	200.00	200.00	200.00	1000.00
2	Drinking Water facilities in nearby villages	15.00	15.00	15.00	15.00	15.00	75.00
3	Installation of Solar street lights	10.00	10.00	10.00	10.00	10.00	50.00
4	Plantation in nearby villages and along the road etc.	5.00	5.00	5.00	7.00	10.00	32.00
Sub Total		230.00	230.00	230.00	232.00	235.00	1157.00
GRANT TOTAL		275.00	275.00	280.00	292.00	295.00	1417.00

20.0 Greenbelt will be developed in 47 ha which is about 33 % of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as green belt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 89,000 saplings will be planted and nurtured in 47 hectares in 5 years.

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

22.0 Details of the consultant: EMTRC Consultants Pvt Ltd, Delhi

23.0 The proposal was considred in the 32nd meeting of EAC held during 11th -13th June 2018. The committee observed that the land requirement for the project was 100.49 Ha and colony was 42.30 i.e. total requirement was 142.79 Ha. Out of which, the project proponent able to produce the land documents for 114.48 Ha. As per the office memorandum of ministry dated 7th October, 2014, in case of the land w.r.t. the project site is proposed to be acquired through the government intervention, a copy of the preliminary notification issued by the concerned government regarding acquisition of land or in case of the land being acquired through private negotiations with the land owners, credible document showing the intent of the land owners to sell the land for the proposed project shall be available for considering the environmental clearance.Since, the PP could not produce the credible document showing the intent of the land owners to sell the land for the proposed project for another 28.31 Ha which are pertaining to the parts of the middle of the plant, the committee advised to submit the requisite documents for further consideration of the proposal.

24.0 The project proponent has informed that about 96.6% of the total land required has been either purchased or under agreement. 3.4% of government land is also under process in advance stage. The detailed status of land acquisition as on 24th December, 2018 is as follows:

Sl.	Location	Purchase	Agreement	Government Land	Total Land
1	Integrated Cement Plant (Acre)	226.7	9.5	12.1 (Allotment under process)	248.3 (100.49 ha)
2	Residential Colony (Acre)	76.1	28.4	-	104.5 (42.30 ha)
Total		302.8 (85.8%)	37.9 (10.8%)	12.1 (3.4%)	352.8 (142.79 ha)

Observations of the Committee:

24.0 The recommedation for EC was deferred as PP could not produce credible document with respect to acquisition of land. Now, the company acquired or made agreement for 96.6% of the land and only 3.4% of total land belongs to Government is under process of allotment by the Government of Andhra Pradesh. Further, the PP requested the water requirement and waste water generation as below:

Plant : 850 KLD of Ground Water, RO Reject-80 KLD and Sewage Generation -75 KLD and Colony: 500 KLD of Ground Water & Sewage Generation -300 KLD

Recommendations of the Committee:

25.0 After detailed deliberation, the committee recommeded the proposal for the environmental clearance under the provisions of EIA Notification, 2006 subject to the following specific conditions and genral conditions.

Specific Conditions:

1. The water requirement for the Plant shall be 850 KLD of Ground Water and RO Reject generation shall be 80 KLD and Sewage Generation shall be 75 KLD. The water requirement for the Colony shall be 500 KLD of Ground Water and the Sewage Generation shall be 300 KLD.
2. The project proponent shall use alteast 2% of alternate fuel (waste) in the co-inceneration.

A. Statutory compliance:

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

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

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

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

B. Monitoring of compliance

i. The project proponent shall send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government.

ii. The project proponent shall put on the clearance letter on the web site of the company for access to the public.

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

iv. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically.

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

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

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

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

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

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

C. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement)and 10th May, 2016(Co-processing Cement); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

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

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

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

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

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

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

ix. Recycle and reuse lime fines, coal fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after agglomeration.

x. Ensurecovered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation;Use closed bulkers for carrying fly ash;

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

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

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

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

D. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No.

612 (E) dated 25th August, 2014 (Cement)and subsequent amendment dated 9th May, 2016 (Cement)and 10th May, 2016(in case of Co-processing Cement)as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants)as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

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

iv. Adhere to 'Zero Liquid Discharge'.

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

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

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

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

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

E. Noise monitoring and prevention

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

F. Energy Conservation measures

i. Waste heat recovery system shall be provided for kiln and cooler.

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

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

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

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

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

G. Waste management

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

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

H. Green Belt and EMP

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

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

iii. The Capital cost Rs. 50.0crore and annual recurring cost Rs. 1.0 crore towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.

iv. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and that during their presentation to the EAC

I. Public hearing and Human health issues

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

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

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

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

v. The commitment made by the project proponent to the issues raised during Public Hearing shall be implemented by the proponent

J. Corporate Environment Responsibility

i. An amount of Rs14.17 proposed towards Corporate Social Responsibility (CER) shall be utilized as capital expenditure in project mode as per the provisions of Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.

