

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

**SUMMARY RECORD OF THE SIXTH (6<sup>th</sup>) MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE HELD DURING 29-30<sup>th</sup> APRIL, 2019 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER THE PROVISIONS OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA) NOTIFICATION, 2006.**

6.0 The sixth meeting of the Re-Constituted Expert Appraisal Committee (EAC) for Industry-1 Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-1 Sector Projects was held during **29-30<sup>th</sup> April, 2019** in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim. The minutes of 5<sup>th</sup> meeting held during 27-29<sup>th</sup> March, 2019 were confirmed by the EAC and already uploaded on Parivesh portal.

**29<sup>th</sup> April, 2019 (Brahmputra)**

6.1. Integrated Steel Plant (2.85 MTPA Steel) of **M/s Rungta Mines Limited** located at Villages Jharbandh, Galpada and Tarkabeda, District Dhenkanal, **Odisha**. [Proposal No. IA/OR/IND/80884/2018; MoEF&CC File No. J-11011/309/2018-IAII(I)] **Environment Clearance** – regarding

6.1.1 M/s. Rungta Mines Limited has made an online application vide proposal no. IA/OR/IND/80884/2018 dated 19<sup>th</sup> March, 2019 along with copies of EIA/EMP report and Form – 2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

**Details submitted by the project proponent**

6.1.2 The proposal from Dhenkanal Steel Plant of M/s Rungta Mines Limited located in Village Jharbandh, Galpada and Tarkabeda, District Dhenkanal, Odisha was initially received in the Ministry on 30.09.2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry-1) during its meeting held on 26-28<sup>th</sup> November, 2018 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 10.12.2018 vide letter no.J-11011/309/2018-IA.II.(I).

6.1.3 Based on the TOR prescribed for the project, public hearing has been held on 07.03.2019. After public hearing, the project proponent submitted an application for environmental clearance to the Ministry on 19.03.2019 vide application no. IA/OR/IND/80884 /2018.

- 6.1.4 The project is for 2.85 million TPA (Phase I-1.45 MTPA; Phase II-1.40 MTPA) production capacity from an Integrated Steel Plant. The project previously had an Environment Clearance vide Letter No. J-11011/241/2009-IA.II(I) dated 02.08.2010 for a capacity of 1.9 MTPA, the validity of which will lapse on 1st August, 2020 while the construction of the units within it would be still ongoing till the expiry of the validity period. The validity extension of Environmental Clearance was accorded by the Ministry vide letter no. J-11011/241/2009-IA.II(I) dated 20/09/2018. Hence, the project proponent decided to apply for fresh ToR for a larger production of 2.85 MTPA.
- 6.1.5 The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide Lr. No. 101-639/EPE dated 25.02.2019. It states that status of compliance of the stipulated EC conditions could not be ascertained as the major project work is yet to be started. However, observations made by the Regional Office and the corrective action taken by the project proponent are summarized as below:

S.No.	Observations of Regional Office of MoEF&CC	Corrective action by the Project Proponent (PP)
i.	It has been found that PAs are in process to construct one water storage pond, which will also be using for the storage of surface runoff / rain water coming out from the reserved forest (RF) hillock, which is situated near North west side of the project. Therefore, it is requested to construct one or more rain water collection pond near the existing hillock, for easily collection and storage of rain water /surface water coming out from the existing hillock during rainy time , which will be used for various activities including development of green belt etc.	PP will construct one more rain water harvesting pond for easier collection and storage of rain water runoff from the existing hillock during rain time and stored water shall be used for development of green belt, sprinkling and process, after settlement/ treatment.
ii.	It is requested to take consultation/ approval from various competent authorities (including CGWA etc) for the collection and utilization of the huge quantity of the rain water coming out from the RF hillocks, which is situated near west north side of the project .	PP has already employed M/s Skylark, Bangalore for hydro-Geological survey for entire plant area to assess total rain water / storm water during rainy season. Based on their report, the submission will be made to Irrigation Department for approval of our storm water drainage plan.

S.No.	Observations of Regional Office of MoEF&CC	Corrective action by the Project Proponent (PP)
iii.	It is also requested to provide significant quantity of rain water to local farmers for cultivation of paddy.	PP is creating passes for rain water to pass from plant side to villagers for cultivation of paddy, hence, there will be no decline in rain water availability to farmers. Additionally, ponds will be constructed as part of CER & CSR in the agricultural fields, if desired by the respective Gram Panchayats.
iv.	It has been found that PAs have not yet started plantation work on the project side, therefore, it is requested to conduct massive plantation drive during coming monsoon period, details information on development of green belt should also submitted to this regional office	PP is planning for plantation on 40 acres land covering 40,000 plantation of land before start of monsoon season
v.	It is required to constitute Environment Management cell (EMC) at project level	PP is in the process of establishing full-fledged Environment Management cell (EMC) before operation of the plant. The personnel will be hired as per organization chart proposed in EMP.
vi.	It is required to conserve top soil of the project and use it for the development of green belt	During construction, PP is removing top soil & keeping in separate pile for use in plantation purpose.

After detailed deliberations, the Committee satisfied with the corrective action of the project proponent.

6.1.6 The proposed capacity for different products of the 28.85 MTPA Integrated Steel Plant is given below:

Sl. No.	Plant facilities	Units	Phase 1	Phase 2	Total
1	Beneficiation Plant	MTPA	2.7	2.7	5.4
	Configuration		1 X2.69 MTPA	1X2.69 MTPA	2X2.69 MTPA
2	Pelletisation Plant	MTPA	1.47	1.47	2.948
	Configuration (with additional 10% extra capacity utilisation)		1X1.2 MTPA	1X1.2 MTPA	2X1.2 MTPA
3	Coal Washery	MTPA	2.616	1.524	4.141

Sl. No.	Plant facilities	Units	Phase 1	Phase 2	Total
	Configuration		1X400 TPH	1X235 TPH	1X40TPH+1X235TPH
4	DRI Plant	MTPA	1.001	0.546	1.547
	Configuration (with additional 30% extra capacity utilisation)		2X500+2X600 TPD	2 X 600 TPD	2X500 +4X600 TPD
5	Mini Blast Furnace	MTPA	0.567	0.992	1.559
	Configuration		1X600 CUM	1X1050 CUM	1X600+1X1050 CUM
6	Sinter Plant	MTPA	0.612	1.051	1.663
	Configuration		1X64 sq.m	1X110 sq.m	1X64 +1X110 sq.m
7	Coke Oven Plant	MTPA	0.420	0.70	1.12
	Configuration		6 batteries X 70,000 TPA	10 batteries X 70,000 TPA	16 batteries X 70,000 TPA
8	Steel Melting Shop	MTPA	1.232	1.232	2.464
8.1	Steel Melting via Induction Furnace Route	MTPA	0.539	-	0.539
	Configuration		7X20TIF+4X20T LRF	-	7X20T IF+4X20T LRF
8.2	Steel Melting via Electric Arc Furnace-Vacuum Degassing-Argon Oxygen Decarburization Route	MTPA	0.693	1.232	1.925
	Configuration		1X90T EAF+1X90T LRF	1X160T EAF and 1X160 T LRF	1X90 T + 1X160 T EAF and 1X90 T + 1X160 T LRF
8.3	Continuous Casting Machine (Billets/ Bloom Caster/ Slab)	MTPA	1.207	1.207	2.415
	Configuration		1 nos. X 3 strands	2nos.X3 strands	3 nos. X 3 strands
9	Finished Product Facilities	MTPA	1.450	1.400	2.850
9.1	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/	MTPA	0.800	0.800	1.600

Sl. No.	Plant facilities	Units	Phase 1	Phase 2	Total
	Structural Mill/ others)				
	Configuration		4X0.2 MTPA	1X0.2+2X0.3 MTPA	5X0.2+2X0.3 MTPA
9.2	Strip Mill/ Sheet/ Coil/ Wire & Bar Mill/ Wire Rope	MTPA	0.450	0.400	0.8500
	Configuration		1X0.45 MTPA	1X0.4 MTPA	1X0.45+1X0.4 MTPA
9.3	Ductile Pipe Plant	MTPA	0.200	0.200	0.400
	Configuration		1X0.2 MTPA	1X0.2 MTPA	2X0.2 MTPA
10	Producer Gas Plant	Million Nm <sup>3</sup> /Annum	240	240	480
	Configuration		10X3000 Nm <sup>3</sup> /hr	10X3000 Nm <sup>3</sup> /hr	20X3000 Nm <sup>3</sup> /hr
11	Oxygen Plant	MTPA	0.035	0.063	0.098
	Configuration		1X 100 TPD	1X 180 TPD	1X100 +1X 180 TPD
12	Lime Plant	MTPA	0.105	0.1995	0.3045
	Configuration		1 X 300 TPD	1 X 570TPD	1X300 + 1X 570 TPD
13	Cement Plant	MTPA	0.884	0.802	1.686
	Configuration		1 X 2600 TPD	1X 2300 TPD	1X2600+1X2300 TPD
14	Captive Power Plant	MW	217	168	385
14.1	Waste Heat Recovery Boiler (WHRB) based Captive Power Plant (CPP)	MW	67	68	135
a	DRI Kiln exit gas based	MW	44	24	68
	Configuration		2X 50 + 2X 60 TPH	2X 60 TPH	2X 50 + 2X 60 TPH
b	MBF Gas based	MW	11	20	31
	Configuration		1 X 50 TPH	1 X 90 TPH	1 X 60 +1 X 90 TPH
c	Coke Oven Gas based	MW	12	24	36
	Configuration		1 X 60 TPH	1 X 100 TPH	1X 60 + 1 X 100 TPH
14.	AFBC/CFBC	MW	150	100	250

Sl. No.	Plant facilities	Units	Phase 1	Phase 2	Total
2	based CPP				
	Configuration		2X125+2X250 TPH	2X250 TPH	2X125+4X250 TPH

6.1.7 The land required for the proposed plant is 674.65 acres. Out of this, 540.705 acres is private land and 67.790 acres is Government land. Both these land have been acquired through IDCO and converted to industrial use. Balance 66.270 acres land is pending with Tehsildar-cum-LAO, Hindol. Additionally, 9.85 acres of private land in village Jharbandh and 3.05 acres of private land in village Nimabahali have been allotted to the company for construction of approach road outside the project area. 7.8 acres of forest land is present within the project area. Stage II forest clearance has been obtained from MOEF&C vide letter no. 5-ORB207/2014-BHU dated 02.07.2015. The land use of the project area is given as below:

**Land use of project area**

Sl. No.	Name of the Village	Private Land	Government Land					Grand Total
			Leasable	Gochar	Communal	Forest	Total	
1	Jharbandh	261.565	44.030	17.390	12.330	7.540	81.290	342.855
2	Tarkabeda	175.870	9.840	0.380	15.170	0.260	25.650	201.520
3	Galapada	103.270	1.800	16.710	8.610	0.000	27.120	130.390
	<b>Grand Total</b>	<b>540.705</b>	<b>55.670</b>	<b>34.480</b>	<b>36.110</b>	<b>7.800</b>	<b>134.060</b>	<b>674.765</b>
	Possession Taken	540.705	40.040	19.950	0.000	7.800	67.790	608.495
	Balance	0.000	15.630	14.530	36.110	0.000	66.270	66.270

6.1.8 No river passes through the project area. Only first order seasonal stream passes through project area and it has been reported that six village tanks exist within the project area. These will get disturbed due to construction, management of which shall be done through storm water drainage system.

6.1.9 The topography of the area is flat and reported to lie between 20°45'14" to 20°46'24" N Latitude and 85°17'12" to 85°18'45" E Longitude in Survey of India Open Series Maps No. F45T1, F45T2, F45T5 & F45T6. The average ground elevation of the project area is 75-95 m AMSL. The ground water table reported to ranges between 1.42 m below the land surface during the post-monsoon season and 8.61 m below the land surface during the pre-monsoon season. There will not be any ground water withdrawal for industrial activities. Further, the stage of groundwater development has been calculated as 4.6% in study area and thereby this is designated as safe area.

- 6.1.10 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 Chandka Dampur WLS is located at a distance of 26 km from the site. Site specific wildlife conservation plan has been prepared and approved by PCCF (WL) vide letter no 3188/1 WL-SSP-10/2015 dated Bhubaneswar 9.04.2015.
- 6.1.11 The process of manufacturing will be steel through both DRI as well as Blast furnace routes. There will be installation of Beneficiation plant (5.4 MTPA), Pelletisation plant (2.948 MTPA), Coal Washery (4.141 MTPA), DRI plant (1.547 MTPA), Sinter plant (1.663 MTPA), Mini Blast furnace (1.559 MTPA), coke oven plant (1.12 MTPA), SMS (2.464 MTPA), casters (2.415 MTPA), Rolling mills & Ductile pipe plant (2.85 MTPA), Producer Gas Plant (480 million Nm<sup>3</sup>), Oxygen Plant (0.098 MTPA), Lie plant (0.3045 MTPA), Cement plant (1.686 MTPA) and Captive Power Plant 385 MW (135 MW WHRB + 250 MW AFBC/CFBC based). The major raw materials to be used for proposed will be 6,394,385 TPA iron ore, 1,092,504 TPA coal. Of the various solid wastes generated in the plant, 100% recycling/ reusing will be done for sponge iron plant dust, char, sinter plant dust, blast furnace slag, blast furnace sludge & flue dust, SMS slag & flue dust, rolling mill rejects & mill scales and coke oven dust. Only beneficiation tailings, washery rejects and kiln accretion will have to be disposed in designated solid waste area. Ash will be generated from captive power plant which will be disposed as per Fly Ash Notification. A fly ash brick plant will also be installed for fly ash management.
- 6.1.12 The targeted production capacity of the finished steel from rolling mill is 2.85 million TPA. The iron ore for the plant would be procured from own mines /OMC/other private Mines located in Odisha/ Jharkhand. Limestone, quartzite, dolomite will be purchased from Rourkela and manganese ore will be sourced from own mines located in Odisha. The ore transportation will be done through road initially in Phase-I and later by rail, once railway siding is constructed in Phase-II. The raw materials requirement for the 2.85 MTPA steel plant is given as below:

Sl. No.	Raw materials	Total			Stock Days	Area in acre
		Required	Own source	From outside (purchased)		
1	Bentonite & Clay Component	67,543	0	67,543	15	0.12
2	Char	285,248	285,248	0	7	0.12
3	Clinker	777,443	777,443	0	10	0.94
4	Coal (max. when Indian coal used)	4,844,956	1,731,894	4,576,808	5	2.69
5	Coking Coal	1,691,200	0	1,691,200	10	1.99
6	Coke	951,143	951,143	0	5	0.56
7	Coke breeze & fines	216,373	0	216,373	10	0.25
8	Dolomite	537,581	0	537,581	7	0.80
9	DRI	1,547,000	1,547,000	0	5	1.82
10	Flocculant	270	0	270	10	0.00
11	Fly Ash from Middlings	356,055	356,055	0	10	0.21

Sl. No.	Raw materials	Total			Stock Days	Area in acre
		Required	Own source	From outside (purchased)		
	& Char					
12	Gypsum	33,412	0	33,412	10	0.10
13	Hot metal	1,559,250	1,559,250	0		-
14	Iron ores & fines (all types)	12,523,824	5,526,956	6,996,868	5	11.18
15	Iron Ore BF Grade	657,195	0	657,195	10	1.93
16	Limestone	1,902,049	0	1,934,689	10	5.69
17	Liquid Metal from Furnace	2,464,000	2,464,000	0		-
18	Middlings from Coal Washery	1,759,908	1,759,908	0	5	1.04
19	Mill scale (from CCM/RM/SM/DPP)	23,323	23,323	0	15	0.21
20	Others	7,774	0	7,774	10	0.07
21	Pig iron	78,222	0	78,222	10	0.69
22	Quartz	81,081	0	81,081	10	0.24
23	Semi-finished products	2,500,000	2,414,720	85,280	10	0.75
24	Sinter	1,662,570	1,662,570	0	5	1.96
25	Steel Scrap	29,293	0	29,293	10	0.26
26	Slag Generation from MBF	467,775	467,775	0	10	0.83
27	Silica component	31,098	0	31,098	10	0.09
	<b>Total</b>	<b>37,088,226</b>	<b>21,527,285</b>	<b>17,024,688</b>		<b>34.54</b>

6.1.13 The make-up fresh water requirement for the project is estimated to be 2950 m<sup>3</sup>/hr for industrial & drinking uses, which will be obtained from Bramhani River. Water allocation committee has recommended the drawl of surface water from Brahmani River as per recommendation of 54th Water Allocation Committee, Office of The Engineer In Chief, Water Resources, Bhubaneshwar, Odisha. The waste water generated within the plant will be 545.4 m<sup>3</sup>/hr, which will be suitably treated and reused for green belt, dust suppression, ash quenching and brick plant.

6.1.14 The power requirement for the project is estimated to be around 385 MW, all of which will be available from the captive power plant comprising of WHRB (135 MW) and AFBC/CFBC (250 MW).

- 6.1.15 Base line Environmental Studies were conducted during summer season i.e. from March to May 2018. Ambient Air quality monitoring has been carried out at 8 locations and the data submitted indicated: PM10 (39.6 to 71.0 µg/m<sup>3</sup>), PM2.5 (22.8 to 42.7 µg/m<sup>3</sup>), SO<sub>2</sub> (6.3 to 16.1 µg/m<sup>3</sup>) and NO<sub>2</sub> (9.04 to 21.7 to µg/m<sup>3</sup>).
- 6.1.16 The results of the modeling study for stack emissions indicates that the maximum increase of GLC for the proposed project is 28.49 µg/m<sup>3</sup> with respect to the PM10, 54.95 µg/m<sup>3</sup> with respect to the SO<sub>2</sub> and 23.18 µg/m<sup>3</sup> with respect to NO<sub>x</sub>.
- 6.1.17 Existing traffic study summary carried out at Nimabahali Chowk (NH-55) is furnished as below:

Traffic vehicle	No. of vehicles per day	Equivalence Factor	Equivalent Passenger Car Unit (PCU)
H.M.V.	6990	3.0	20970
L.M.V.	2991	1.0	2991
Two/three wheelers	1904	0.5	952
Cycles	640	0.5	320
<b>Grand Total</b>	<b>12525</b>		<b>25233</b>

The road from project site till NH is 5 m wide while the NH is presently 7.5 m. The present traffic load is 84.11% of the maximum capacity as per IRC norms. It was reported during the meeting that NH is undergoing widening from Cuttack till Sambalpur resulting in a 23.5 m wide cross section. It will comprise of 8.5 m wide carriageways for both directions separated by 2.5 m median. There will be 2 m wide shoulders in either side.

- 6.1.18 It has been reported that incremental traffic due to plant operation on road has been considered for the first phase only since it is expected that the railway siding will become operational by second phase. The truck movement has been assumed 50% for 20T trucks and 50% for 25T in raw material, 100% as 25 T for product and 100% as 20 T for solid waste. In addition, there will be 25KL fuel tankers containing LSHS. The worst case scenario for coal has been considered i.e. Indian coal, wherein higher truck movement will take place. Accordingly, the traffic assessment estimation is given as below:

Summary of truck transportation (to & fro trucks per day)	50%	50%	100%
	20T	25 T	<b>Total</b>
<b>1. Due to raw materials</b>			
(a) with South African Coal (with equivalent coal input reduction in washery, Coal from DRI purchased from outside)	1050	840	1890
(b) with India Coal (when equivalent coal comes from washery to DRI internally)	1172	938	2110

(c) LSHS for reheating & other uses	0	10	10
<b>2. Solid waste</b>			
<b>Reused Outside plant boundary</b>	140		140
<b>Disposed Outside plant boundary</b>	0		0
<b>3. Product</b>	0	318	318
<b>GRAND TOTAL (for Indian coal)</b>	<b>1312</b>	<b>1266</b>	<b>2578</b>

6.1.19 Incremental GLC due to emissions from vehicles & tyre-airborne dust on roads due to traffic (In phase-1 only till Railway siding becomes operational) is given as below:

<b>Pollutant</b>	<b>Incremental value (<math>\mu\text{g}/\text{m}^3</math>)</b>
PM <sub>2.5</sub>	4.70
PM <sub>10</sub>	16.70
SO <sub>2</sub>	57.39
NO <sub>2</sub>	29.47

6.1.20 Ground water quality has been monitored in 8 locations in the study area and results indicate pH in range of 6.6-7.5, total hardness between 249-546 mg/l, Chloride between 27-245 mg/l, Fluoride between 0.2-0.73 mg/l and Heavy metal are within the permissible limits. Surface water samples have been monitored in 11 locations in the study area. pH was in range of 7.4-7.9, DO between 6.7-6.9mg/l, BOD between 5-25 mg/l and COD between 14-39 mg/l.