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

3.27 Proposed 2x9 MVA ferro alloys plant (Fesi-12780 TPA/SiMn-28260 TPA/FeMn-37080 TPA) at Village Taraimal, Tehsil Tamnar, District Raigarh, Chhattisgarh of M/s Sumit Ispat Private Ltd [Proposal No. IA/CG/IND/20443/2011; MoEFCC File No. J-11011/688/2009-IA.II (I)] – Extension of validity of environmental clearance.

The PP did not attend consequetively for three meetings. Therefore, the committee decided to return the proposal in the presnt form.

3.28 Setting up of a Greenfield Integrated Steel plant of capacity 13.2 MTPA crude steel with 10 MTPA Cement grinding unit & 900 MW Captive power plant Near Paradeepjagatsinghpur district, Odisha by M/s JSW Utkal Steel Limited (online Proposal No. IA/OR/IND/74396/2018; MoEFCC File No. J-11011/524/2017-IA.II(I) – Terms of Reference.

The proposal was considered in the 35th meeting of Expert Apprisal Committee held during 17th – 18th September, 2018. After detailed deliberations, the Committee recommended that a sub-committee of EAC shall visit the proposed steel plant project site and, thereafter, the proposal would be considered for grant of Terms of Reference. The site visit was proposed for 6th to 9th January, 2018. However, the site vist was postponed. Therefore the proposal is differed and will be considered after site visit report.

3.29 Installation of Iron Ore Grinding and Desliming Plant of capacity 30 Million Metric Tons Per annum (MTPA) near Joda in Keonjhar District, Odisha along with transportation of iron ore slurry through pipeline of about 312 km from Joda to Integrated Steel Plant (ISP) near Paradeep, Odisha by M/s JSW Utkal Steel Limited [Online Proposal No. IA/OR/IND/74415/2018; MoEFCC File No. IA-J-11011/271/2018-IA-II(I)]– Terms of Reference.

The proposal was considered in the 35th meeting of Expert Apprisal Committee held during 17th – 18th September, 2018. After detailed deliberations, the Committee recommended that a sub-committee of EAC shall visit the proposed steel plant project site and, thereafter, the proposal would be considered for grant of Terms of Reference. The site visit was proposed for 6th to 9th January, 2018. However, the site vist was postponed. Therefore the proposal is differed and will be considered after site visit report.

3.30 Proposed 45,000 TPA M.S. Billets 76,200 TPA TMT Bars Total 76,200 TPA M.S. Billets 76,200 TPA TMT Bars by M/s. New Steel Trading Private Limited at Survey No. 5/1 (pt), 6/3, 4, 5, 13 and 46/1, Village – Vasuri (Kd), Tal – Wada, District – Palghar, Maharashtra[Online Proposal No. IA/MH/IND/82035/1900; MoEFCC File No. IA-J-11011/326/2018-IA-II(I)] – Terms of Reference

1.0 M/s. New Steel Trading Private Limited made an application vide online proposal no. IA/MH/IND/82035/2018 dated December 2018 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" EIA Notification; 2006.The proposal of expansion is submitted and appraised at Central Level

Details submitted by the project proponent:

2.0 M/s. New Steel Trading Private Limitedproposes expansion of existing manufacturing unit for M.S. Billets &new unit for TMT Bars. It is proposed expansion ofmanufacturing of M.S. Billets from 31200 TPA to 76200 TPA and a new Rolling Mill of 76200 TPA TMT Bars based on Hot Billet Rolling Process..

3.0 Consent to Operate was accorded by Maharashtra pollution Control Board vide lr. no. BO/JD(APC)/EIC No.KN-6573-14/R/CC-2569 dated 15th March 2014. Validity of CtO is up to 31st December 2018.

4.0 The proposed unit will be located atSurvey No. 5/1 (pt), 6/3, 4, 5, 13 and 46/1, Village Vasuri (Kd), Tal – Wada, District – Palghar, State - Maharashtra

5.0 The land in possession is 2.02 Ha and is in industrial use. No forestland involved. Of the total area 2.02 ha (33%) land will be used for green belt development.

6.0 The proposed boundary of Eco-sensitive Zone of Tansa Wild Life Sanctuary is located at a distance of 1.11 km from the site. The existing boundary of Tansa Wild Life Sanctuary is located at a distance of 9.38km from the site. (As per Notification no. S.O. 2566 (E) dated 10th August 2017).