6.1.21 Noise level are in the range of 48.12 to 52.16 dBA for day time and 39.12 to 42.51 dBA for night time.

6.1.22 It has been reported that there is displacement of 54 families which have been rehabilitated & resettled as per R&R Policy, Government of Odisha. Compensation has already been paid through IDCO.

6.1.23 It has been reported that a total of 8 MTPA of waste will be generated due to the project, out of which 5.5 MTPA will be re-used within and outside the plant. Middlings, char, dusts from pollution control systems, various slags, mill scales and ash will be reused. Only 2.5 MTPA comprising beneficiation tailing, washery reject and kiln accretion will be dumped in the earmarked dump yard. It has been envisaged that an area of 90 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.

6.1.24 The Public hearing of the project was held on 07.03.2019 at Tehsil Office, Hindol under the chairmanship of Additional District Magistrate for production of 2.85 million TPA of finished steel. The main issues raised during public hearing are related to employment opportunity, education, drinking water facility, development of village roads, cleaning of village ponds, pension for senior citizen, adequate air pollution and water pollution control measures, provision of primary health center facility, ambulance, ITI and afforestation, etc. The issues raised during the public hearing and response given is furnished as below:

**Issues raised during the public hearing and response given**

Sl. No.	Main Issue raised in PH	Action Plan proposed	Budgetary provision as on 29-04-2019		Timeline of implementation	
			Capital cost	Annual Recurring	To	From
1	Employee & training	<p>There will be a total requirement of 2600 persons to be employed for the operation of the project at full capacity.</p> <p>The construction work for the initial phase of the project based on the EC dated 02.08.2010 has commenced in 2018 and 3 displacees and 200 local persons have been taken as unskilled manpower by the construction contractor. This is more 50% of the currently deployed construction workers.</p> <p>Already 3 persons have been employed in the project, on payroll.</p> <p>Gradually, direct and indirect hiring will take place with the commencement of the plant in 2020 for which</p>	Cost of ITI construction Rs 1.5 crore	<p>Wages, PF, Medical and Bonus will be paid as per prevalent Labour Laws.</p> <p>Operation cost of ITI shall be approx. Rs. 19.5 lakhs/annum</p>	<p>ITI construction has already commenced.</p> <p>Employment for construction has already begun but recruitment for operation will begin on completion of few units in 2020 &amp; receipt of CTO</p>	Simultaneous recruitment will take place as the sub-units of plant get commissioned till all units are fully commissioned to full capacity

Sl. No .	Main Issue raised in PH	Action Plan proposed	Budgetary provision as on 29-04-2019		Timeline of implementation	
		<p>preference will be given as follows:</p> <ul style="list-style-type: none"> <li>● Displaced families (54 nos.) opting for job</li> <li>● Land losers (of 450 holdings) opting for job</li> <li>● Local villagers</li> </ul> <p>Company is constructing ITI &amp; interested local villagers will be trained to make them employable in the plant when the construction is completed &amp; operation commences. Those opting out of job will be supporting for vocational training.</p>				
2	Health	<ul style="list-style-type: none"> <li>➤ Purchase of ambulance (already done as on 15.03.2019).</li> <li>➤ Post the contact number for the ambulance at Panchayat house/ community centre in the villages</li> <li>➤ Construction of about 10 bedded hospital with facilities in</li> </ul>	<p>Capital cost, as part of CER for</p> <ul style="list-style-type: none"> <li>➤ Ambulance (s) in 1st, 3rd &amp; 5th years- total Rs. 45 lakhs</li> <li>➤ 10 bed hospital - Rs. 8.1 crore</li> <li>➤ Veterinary centre- Rs. 20 lakhs</li> </ul>	<p>As part of CSR for:</p> <ul style="list-style-type: none"> <li>➤ One Ambulance- Rs. 3 lakhs</li> <li>➤ 10 bed hospital, free consultations &amp; free medicines - Rs. 50 lakhs</li> <li>➤ Veterinary centre- Rs. 9 lakhs</li> </ul>	Provide from 1 <sup>st</sup> year of construction	Continue till plant operates

Sl. No .	Main Issue raised in PH	Action Plan proposed	Budgetary provision as on 29-04-2019		Timeline of implementation	
		<p>Jharbandh village.</p> <ul style="list-style-type: none"> <li>➤ Provide free consultation and medicines to displacees &amp; land losers at proposed hospital of the company and subsidised facilities to all other villagers.</li> <li>➤ Conducting mobile health/ awareness camp for protection against prevalent common diseases/ family planning camp (Doctor, para-medical staff and free supply of medicines)</li> <li>➤ Provision of veterinary doctor and centre for animals.</li> </ul>		<ul style="list-style-type: none"> <li>➤ Awareness Camps/ health camps- Rs 1.2 lakhs</li> <li>➤ Financial help to critical medical cases - variable on need basis, provisioned Rs. 1 lakh</li> </ul>		
3	Education	<ul style="list-style-type: none"> <li>➤ Development of infrastructure in schools by construction of boundary walls, park/ playground, toilets &amp; any new classroom/ building, maintenance</li> </ul>	Rs. 32 lakhs	Rs. 2 lakhs	Since start of construction	Infrastructure development will be completed commensurate with completion of plant construction. Other activities will be continued till plant

Sl. No .	Main Issue raised in PH	Action Plan proposed	Budgetary provision as on 29-04-2019		Timeline of implementation	
		of the same				operates
		➤ plantation & beautification in and around school premises	Rs. 5 lakhs	Rs. 0.6 lakhs		
		➤ Providing sets of desk, bench with back rest and shelf, blackboard, and other furniture	Rs. 14 lakhs	Rs. 1 lakh		
		➤ Scholarship to meritorious students	-	Rs. 0.6 lakhs		
		➤ Financial support to needy students	-	Rs. 0.6 lakhs		
		➤ Adult education centre	Rs. 5 lakhs	Rs. 1.2 lakh		
		➤ Distribution of Bags, Study Material (Slate, Globe, Maps Charts, Exercise Book, Duster, Chalk etc.) as per requirement of school	Rs. 7 lakhs	Rs. 1 lakh		
4	Peripheral development activities - (i) Livelihood	<ul style="list-style-type: none"> <li>● vocational training centre</li> <li>● Training to people for improvement of agriculture</li> <li>● Soil moisture conservation works and rain water</li> </ul>	Rs. 1.35 crores	Rs. 12.8 lakhs approx.	Since start of construction	Infrastructure development will be completed commensurate with completion of plant construction. Other

Sl. No .	Main Issue raised in PH	Action Plan proposed	Budgetary provision as on 29-04-2019		Timeline of implementation
		harvesting near agricultural land			activities will be continued till plant operates
	(ii) Roads	<ul style="list-style-type: none"> <li>➤ Construction of approach roads in Chandrashekh arpur, Beruanpal, Jharbandh, Madhupur, Tarkabera and Kadela villages</li> <li>➤ Also maintenance of roads, where required in phased manner in collaboration with local Panchayat and Govt. schemes.</li> <li>➤ Solar based street lights</li> </ul>	Rs. 4.4 crores	Rs. 44 lakhs approx.	
	(iii) Drainage	<ul style="list-style-type: none"> <li>➤ Construction of drainage system in villages in phased manner</li> <li>➤ Covering of open drains in collaboration with local Panchayat heads and Govt. schemes.</li> </ul>	Rs. 103 lakhs	Rs. 3.6 lakhs	
	(iv) Sanitation & solid waste	Swachh Bharat Mission has initiated construction of	Rs. 23.25 lakhs	Rs. 4.7 lakhs	

Sl. No .	Main Issue raised in PH	Action Plan proposed	Budgetary provision as on 29-04-2019		Timeline of implementation	
	management	<p>toilets, hence, Rungta Mines Ltd. will focus on improvement of overall hygiene &amp; cleanliness with following:</p> <ul style="list-style-type: none"> <li>➤ Awareness camps about solid waste segregation and household composting</li> <li>➤ Purchase of dustbins for garbage collection for solid waste disposal.</li> <li>➤ Purchase of anti mosquito fumigation machine.</li> <li>➤ Intensive awareness drive among residents to prevent water logging and mosquito breeding</li> </ul>				
	(v) Sports, culture and others	<ul style="list-style-type: none"> <li>➤ Construction of community centre</li> <li>➤ Sponsorship to Sports events &amp; players, cultural events</li> <li>➤ Provide sports equipment</li> <li>➤ Tree sapling distribution</li> </ul>	Rs. 95 lakhs	Rs. 14 lakhs approx		
5.	Green belt and plantation	➤ Greenbelt Plantation shall be done in an area of 222.67	Green belt- Rs 225.28 lakhs	● Green belt- Rs. 36.88 lakhs/an	Since start of construction	Within 5 years of start

Sl. No .	Main Issue raised in PH	Action Plan proposed	Budgetary provision as on 29-04-2019		Timeline of implementation	
		<p>acres in the project area.</p> <ul style="list-style-type: none"> <li>➤ Sapling of fruit bearing trees shall be distributed to the villagers as per their requirement</li> <li>➤ avenue plantation and plantation in village shall be carried out</li> </ul>		<p>num.</p> <ul style="list-style-type: none"> <li>● Tree distribution/ plantation in community- Rs. 0.5 lakh/year</li> </ul>		
6.	Drinking water	<ul style="list-style-type: none"> <li>➤ Construction of Water storage tanks</li> <li>➤ Purchase of water tankers</li> <li>➤ Water supply through mobile water tankers during festivals and dry season to local villages</li> <li>➤ Water supply through pipeline</li> <li>➤ Construction of pond for Rain Water Harvesting &amp; recharge.</li> <li>➤ Deepening and cleaning of ponds</li> </ul>	Rs. 265 lakhs	Rs. 13.3 lakhs approx.	Since start of construction	Infrastructure development will be completed commensurate with completion of plant construction. Other activities will be continued till plant operates
7	Pond cleaning & construction	<ul style="list-style-type: none"> <li>➤ Company shall clean and maintain ponds regularly in future also</li> <li>➤ Construction and maintenance of ghats in</li> </ul>	Rs. 64 lakh	Rs.0.5 lakhs/ annum	Since start of construction	On need basis, throughout the plant life

Sl. No .	Main Issue raised in PH	Action Plan proposed	Budgetary provision as on 29-04-2019		Timeline of implementation	
		commonly used ponds will be undertaken.				
		➤ Construction of pond in Nimabahli	Rs. 22 lakhs	Rs. 0.2 lakhs/ annum	1 <sup>st</sup> year of operation	Before end of 2020
8	Pollution control	<ul style="list-style-type: none"> <li>• <b>Water pollution control-</b> Waste water generated within the plant will be utilised after treatment and no process water will be discharged. ETP, oil water separator, common monitoring basin, septic tanks, etc shall be provided with different sub-units and centrally also, and at different locations within the project site</li> <li>• <b>Air pollution control</b> - (a) ESP and Bag Filters will be installed to control particulates emission below 30 mg/Nm<sup>3</sup>. (b) Stack heights of 30 m to 110</li> </ul>	Rs. 98.67 crores	Rs. 23.75 crores/ annum	On commencement of construction of plant, the installation of control equipments will commence. Their operation will start with commissioning.	Their operation will continue till the end of the project life during operation

Sl. No .	Main Issue raised in PH	Action Plan proposed	Budgetary provision as on 29-04-2019		Timeline of implementation	
		<p>m will be provided for dispersion of pollutants.</p> <ul style="list-style-type: none"> <li>• <b>Fugitive emission control-</b> Few raw material and all product stock yards will be covered and floor will be impervious</li> <li>• <b>Transportation emissions</b> - Transport of raw material will be by road through covered trucks. Vehicles will have PUC checks and be well maintained. Railway siding is proposed to start construction with construction of phase-II, thus reducing traffic load on road</li> <li>• <b>Green belt/green cover</b> will be developed over 33% of the plant area.</li> <li>• <b>Solid waste</b> - All the solid</li> </ul>				

Sl. No .	Main Issue raised in PH	Action Plan proposed	Budgetary provision as on 29-04-2019		Timeline of implementation	
		<p>waste from the plant will be reused within or outside the plant except tailing from beneficiation plant, reject from washery and kiln accretion from DRI, which will be disposed within the plant on designated solid waste yard provided with lining, garland drain and its ETP.</p> <p>Company will follow the mitigation measures as detailed in Chapter 4 of EIA/EMP Report to protect</p>				
9.	CSR	<p>CSR activities related to :</p> <ul style="list-style-type: none"> <li>● Drinking Water</li> <li>● Health</li> <li>● Eradicating Poverty</li> <li>● Education</li> <li>● Vocational Training/ Livelihood Projects</li> <li>● Environment / Ecology /NRM</li> </ul>	2% of the average profit from the plant of previous three years, as per The Companies Act 2013. Till the time Company shows profit, the capital expenditure shall be met through CER fund.		Since start of construction	Till the plant is operational

Sl. No .	Main Issue raised in PH	Action Plan proposed	Budgetary provision as on 29-04-2019		Timeline of implementation	
		<ul style="list-style-type: none"> <li>● Culture &amp; Tradition/ Heritage</li> <li>● Contribution to PMNRF &amp; Welfare of SC, ST, OBC etc.</li> <li>● Rural Development Projects</li> </ul> shall be undertaken				
10	Delay in project	The concern regarding delay is noted and submits that the Company has tried to work as quickly as possible in view of the various hurdles related to land acquisition, resettlement, market conditions, cancellation of coal block allocation, etc. The construction work for the initial phase of the project based on the EC dated 02.08.2010 has commenced in 2018 and the first sub-units will become operational in 2020. Company will be completing construction at earliest.	--	-	-	-

6.1.25 The capital cost of the project is Rs 7837.90 crores and the capital cost for environmental protection measures is proposed as Rs. 98.66 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 237.4 lakhs per annum. The total employment generation from 2.85 MTPA steel plant will be 2600 person. The capital expenditure on CER will commensurate with the investment and shall be Rs. 23.85 crores in 5 years on the basis of MOEF&CCs office memorandum dated 01.05.2018, for brownfield projects. The CER action plan is given as below:

**CER action plan**

Sector	Proposed intervention	Capital cost in CER (Rs. Lakhs)					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
<b>1. Roads</b>	a) Construction of approach roads in Chandrashekharpur, Beruanpal, Jharbandh, Madhupur, Tarkabera and Kadela villages	70	70	70	70	70	350
	b) Also maintenance of roads, where required in phased manner in collaboration with local Panchayat and Govt. schemes	7	7	9	10	12	45
	c) Solar based street lights	5	5	11	12	12	45
<b>Sub Total 1</b>							<b>440</b>
<b>2. Drainage</b>	a) Construction of drainage system in villages in phased manner	10	10	15	15	15	65
	b) Covering of open drains in collaboration with local Panchayat heads and Govt. schemes.	7	7	7	7	10	38
<b>Sub Total 2</b>							<b>103</b>
<b>3. Sanitation &amp; solid waste management</b>	a) Awareness camps about (i) solid waste segregation and household composting (ii) prevention of water logging and mosquito breeding	0.75	0.75	0.75	1.5	1.5	5.25
	b) Purchase of dustbins, wheel barrow, sweeping equipment, etc for garbage collection for solid waste disposal.	0.5	0.5	0.5	1	1	3.5
	c) Purchase of anti-mosquito fumigation machine.	0.5				0.5	1

Sector	Proposed intervention	Capital cost in CER (Rs. Lakhs)					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
	d) Provide support for cleaning staff to clean village roads and common areas periodically.	1.5	1.5	3	3.5	4	13.5
<b>Sub Total 3</b>							<b>23.25</b>
<b>4. Drinking Water</b>	a) Construction and maintenance of ghats in commonly used ponds.	11	11	12	15	15	64
	b) Construction of Water storage tanks	4	4	5	5	7	25
	c) Purchase of water tankers.	11		11		11	33
	d) Water supply through mobile water tankers during festivals and dry season to local villages.	3	3	7	7	7	27
	e) Construction of pond in Nimabahali	22	0	0	0	0	22
	f) Deepening and cleaning of existing ponds	1		1		2	4
	g) Water supply through pipeline	30		30		30	90
<b>Sub Total 4</b>							<b>265</b>
<b>5 Market access and local livelihood means</b>	a) Construction of vocational training centre to build capacity for self-employment [for Ladies (stitching, embroidery, tailoring, pickles, etc), for Men (mushroom farming, dairy improvement, poultry farming, fish rearing, bee keeping, etc)]				25	35	60
	b) Establishing companys own Industrial Training Centre in the locality for providing training on skill development and employment.	50	50	50			150
	c) Training to people for improvement of agriculture and construction of training centre					5	5
	d) Soil laboratory for local farmers, soil quality improvement works, soil moisture conservation works and rain water harvesting near agricultural land		15	15	20	20	70
<b>Sub Total 5</b>							<b>285.00</b>

Sector	Proposed intervention	Capital cost in CER (Rs. Lakhs)					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
<b>6. Education</b>	a) Expansion of existing of schools to higher levels (middle/ High) as per requirement	20		20		20	60
	b) Construction (phase-wise) of primary school in Chandrashekharpur in consultation with government scheme.		35		35	35	105
	c) Development of infrastructure in schools by construction of boundary walls, park/ playground, toilets & any new classroom/ building, maintenance of the same	10		10		12	32
	d) plantation & beautification in and around school premises				2	3	5
	e) Providing sets of desk, bench with back rest and shelf, blackboard, and other furniture	2	2.5	2.5	3.5	3.5	14
	f) Scholarship to meritorious students						0
	g) Financial support to needy students						0
	h) Adult education centre	5					5
	i) Distribution of Bags, Study Material (Slate, Globe, Maps, Charts, Exercise Book, Duster, Chalk etc.) as per requirement of school	1	1	1.5	1.5	2	7
	<b>Sub Total 6</b>						
<b>7. Health Care</b>	a) Construction of 10 bedded hospital in consultation with statutory regulatory bodies/ government scheme.			200	260	350	810
	b) Purchase of ambulance.	15		15		15	45
	c) Provide free consultation and medicines to displacees and land losers and subsidy to other villagers at proposed hospital of the company.						0
	d) Provision of veterinary doctor and centre for animal health					20	20

Sector	Proposed intervention	Capital cost in CER (Rs. Lakhs)					Total
		Year 1	Year 2	Year 3	Year 4	Year 5	
	e) Financial help to critical medical cases						0
	f) Conducting mobile health/ awareness camp for protection against prevalent common diseases/ family planning camp (Doctor, para-medical staff and free supply of medicines)	5	5.5	9	9	9	37.5
<b>Sub Total 7</b>							<b>912.5</b>
<b>8. Sports, Culture and others</b>	a) Construction of community centre, sports centre, recreation rooms, stage, cultural spaces, etc	16		16		20	52
	b) Sponsorship to Rural Sports events						0
	c) Sponsorship to local talent to participate at state & national levels						0
	d) Construction & improvement of sports field and parks	10		15		15	40
	e) Provide equipment to village level teams in crickets, football and badminton		1.5		1.5		3
	f) sponsorship of cultural events during festivals						0
	g) Celebrating Earth day and awareness program for sustainable development and environment protection						0
	h) Pension to senior citizens of displacees and land losers						0
	i) Tree distribution/ Plantation in community	1	1	1.5	1.5	1.5	6.5
	<b>Sub Total 8</b>						
<b>Grand Total (1+2+3+4+5+6+7+8)</b>		<b>319.25</b>	<b>231.25</b>	<b>537.75</b>	<b>506</b>	<b>764</b>	<b>2358.2</b>

- 6.1.26 Green belt will be developed in 222.67 acres (90.11 ha) which is about 33% of the total area. A 10 m wide green belt, consisting of at least 3 tiers around boundary will be developed as green belt and green cover as per CPCB/ guidelines. Local and native species will be planted with a density of 2500 trees per ha. Total 2.25 lakh trees will be planted and nurtured in 90.11 ha in 5 years.
- 6.1.27 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity
- 6.1.28 Name of consultant: Min Mec Consultancy Private Limited, New Delhi. MinMec is preparing and presenting reports as per the High Court of Delhi orders in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016.