7.0 Total project cost is Rs. 80Crores. Proposed employment generation from proposed project will be 150 direct employment and indirect employment.

8.0 New Steel Trading Private Limitedhas proposed expansion of Production of M.S. Billets from 31200 TPA to 76200 TPA &new Rolling Mill for Production of 76200 TPA TMT Bars.The proposed and existing capacity of Induction Furnace and Rolling Mill are as below:

S.No	Name of Unit	No. of Units	Existing	Proposed	Total after expansion	Production Capacity
1	Induction Furnace	2	1x12 TPH	1x15 TPH	1x12 TPH and 1x15 TPH	76200 TPA
2	Rolling Mill	-	-	76200 TPA	76200 TPA	76200 TPA

9.0 The electricity load of 10 MW will be procured from State Electricity Board.

10.0 Proposed raw material for project are sponge iron, M.S. Scrap and M.S. Billets. The requirement would be fulfilled by Local vendors and imports.

11.0 Water Consumption for the proposed project will be 60 KLD and waste water generation will be 10 KLD. About 5 KLD domestic waste water will be treated in Packaged Type STP and industrial waste water generated will be treated in settling tank and reused in process. Ground water will be extracted for industrial and domestic use.

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

13.0 Consultant Name: Pollution and Ecology Control Services, Nagpur. Number in QCI List: 119

Observations of the committee:

14.0 After detailed deliberations, the Committee observed that the project site is located at a distance of 9.38 km from the Tansa Wildlife Sanctuary, pending final notification of ESZ of the same, the recommendation of the National Board for Wildlife is to be obtained

Recommendation of the committee:

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

i. The project site is located at a distance of 9.38 km from the Tansa Wildlife Sanctuary, pending final notification of ESZ of the same, the recommendation of the National Board for Wildlife is to be obtained.

ii. Electric Arc Furnace should be provided with 4th hole extraction system with bagfilters.

iii. Rain water recharge facility shall be included and solar lighting shall be used in the plant.

iv. The plant shall be designed for ZLD.

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

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

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

3.31 Expansion and Modernization of 1.2 MTPA Pellet Plant of M/s MSPL Limited located at Village Halavarthi, District Koppal, Karnataka [Online Proposal No. IA/KA/IND/68989/2017; MoEFCC File No. J-11011/383/2014-IA.II(I)] – Environmental Clerance – reconsideration.

1.0 MOEF&CC has issued TOR for upgradation of Wet Iron Ore Grinding System to Beneficiation Circuit in existing 1.2 MTPA Iron ore pellet plant located at Halavarthi Village, Tehsil & District Koppal, Karnataka vide letter No. F.N. J-11011/383/2014-IA.II (I) Dated: 26th February 2018.

2.0 Public hearing was conducted on 28th May, 2018. The proposal was appraised by EAC-(Industry I) in 33rd EAC meeting held during 9th to 11th July 2018 and the committee found that the EIA was based on the baseline data which was more than three years old.

3.0 Aaress Iron & Steel Limited and MSPL project sites are adjacent to each other. The data of Aaress Iron & Steel Limited collected during March, April, May 2016 for preparation of EIA report of 3.5 MTPA Integrated steel plant has been utilised for the present proposal of Up gradation of existing Wet Iron Ore Grinding System to Beneficiation Circuit in the Operational 1.2 MTPA Iron Ore Pellet Plant of MSPL.

4.0 The base line data collected by NABET accredited consultant and MOEF approved laboratory. The said baseline data is also presented in the AISL Public hearing.

5.0 The difference between Base line collected of MSPL limited and Aaress Iron & Steel Limited is year of sampling (i.e MSPL Limited Data collected on March-2015 to May-2015 and Aaress Iron & Steel Limited is Mar-2016 to May-2016). The Project Promoters for both the Projects i.e. Present Proposal and Aaress Iron and Steel Limited are same i.e. Baldota Group.

6.0 In light of the above, the MSPL has requested to permit to use the baseline data collected for Aaress Iron & Steel Limited for the purpose of the EIA/EMP of the upgradation of existing Wet Iron Ore Grinding System to Beneficiation Circuit in the Operational 1.2 MTPA Iron Ore Pellet Plant located at Village Halavarthi, District Koppal, Karnataka and exemption of fresh conduct of public hearing as the PH was conducted on 28th May, 2018 and the baseline data of Aaress Iron & Steel Limited was also placed before the public during the public consultation conducted for expansion proposal of AISL.

Observations of the committee:

7.0 After detailed deliberations, the committee observed that the Aaress Iron & Steel Limited and MSPL project sites are adjacent to each other and belongs to same group. The Public Hearing was also conducted independently to M/s AISL.