**Observations of the Committee: -**

- 6.1.29 The committee noted that CER action plan prepared to address the issues raised during the public hearing and the findings of the social impact assessment is based on norms for brown field project. The committee also observed that the AAQ modelling furnished in the EIA report was not satisfactory. Further, the project proponent had not submitted the letter from Competent Authority indicating the status of acquisition of 66.270 acres of land.

**Recommendations of the Committee: -**

- 6.1.30 After detailed deliberations, and in view of the aforesaid shortcomings, the Committee sought the following additional information from the project proponent for further consideration of the proposal.
- i. Document from Competent Authority indicating the status of land acquisition of 66.270 acres of land within the plant site as proposed in the EIA report shall be submitted.
  - ii. Action plan to conserve the water bodies within the plant site shall be furnished.
  - iii. Ambient Air Quality modeling has to be reworked, and submitted to the Ministry considering desulphurization of heat recovery gases and switching over to 100% hot charging thereby minimizing the use of reheating furnaces.
  - iv. CER table shall be revised as per Ministry's O.M. dated 1/5/2018 using the norms for the green field project and action plan for completion of CER activities within a time frame of five years shall be furnished.
  - v. Action plan for completion of greenbelt within a time frame of 3 years shall be furnished.
  - vi. Project proponent shall furnish an undertaking, confirming that railway siding shall be provided within 5 years or at the time of commissioning of the plant, whichever is earlier.
- 6.2. Change in configuration of pelletization plant (2x1.32 MTPA to 1x2.64 MTPA) in the Integrated Steel Plant by **M/s. Rungta Mines Limited** located at Village Chaliyama, Bankasai & Kaju, District Saraikela Kharsawan of **Jharkhand** - [Proposal No. IA/JH/IND/100546/2019; MoEF&CC File No. J-11011/305/2012-IAII(I)] - **Environment Clearance** under para 7(ii) b of the EIA Notification, 2006 - regarding.

- 6.2.1 M/s. Rungta Mines Limited has made an online application vide proposal no. IA/JH/IND/100546/2019 dated 27<sup>th</sup> March, 2019 along with Form – 2 seeking environmental clearance under para 7(ii) 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 project is appraised at the Central level.

**Details submitted by the project proponent**

- 6.2.2 M/s Rungta Mines Limited is operating an Integrated Steel Plant at villages Chaliyama, Bankasai & Kuju in District Saraikela Kharsawan, Jharkhand. Environmental Clearance for above mentioned plant was granted by MOEF&CC vide letter no. J-11011/305/2012-IA.II (I) dated 07.08.2018 and its enhancement in DRI, SMS, Caster and Rolling mill & change in technology & configuration of SMS and power plant vide amendment letter no. J-11011/305/2012-IA.II.(I) dated 28.01.2019. The consolidated summary of the sanctioned facilities is given in Table 1.

**TABLE 1: UNITS SANCTIONED IN EC LETTER DATED 07.08.2018 & ITS AMENDMENT DATED 28.01.2019**

Sl. No.	Plant/ facility	Units	Total Capacity (as per EC dated 07.08.2018 & its amendment dt.28.01.2019)
1	DRI plant (8x100 TPD+2x350 TPD)	MTPA	0.658
2	Mini blast furnace (2x262cum)	MTPA	0.458
3	Steel melting shop (I) IF 4X15 T+2x20 T LRF (II) IF 4X15 T+1x35 T LRF (III) IF 4X15 T+1x35 T LRF	MTPA	0.7854
4	Billets/ Slab/ Bloom caster I, II & III	MTPA	0.7695
5	Continuous Casting Machine		3X4 strand
6	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ others)		
a	Mill-1	MTPA	0.261
b	Mill-2	MTPA	0.261
c	Mill-3	MTPA	0.217
7	Captive power plant	MW	158
a	WHR based CPP	MW	53
b	AFBC/CFBC based CPP	MW	105
8	Pelletisation Plant	MTPA	2.64
9	Coal Washery	MTPA	1.26
10	Oxygen Plant (1x30 T)	m <sup>3</sup> /annum	7,350,000
11	Lime Plant (1X90 T)	m <sup>3</sup> /annum	31,500
12	Vacuum Degassing	Tonnes	30
13	Ferro Alloy Plant (9MVA + 18 MVA)		
a	Ferro Manganese OR	MTPA	0.054
b	Silico Manganese OR	MTPA	0.0432
c	Ferro Chrome OR	MTPA	0.0432

Sl. No.	Plant/ facility	Units	Total Capacity (as per EC dated 07.08.2018 & its amendment dt.28.01.2019)
d	Ferro Silicon	MTPA	0.0192
14	Briquette Plant		
	For Ferro chrome OR	MTPA	0.088
	For Ferro manganese	MTPA	0.112
15	Sinter Plant (2X24 sq.m)	MTPA	0.532
16	Coke Oven plant (4 batteries X 70,000 TPA)	MTPA	0.28
17	Producer Gas Plant	NM <sup>3</sup> /hr	51,000

6.2.3 In the ISP, 8X100 TPD and 2X350 TPD DRI kilns, 8X15 T IF with CCM, one 0.217 MTPA rolling mill, 33 MW WHRB and 25 MW AFBC are already under operation. Construction of other manufacturing facilities is ongoing. The construction of pelletisation plant has not yet been started.

6.2.4 Now, company wishes to change the pelletisation plant module configuration from 2 nos. X1.32 MTPA to 1 no. X 2.64 MTPA without any change in overall sanctioned capacity permitted as per EC dated 07.08.2018 & its amendment dated 28.01.2019

6.2.5 The project proponent submitted an online application in the prescribed format i.e. Form-2 along with other documents to the Ministry on 27.04.2019 vide Online Application No. IA/JH/IND/100546/2019.

6.2.6 Due to change Pelletisation plant module configuration from 2 nos. X1.32 MTPA to 1 no. X 2.64 MTPA, following are the advantages:

- Reduction in land requirement for pellet plant from 55 acres to 30 acres.
- Reduction in specific fuel (FO) consumption to 18 ltr/ton from 20 ltr/ton. Therefore, there will be less emission due to better thermal efficiency and less heat loss at furnace as a consequence of larger size.
- Reduction in specific power consumption to 50Kwh/ton instead of 55Kwh/ton due less number of equipment and more efficient use of equipment. Approximately 2 MW of electricity consumption is expected to reduce.
- Reduction in number of chimneys from four to two.
- Half the number of transfer points for iron ore and pellet will be required.
- The structural steel consumption and civil work will reduce.

6.2.7 No additional water requirement will be there due to change in configuration. Reduction in total pollutant emissions from stack into the air are anticipated since total material handled and its air requirement remains same but specific fuel consumption will reduce. Number of stacks will reduce from four to two. Bag filters & ESPs shall be installed to comply to the emission norms. Fugitive emissions might reduce due to lesser transfer points. The total solid waste generation in form of dust (Iron Ore, Coke, Coal Fines, Limestone, Dolomite, Bentonite), will remain unchanged and will be 100% reused in sinter making within the ISP. No additional environmental management measures or funds for it shall be required.

- 6.2.8 The Eastern Central Zone Office of MoEF&CC has visited the plant and issued a compliance status report vide letter no. 103-498/ROR-2016 dated 22.05.2018. As per the letter dated 22/05/2018, the stipulated Environmental Clearance conditions such with respect to green belt development, CSR expenditure, effluent quality monitoring data, slag separation plant and fly ash utilization have been reported as partially complied. In this regard, the company had submitted the action plan to MOEF&CC, Regional office, Ranchi vide their letter no. RML/CSP/ MOEF(RO)/18-19/1057 dated 12.06.2018. After detailed deliberations, the Committee satisfied with the corrective actions taken by the project proponent.
- 6.2.9 Name of the Consultant: M/s Min Mec Consultancy Pvt. Ltd., New Delhi with permission from High Court of Delhi vide in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016.

**Observations of the Committee: -**

- 6.2.10 The Committee noted the proposed change in configuration of the pellet plant reducing the no of units from 2x1.32 MTPA to 1x2.64 MTPA capacity. The new configuration will reduce the land requirement, specific fuel and power consumption, and also reduction in number of transfer points for iron ore and pellets.

**Recommendations of the Committee: -**

- 6.2.11 After detailed deliberations, the Committee recommended the proposal for grant of environmental clearance for change in configuration of the pellet plant from 2x1.32 MTPA to 1x2.64 MTPA subject to following environmental safeguards.
- i. Greenbelt in an additional area of 25 acres of land shall be developed, and the existing green belt already in an area of 224.91 acres shall be improved by planting of local broad leaved tree species in the gaps.
  - ii. Project proponent shall clear the old dump of fly ash in twelve months' time. Freshly generated fly ash shall be utilized strictly as per the provisions of the "Fly Ash Notification".
  - iii. The specific power consumption in the pellet plant shall not exceed 50 kw/tonne, and fuel oil consumption shall not exceed 18 lit/tonne.
  - iv. Project proponent shall not abstract and use any groundwater.
  - v. Action plan for rain water harvesting shall be submitted by the project proponent to the Regional Office along with the half yearly compliance report.

- 6.3. Change in configuration of pelletization plant (2x1.32 MTPA to 1x2.64 MTPA) in the Integrated Steel Plant by **M/s. Rungta Mines Limited** located at Village Kamanda, District Sundergarh of **Odisha**. - [Proposal No. IA/OR/IND/100564/2019; MoEF&CC File No. J-11011/434/2009-IAII(I)] - **Environment Clearance** under para 7(ii)b of the EIA Notification, 2006 - regarding.

- 6.3.1 M/s. Rungta Mines Limited has made an online application vide proposal no. IA/OR/IND/100564/2019 dated 28<sup>th</sup> March, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance under para 7(ii) 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 project is appraised at the Central level.

**Details submitted by the project proponent**

6.3.2 M/s Rungta Mines Limited is operating an Integrated Steel Plant at village Kamanda, District Sundergarh, Odisha. Environmental Clearance for the plant was granted by MOEF&CC vide letter no. J-11011/434/2009-IA.II(I) dated 06.11.2017 and its enhancement in DRI, SMS, Caster and Rolling mill & configuration of SMS and power plant vide amendment letter no. J-11011/434/2009-IA.II.(I) dated 8.03.2019. The consolidated summary of the sanctioned facilities is given in Table 1.

**TABLE 1: UNITS SANCTIONED IN EC LETTER DATED 06.11.2017 & ITS AMENDMENT DT. 08.03.2019**

Sl. No.	Facility	Total Capacity(TPA)
1	<b>Beneficiation Plant</b>	1,200,000
2	Pellet Plant-1	600,000
	Pellet plant-2	2,640,000
	<b>Sub Total</b>	<b>3,240,000</b>
3	<b>Coal Washery</b>	924,000
4	<b>DRI Plant</b>	
	6X100 TPD	273,000
	1X300 TPD	136,500
	3X350 TPD	441,000
	2X500TPD	420,000
	<b>Sub total</b>	<b>1,270,500</b>
5	<b>Sinter Plant -2x24 sqm</b>	532,224
6	<b>Mini Blast Furnace</b>	
	2X262 CUM	458,500
	1X260 CUM	227,500
	<b>Sub-total</b>	<b>686,000</b>
7	<b>Coke Oven (2 batteries of 70,000 TPA)</b>	140,000
8	<b>SMS</b>	
	4X15T IF, 2x20 LRF	277,200
	9 X15T IF, 3x35T LRF	623,700
	<b>Sub total</b>	<b>900,900</b>
9	<b>Billet/ Slab/ Bloom Caster</b>	
	Caster 1	271,656
	Caster 1	271,656
	Caster 1	339,570
	<b>Sub total</b>	<b>882,882</b>
10	<b>Flat/ Round/ Wire Rod/ Structural Mill/ others</b>	
	Mill-1	260,790
	Mill-2	260,790
	Mill-3	325,987
	<b>Sub total</b>	<b>847,567</b>
11	<b>Ferro Alloy Plant (1x9 MVA + 1x18 MVA)</b>	
	Ferro Manganese OR	9 MVA= 18,000

Sl. No.	Facility	Total Capacity(TPA)
		18 MVA=36,000
	Silico Manganese OR	9 MVA= 14,400 18 MVA=28,800
	Ferro Chrome OR	9 MVA= 14,400 18 MVA=28,800
	Ferro Silicon	9 MVA= 6,400 18 MVA=12,800
	Briquette Plant for ferro chrome	88,320
	Briquette Plant for ferro manganese	111,360
12	Captive Power Plant	198 MW
	WHRB	87 MW
	AFBC / CFBC (1x20 MW+ 2x45.5 MW)	111 MW

- 6.3.3 In the ISP, 6X100 TPD, 1X300 TPD and 1X350 TPD DRI kilns, 4X15 T IF with CCM, 20 MW WHRB and 20 MW AFBC are already under operation. Construction of other manufacturing facilities is ongoing. The construction of pelletisation plant has not yet been started.
- 6.3.4 Now, company wishes to change the pelletisation plant module configuration from 2 nos. X1.32 MTPA to 1 no. X 2.64 MTPA without any change in overall sanctioned capacity permitted as per EC dated 06.11.2017 & its amendment dated 08.03.2019.
- 6.3.5 The project proponent submitted an online application in the prescribed format i.e. Form-2 along with other reports to the Ministry on 28.03.2019 vide online application No. IA/OR/IND/100564/2019.
- 6.3.6 Due to change in configuration of the pelletisation plant from 2 nos. X1.32 MTPA to 1 no. X 2.64 MTPA without any change in overall sanctioned capacity, there will be following advantages:
- Reduction in land requirement for pellet plant from 55 acres to 30 acres
  - Reduction in specific fuel (furnace oil) consumption to 18 ltr/ton from 20 ltr/ton. Therefore, there will be less emission due to better thermal efficiency and less heat loss at furnace as a consequence of larger size.
  - Reduction in specific power consumption to 50 Kwh/ton instead of 55 Kwh/ton due less number of equipment and more efficient use of equipment. Approximately 2 MW of electricity consumption is expected to reduce.
  - Reduction in number of chimneys from four to two
  - Half the number of transfer points for iron ore and pellet will be required
  - The structural steel consumption and civil work will reduce
- 6.3.7 No additional water requirement will be there due to change in configuration. Reduction in total pollutant emissions from stack into the air are anticipated since total material handled and its air requirement remains same but specific fuel consumption will reduce. Number of stacks will reduce from four to two. Bag filters & ESPs shall be installed to comply to the emission norms. Fugitive emissions might reduce due to lesser transfer points. The total solid waste generation in form of dust (Iron Ore, Coke, Coal Fines, Limestone, Dolomite, Bentonite), will remain

unchanged and will be 100% reused in sinter making within the ISP. No additional environmental management measures or funds for it shall be required.

6.3.8 The Regional Office of MoEF&CC has visited the plant and issued a compliance status report vide letter no.101-998/EPE/432 dated 27.11.2018. The observations of Regional Office are summarized as below:

- i. It is required to speed up the construction of 150 KLD sewage treatment plant work.
- ii. It has come to observed that PAs have assigned Indian Institute of Technology (IIT), Kharagpur on dated 21.09.2018 to prepare GHG emission inventory of the project. it is required to submit above report to Ministry and its regional office at the earliest
- iii. It is required to strengthen and maintained the existing green belt with broad leaves native species of the plant especially all along the boundary of the plant

In this regard, the project proponent informed that the necessary correction actions to the aforesaid observations have been taken and the compliance is under progress.

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

#### **Observations of the Committee: -**

6.3.10 The committee noted that the following non-compliances reported by the Regional Office of the MoEF&CC are yet to complied with by the project proponent.

- i. 150 KLD STP is not commissioned.
- ii. GHG inventory report has not been prepared and submitted.
- iii. Improvement and strengthening of the green belt is yet to be done.

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

6.3.11 In view of the aforesaid shortcomings reported by the Regional Office, and after detailed deliberations, the Committee deferred the consideration of the proposal and advised the project proponent to furnish a closure report from Regional Office of MoEF&CC on the aforementioned non-compliances to enable further consideration of the proposal.

6.4. Enhancement of production in the Steel Melting Shop [105600 TPA to 126720 TPA], billet/bloom/slab caster [103488 TPA to 124186 TPA] and Rolling Mill [TMT/Flat Round/ Wire Rod/Structural Mill/ Others] (102418 TPA to 121702 TPA) by **M/s. Rungta Mines Limited** at Karakhendra Steel Plant located at village Karakhendra, District Keonjhar, **Odisha**.- [Proposal No. IA/OR/IND/100635/2019; MoEF&CC File No.J-11011/230/2016-IAII(I)] - **Environment Clearance** under para 7(ii)a of the EIA Notification, 2006 - regarding.

6.4.1 M/s. Rungta Mines Limited has made an online application vide proposal no. IA/OR/IND/100635/2019 dated 29<sup>th</sup> March, 2019 along with Form – 2 seeking environmental clearance under the para 7(ii) 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” of the EIA Notification, 2006 and the project is appraised at the Central level.

**Details submitted by the project proponent**

6.4.2 The proposal is for enhancement in the production of Steel Melting Shop [105600 TPA to 126720 TPA], billet/bloom/slab caster [103488 TPA to 124186 TPA] and Rolling Mill [TMT/Flat Round/ Wire Rod/Structural Mill/ Others] (102418 TPA to 121702 TPA) at Karakhendra Steel Plant at village Karakhendra of District Keonjhar, Odisha of M/s Rungta Mines Ltd. along with Form-I and Pre-feasibility Report. The proposed enhancement in production falls under category 'B'. But it is treated as Category 'A' due to its proximity to interstate boundary of Odisha-Jharkhand (1.7 km). Environmental clearance has been obtained from MOEF&CC vide letter no. J-11011/230/2016-IA. II(I) dated 15.01.2018. The sanctioned facilities and production along with present status of implementation are given below:

**UNITS SANCTIONED IN EC LETTER DATED 15.01.2018**

Sl.	Facilities	Production Capacity TPA	Present Status of implementation
1	Steel Melting Shop comprising: Induction Furnace (2X15T) with CCM (2 strand)	105,600	<ul style="list-style-type: none"> <li>● 33 nos. foundation completed out of 36 nos.</li> <li>● Order placed for IF</li> <li>● Civil works for IF underway</li> </ul>
	Billet / Bloom/ Slab caster	103,488	Order placed
2	TMT/ Flat/Round/ Wire Rod/ Structural Mill	101,418	Order yet to be placed, quotations invited

6.4.3 Now it is proposed to have the following enhancement in production:

- i. Amendment by addition of further refining facility i.e. 1X20 T LRF to process 1,26,720 TPA in consonance with the proposed enhancement of 2X15 T IF.
- ii. Capacity enhancement of SMS, Billets/ bloom/ slab casters and Rolling mill for Flat/ Round/ Wire rod/ Structural as follows:

**PRODUCTION AS PER EC & PROPOSED EXPANSION IN PRODUCTION**

S. No.	Plant Facilities	Production as per EC dated 15.01.2018 TPA	Proposed Production, TPA	Total Production, TPA	%tage increase
1.0	Steel Melting Shop comprising: Induction Furnace 2x15 T, LRF 1x20T (proposed in above amendment)	105,600	21,120	126,720	20%
2.0	Billets/ Bloom	103,488	20,698	124,186	20%

S. No.	Plant Facilities	Production as per EC dated 15.01.2018 TPA	Proposed Production, TPA	Total Production, TPA	%tage increase
	Caster/Slab Caster CCM (2 strand)				
3.0	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ others)	101,418	20,284	121,702	20%

6.4.4 The above expansion is possible because of following:

- In Induction Furnace, by using alumina based neutral lining (life-100 heats) instead of the conventionally used silica based acidic lining (life- 20 heats), the downtime is reduced. Furthermore, 100 heat life of neutral lining can be further increased to 350 heats by hot patching. The longer life of lining will reduce downtime and increase availability of 96 working hours. Hence, increase of production by 20% is easily feasible by utilizing the extra working time available to operate a standby furnace in addition to the operational furnaces above. For operation of a standby furnace simultaneously, additional electrical, bush bars and panel shall be installed.
- Billets/ Bloom Caster/Slab Caster CCM (2 strand) capacity will be increased by increasing the operating hours to cater to the higher output from IF-LRF. There will be no other change.
- The smallest 'direct' rolling mills that are currently manufactured by suppliers are 28 TPH. This configuration can easily cater to the increased output from IF-LRF-CCM by increasing the number of operating hours from average 11-12 hrs/day to 15 hours/day. There will be no other change.