Recommendations of the committee:

8.0 In light of the above, the committee recommended for permission to use the baseline data collected for M/s Aaress Iron & Steel Limited for preparation of fresh EIA/EMP for the proposed upgradation of existing Wet Iron Ore Grinding System to Beneficiation Circuit in the Operational 1.2 MTPA Iron Ore Pellet Plant subject to submission of the EIA/EMP within the validity period of baseline data (i.e. before March 2019) and permission from the agency collected baseline data for M/s AISL. Since the public hearings were conducted to the both the projects individually and the baseline was placed before the public during the public hearing conducted for the M/s AISL, committee agreed for consideration of the public hearing conducted on 28th May, 2018.

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ANNEXURE –I

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

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

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

   - i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

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

5. **<u>Forest and wildlife related issues (if applicable):</u>**

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

vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife

6. **Environmental Status**

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

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

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

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

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

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

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

viii. Soil Characteristic as per CPCB guidelines.

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

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

xi. Socio-economic status of the study area.

7. Impact Assessment and Environment Management Plan

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

ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for

the drain water taking into consideration the upstream and downstream quality of water of the drain.

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

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

vi. Measures for fugitive emission control

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

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

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

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

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

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

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

8. Occupational health

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

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre-designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details

of the same. Details regarding last month analysed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

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

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

9. Corporate Environment Policy

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

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

11. Corporate Environment Responsibility (CER)

i. To address the Public Hearing issues, an amount as specified under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018 amounting to Rs. .....crores, shall be earmarked by the project proponent, towards Corporate Environment Responsibility (CER). Distinct CER projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These CER projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat & District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/donations and or free camps shall be included in the above CER budget

12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant

Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

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

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

The following general points shall be noted:

i. All documents shall be properly indexed, page numbered.
ii. Period/date of data collection shall be clearly indicated.
iii. Authenticated English translation of all material in Regional languages shall be provided.
iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCl)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.
ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCBshall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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ANNEXURE-2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

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

19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

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ADDITIONAL ToRS FOR PELLET PLANT

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

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ADDITIONAL ToRs FOR CEMENT INDUSTRY

1. Limestone and coal linkage documents along with the status of environmental clearance of limestone and coal mines
2. Quantum of production of coal and limestone from coal & limestone mines and the projects they cater to;
3. Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. If the raw materials used have trace elements, an environment management plan shall also be included.
5. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.

6. Energy consumption per ton of clinker and cement grinding
7. Provision of waste heat recovery boiler
8. Arrangement for co-processing of hazardous waste in cement plant.
9. Trace metals in waste material especially slag.

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

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

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

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

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

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

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LEATHER/SKIN/HIDE PROCESSING INDUSTRY

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

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COKE OVEN PLANT

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

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ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

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INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE

1. Details of proposed layout clearly demarcating various units within the plant.

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

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METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)

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

Executive Summary

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

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

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

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

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

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

vi. Capitalcost of the project, estimated time of completion

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

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

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

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

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

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

xiii. CSR plan with proposed expenditure.

xiv. Occupational Health Measures

xv. Post project monitoring plan

LIST OF PARTICIPANTS OF EAC (I) IN 3rd MEETING OF EAC (INDUSTRY-I) HELD ON 9th to 11th January, 2019

S. No	Name and Address	Position	Attendance			Signature
			9th	10th	11th	
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P	P	
Members						
2.	Dr. Tapliyal Representative of Central Pulp and Paper Research Institute	Member	A	A	A	
3.	Dr. Siddarth Singh, Representative of Indian Meteorological Department	Member	A	P	P	
4.	Dr. G. Bhaskar Raju	Member	P	P	P	
5.	Dr. Jagdish Kishwan, IFS (Retd.)	Member	P	P	P	
6.	Dr. G.V. Subramanyam	Member	P	P	P	
7.	Shri Ashok Upadhyaya	Member	P	P	P	
8.	Shri R.P. Sharma	Member	P	P	P	
9.	Shri Sanjay Deshmukh	Member	A	A	A	
10.	Prof. S.K. Singh	Member	P	P	P	
11.	Dr. R. Gopichandran	Member	P	P	A	
12.	Shri Jagannath Rao Avasarala	Member	P	P	P	
13	Shri J.S. Kamyotra	Member	P	P	P	
14.	Shri Sharath Kumar Pallerla, Scientist 'F' / Director, MoEF&CC	Member Secretary	P	P	P	
15.	Shri Sundar Ramanathan, Scientist 'D', MoEF&CC	Joint Director	P	P	P	
16.	Shri RajasekharRatti, Scientist 'C', MoEF&CC	Dy. Director	P	P	P	