6.4.5 The salient features for proposed enhancement in production are summarized as below:

Description	Existing as per EC dated 15.01.2018	After Expansion
Location	Village Karakhendra, District Keonjhar, Odisha	Same
Total Area	13.20 Acres	Same
Product	Billets/ Bloom/ Slab and TMT/ Flat/ Round/ Wire rod/ Structural steel/ other	Same
Working days	330 days	Same
Manpower	250	260
Implementation Schedule	-	24 month
Cost of the project	Rs. 83 crores	Rs 85 crores
Recirculating Water	758 KLD	1226 KLD

Daily make up water	Not estimated	104.6, say, 105 KLD
Waste water generation	42.2 KLD (including initial losses to clean the system)	4.7 KLD
Source of water	Industrial water - harvested rain water and deficit from Karo River, if required. Ground water sourced for domestic.	Same
Power requirement	15 MW	20 MW

6.4.6 The raw materials requirement for the proposed enhancement in production is furnished as below:

Sl. No.	Facilities	Raw Material	Unit	Required	Own Source	From outside Purchased
1	Steel Melt Shop					
	I.F.	DRI	TPA	1,19,266	1,19,266	-
		Pig Iron	TPA	13,774	-	13,774
		Scrap	TPA	13,774	-	13,774
		<b>Product</b>		<b>Produced</b>		<b>Sold to market</b>
2	Rolling mill	TMT	TPA	121702		121702

- Own source is the Karakolha sponge iron plant at a distance of 0.5 km aerially.
- Pig Iron & scrap will be purchased from open market
- Raw material and product will be transported through Road and Road-Rail combination (from nearest siding at Barbil-2.9 km aerially and Bolani-13.5 km aerially).

6.4.7 Due to the expansion, there will be no additional land requirement beyond 13.2 acres for which Environmental Clearance was accorded. There will be marginal increase in water requirement and total daily fresh water requirement shall become 105 KLD. Out of this, 4 KLD drinking water requirement will be met from ground water, for which permission has been obtained from CGWA. Balance 101 KLD shall be met through harvested rain water collected in raw water reservoir. Entire waste water will be reused within plant for sprinkling after treatment in OWS, settling tanks and common sump.

6.4.8 Increase in total pollutant emissions from stack into the air are anticipated for PM10, PM2.5 and NO2 but decrease in SO2 will be there due to use of lower sulfur fuel. The maximum incremental GLCs will increase by 0.02 µg/m<sup>3</sup> for PM10, 0.01 µg/m<sup>3</sup> for PM2.5 and 0.01 µg/m<sup>3</sup> for NO2. Bag filters shall be installed to comply to the emission norms.

6.4.9 Fugitive emissions will be controlled by keeping raw materials DRI & Scrap as well as finished products under covered sheds. There will be increase in traffic by approximately 28 trucks. The total solid waste generation will increase in form of slag (by 2859 TPA), mill scale (by 228 TPA) and BF dust (by 489 TPA). Slag and mill

scale shall be 100% reutilized while BF dust shall be stored in designated solid waste area. Additional environmental management measures proposed are:

- Installation of the latest & state-of-the art bag filters compliant to 30 mg/Nm<sup>3</sup>
- Solar lighting for all streets and parking area.
- Solar panels of roof top to minimize power consumption from own power plant at Karakolha (0.5 km away). This will reduce coal consumption in own CPP
- 1 ha green belt plantation outside project boundary

6.4.10 Project proponent submitted certified compliance report of EC dated 15.01.2018 from Regional Office, MOEF&CC, Bhubaneswar. Project was monitored on 26.02.2019 by Dr. A.K.Gupta Scientist D , Regional Office Bhubaneswar and issued a compliance status report vide letter no. 101-1001/EPE/ dated 06.03.2019. The observations made in the Regional Office report is furnished as below:

- i. Chose at least 2-3 feet plant saplings for better survival of the green belt development.
- ii. Complete construction work of rain water storage pond before the monsoon season.
- iii. Put up Environment & Safety signage boards in various prominent location of the project site.

In this regard, the project proponent informed that the necessary correction actions to the aforesaid observations have been taken and the compliance is under progress.

6.4.11 Public hearing for the existing project was conducted on 12.10.2017 and the issues raised in the public hearing are being carried out by the project proponent under various headings of environment, employment, health, supply of drinking water, electricity, road communication & others. Rs. 43.12 lakhs have been spent between Oct 2017 to Jan 2019.

6.4.12 Name of Environmental consultant: Min Mec Consultancy Pvt. Ltd. who is preparing and presenting reports as per the High Court of Delhi orders in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016.

#### **Observations of the Committee: -**

6.4.13 The committee noted that the following non-compliances reported by the Regional Office of the MoEF&CC are yet to be complied with by the project proponent.

- i. Project proponent shall plant broad leaved trees using 2-3 feet high saplings for improving the greenbelt.
- ii. Rainwater harvesting structures shall be established by the project proponent before the onset of monsoon.
- iii. Project proponent shall install signage for awareness about environment and safety in prominent locations of the project site.

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

6.4.14 In view of the aforesaid shortcomings reported by the Regional Office, and after detailed deliberations, the Committee deferred the consideration of the proposal and advised the project proponent to furnish a closure report from Regional Office of MoEF&CC on the aforementioned non-compliances to enable further consideration of the proposal.

6.5. Change in configuration of Coke Oven Plant from 0.6 MTPA by-product Recovery Type to 0.6 Heat Recovery Type with WHRB without change in overall production of 1.4 MTPA Steel by **M/s Kalyani Steels Limited** at Koppal District, Karnataka. - [Proposal No. IA/KA/IND/101916/2019; MoEF&CC File No.J-11011/172/2007-IAII(I)] - Environment Clearance under para 7(ii) of the EIA Notification, 2006 - regarding.

6.5.1 M/s Kalyani Steels Limited has made an online application vide proposal no. IA/KA/IND/101916/2019 dated 12<sup>th</sup>April, 2019 along with Form – 2 seeking environmental clearance under para 7(ii) 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 project is appraised at the Central level.

**Details submitted by the project proponent**

6.5.2 Kalyani Steels Limited (KSL) had planned expansion of their Integrated Steel Plant (ISP) for production of 1.4 MTPA carbon and alloy steel along with stainless steel in Koppal district of Karnataka. The Environmental Clearance (EC) for the proposed expansion was accorded by Ministry of Environment, Forest & Climate Change (MoEFCC) vide F. No. J-11011/172/2007-IA II (I) on 19<sup>th</sup> January 2016. The details of the earlier project are as delineated below:

6.5.3 The Project site, located in Koppal district of Karnataka, lies between latitudes 15°19'25” - 15°20'41” N and longitudes 76°14'48” - 76°15'43” E and 498 m above mean sea level (MSL). It is about 17-20 km North West of Hospet city in Karnataka.

6.5.4 Products with capacities include: Crude Steel (1.40 MTPA), Saleable Steel ( 1.36 MTPA) which include Long Products ( 1.26 MTPA) (Billets, blooms, rounds & rolled Products) and Cast Ingots ( 0.10 MTPA)

6.5.5 Process route involves steel production via BF→BOF route as well as BF/Scrap (or purchased DRI) → EAF route

6.5.6 Production Units as per EC are as follows:

Sl. No.	Production Unit	Configuration & Production capacities as per EC dated 19 <sup>th</sup> January 2016
1	Coke Oven Plant	2 x 45 ovens Coke Ovens and By-Products Recovery Plant (COBP) 0.6 MTPA Gross Coke
2	Sinter Plant Pellet Plant	1 x 33 sq m + 1 x 130 sq m 1.79 MTPA 1 x 1.2 MTPA
3	Blast Furnace DR Plant	1 x 750 cu m + 2 x 250 cu m + 1 x 350 cu m 1.64 MTPA Hot Metal 1 x 0.5 MTPA
4	Pig casting machine	40 TPH & 180 TPH

Sl. No.	Production Unit	Configuration & Production capacities as per EC dated 19 <sup>th</sup> January 2016
5	Lime/dolo Calcining Plant	2 x 300 TPD 0.17 MTPA Calcined Lime; 0.05 MTPA Calcined Dolo
6	Steel Melt Shop	BOF - 2 x 60 T LF - 3 x 60 T IF - 1 x 50 T VD/RH - 2 x 60 T EAF - 1 x 60 T AOD - 1 x 60 T 1.46 MTPA Liquid Steel
7	Casting units	Continuous Caster: a. Billet cum bloom cum round caster b. Billet cum bloom caster c. Bloom cum round caster d. Ingot Casting 1.4 MTPA Crude Steel
8	Rolling Mill	Bar & Wire Rod Mill 0.49 MTPA Bars, flats & Wire Rods
		Heavy bar Mill 0.31 MTPA Rounds & RCS
		Bar & Rod Mill 0.34 MTPA Bars & Rods
		Annealing Furnace - 60 TPH Tempering Furnace - 50 TPH
9	Air Separation Plant	600 TPD (BOO basis)
10	Power Plant	BF gas based - 8 MW CDQ - 6 MW (5.4 MW production capacity) TRT - 3.65 MW (3.28 MW production capacity)

6.5.7 Requirement of water for the expansion of ISP was estimated to be about 3.14 MGD. The total requirement of water for existing as well as the expansion would be about 4.68 MGD which would be drawn from Tungabhadra, at a distance of 5.2 km in south western direction of the plant site.

6.5.8 Total power requirement for the expansion of ISP was about 128 MW, proposed to be met through in-plant generation and drawal of power from KPTCL grid.

6.5.9 The capital cost was estimated to be Rs.5531 Crore and the scheduled completion period was 60 months from Go-ahead date.

6.5.10 Details regarding CFE/CFO:

- a. KSL has received CFE on 9<sup>th</sup> Feb, 2016 along with corrigendum on the same on 2<sup>nd</sup> Mar, 2016. KSL's said CFE is valid for a period of 5 years i.e. till 9<sup>th</sup> Feb, 2021
- b. CFO for the new units shall be obtained before start of operations.  
Further, CFO for KSL's existing operations was obtained on 3<sup>rd</sup> Feb, 2017 and is valid till 30<sup>th</sup> Jun, 2021.

- 6.5.11 The Status of compliance of EC was obtained from Regional Office, Bangalore vide letter number F.No.EP/12.1/530/KAR & EP/12.1/11/2015-16/KAR61 dated 10th Apr, 2019. There is no non-compliances reported by Regional officer. This compliance report is obtained against conditions of EC dated 27th Dec, 2007 – which pertains to KSL’s existing operations.
- 6.5.12 We also wish to submit that KSL could not implement the facilities mentioned in the EC dated 19thJan, 2016 due to inordinate delay in financial closure. Due to this, conditions related to construction and operation of the said 1.4 MTPA Expansion project shall be complied during and after implementation of the project facilities.
- 6.5.13 Further, KSL has promptly complied with conditions not related to construction and operation of the 1.4 MTPA Expansion project.
- 6.5.14 At present KSL proposes to install 0.6 MTPA heat recovery type coke ovens with stamp charging in place of 0.6 MTPA Byproduct recovery type Coke Ovens with stamp charging in the existing land area of KSL.
- 6.5.15 The details of the proposed amendment are as mentioned below:
- i. Phase 1 : 0.20 MTPA Heat Recovery coke oven with Modified Wet Quenching with 25 MW WHR Power Plant
  - ii. Phase 2 : 0.40 MTPA Heat Recovery coke oven with Modified Wet Quenching with 50 MW WHR Power Plant
- 6.5.16 Further, KSL requests for deletion of 1 x 0.5 MTPA DR Plant based on Coke Oven Gas (COG) as reductant.
- 6.5.17 Requirement of Water & Electrical Power due to the proposed amendment are as follows:
- The total requirement of water for the existing plant as well as the expansion would be about 4.30 MGD (in place of 4.68 MGD earlier)
  - The total requirement of power for the ISP would be about 120 MW (in place of 128 MW earlier), which would be met partly through captive power generation as mentioned above and rest from KPTCL grid.
- 6.5.18 The impacts due to the aforesaid changes and the management plan are as follows:

	<b>Impacts due to change in coke oven configuration to heat recovery type Coke Ovens &amp; deletion of COG based DRI plant</b>	<b>Management Plan</b>
<b>Air</b>		
<b><i>Fugitive emission</i></b>	<ul style="list-style-type: none"> <li>- No fugitive emission due to leakages from ovens, coal charging &amp; coke pushing since the oven operates under negative pressure</li> <li>- Generation of fugitive particles during coal handling &amp; coke</li> </ul>	<ul style="list-style-type: none"> <li>- Maintaining improved draught inside oven to ensure total combustion of gasses</li> <li>- Adequate stack height to ensure proper dispersion.</li> </ul>

	<b>Impacts due to change in coke oven configuration to heat recovery type Coke Ovens &amp; deletion of COG based DRI plant</b>	<b>Management Plan</b>
	screening	- Installation of dust suppression system for coal handling unit and dust extraction system for coke screening unit
<b>Stack emission</b> - Under-firing	- No emission from under firing as the heat of combustion is used to keep the walls of the ovens hot for the process of carbonization & no additional fuel is required for heating the walls of the ovens.	- Desulphurisation of flue gas with lime spray.
- Flue gas from carbonization	- Flue gas mostly containing CO <sub>2</sub> & NO <sub>x</sub> , after recovery of sensible heat is vented off to the atmosphere	- Modified wet quenching shall be employed with 2-stage scrubbing droplet separators and grit arrester
- Emission during wet quenching	- Emission containing coke particulate	
<b>Water</b>		
- Process Wastewater from primary gas cooling	- No generation of process wastewater. - Generation of wastewater from modified wet quenching.	Wastewater from Modified wet quenching would be treated for removal of suspended solids and recycled back to the system for quenching purpose.
- Wastewater from equipment cooling	- The wastewater from cooling circuit is treated and reused	
<b>Solid waste</b>		
- Coal tar sludge & BOD sludge	No generation of such solid wastes	

6.5.19 Fund provision for the proposed amendment is not applicable as the overall project cost is estimated to be approximately same as that in existing EC as:

6.5.20 The decrease in cost due to:

- a. Converting Recovery type of Coke Oven to Non-Recovery Type and
- b. Deletion of DR plant

...is offset by:

- a. Additional cost of Waste Heat recovery system and Power plant

- b. Overall increase in equipment cost for all the plant facilities
- c. Increase in construction cost (steel & cement)
- d. Higher exchange rate as compared to that in 2015-16 when we received the existing EC.

6.5.21 Key advantages due to present proposal are as follows:

- i. Net reduction in the requirement of make-up Water & Power
- ii. No production of cyanide & phenolic effluent and no requirement of BOD plant
- iii. Since non-recovery ovens work under negative pressure, there is no fugitive emission from the ovens during operation
- iv. Efficient utilisation of energy to produce low cost electrical power reducing sourcing of the same from external sources.
- v. Reduction of pollution load due to deletion of DRI plant which includes DRI exhaust emission and reduction of pollution load due to raw material and DRI handling in DRI circuit.

6.5.22 Proposed mitigation plan for dealing of pollution load

- i. Ovens are operated under negative pressure (-3mm to -5mm wg), hence there are no fugitive emissions from doors and other openings.
- ii. Complete combustion of volatile matter of coal by introduction of primary & secondary air
- iii. Improved heating control system to ensure no leakage of un-burnt hydrocarbons into the atmosphere through stack.
- iv. Maintaining improved draught inside oven for ensuring total combustion of gasses before it is let out into the atmosphere after waste heat recovery in the boilers.
- v. Adequate stack height to ensure proper dispersion.
- vi. Installation of Modified Wet Quenching system with two-level scrubbing, droplet and grit arrestor and other accessories, to ensure minimum dust emission
- vii. Installation of dust suppression system for coal handling unit and dust extraction system for coke screening unit.
- viii. Wet desulphurisation using lime solution for de-sulphurizing flue gas

6.5.23 The Public Consultation was organized by the KSPCB official and DC, Koppal on 28<sup>th</sup> Mar, 2015 at the project site, Ginigera and was attended by about 150 people representing the nearby villages. KSL (Project Proponent or PP) management briefed the audience about the project details viz. production process, baseline monitoring, Impact due to the project, management measures to be undertaken and CSR plans to be adopted. Most of the people showed gratitude to the PP for their extensive CSR activities that have caused massive societal up-liftment of the area. They are also extremely optimistic that the expansion project would also lead to creation of jobs and overall development of the surrounding area.

The major issues raised in Public Consultation are summarized in table below:

Sl. No.	Name & address	Issues raised by public/villagers	Status of Implementation
1	Sri.Goolappa s/o DyamappaHaligeriGramapa nchayath-Member, Ginigera village, Koppal	1) The expansion will boost the various employment opportunities for local un-employed educated youths	As mentioned earlier, the project could not be started due to inordinate delay in financial closure. Hence, issues related to the public consultation shall be taken up at the time of implementation of the said expansion project. However, we also wish to submit that KSL is in process to build boundary wall around its land for the said expansion project. The job work for construction of such boundary wall has been given exclusively to around 15 contractors from surrounding villages which has in-turn created employment for around 250 local villagers. Further, whenever required, KSL hires field equipment or earthmoving equipment (e.g. JCB etc.) from sources from surrounding villages. This has been done to promote economic activity and job creation in the surrounding villages.
		2) The Project Proponent (PP) shall have to take care of the local needs by providing drinking water, roads and other community facilities	
		3) The PP have to consider local peoples grievances and address the same	
		4) The expansion will not cause any adverse impact on the villagers	
2	Sri. KariyappaMeti, Ginigera village, Koppal	1) The PP have stirred various developmental drives in the area and have worked for overall development of the area	
		2) The PP is requested to consider catering through the forum to cater water to the nearby village with the help of State Govt.	
		3) The PP is requested to consider catering water feeding facilities to the lake Ginigera village from drawing pipe line from TB river with the help of Govt., which will help for feeding cattles& other domestic animals, human activities and agricultural usage during summers.	
		4) The PP is requested to continue with their social upliftment	

Sl. No.	Name & address	Issues raised by public/villagers	Status of Implementation
		measures and come further forward to support the villagers	
3	Sri Nagaraj Challalolli, Taluk Panchayath-Member, Ginigeru, Koppal	1) The PP has shown phenomenal support for the development of the area and has provided aides for the same. They have also extended extraordinary help in providing job opportunities. 2) The PP is requested to continue with such development drive even after the expansion 3) The PP shall take up all dust preventive measures and protect the surrounding villagers and environment from pollution point of view.	
4	Sri NageshShanthappa, Allanagar, Koppal	1) The Project activities should not affect the residing villagers health 2) The PP shall adopt preventive measures to control dust and other nuisances, if any.	
5	Sri MarutheppaHalagiri, Gramapanchayath-Member, Hosakanakapur village, Koppal	1) The PP have done excellent job in supporting the villagers, providing them with job opportunities as well as catering to their basic needs. 2) The PP was requested not to encourage outside state people in job opportunities as well as contract works, which hamper the life of local dependents	

Sl. No.	Name & address	Issues raised by public/villagers	Status of Implementation
6	Sri. Subbannachar, Vidyanagar, Ginigera village, Koppal	1) The PP has been thoroughly helpful in the social upliftment of this previously backward area. He expects that the company will continue to be helpful to the villagers in the future.	
7	Sri.B.S.Suresh, Former Z.P Member, Ginigera village, Koppal	1) The PP, since the inception of the project in 1994, has taken care of the needs of local villagers by providing jobs contract works and overall development of villages.	
8	Sri. MallikarjunKanakappahalige ri, Ginigera village, Koppal	1) The PP has been taking care of villagers need. However, more developmental activities are expected in the rural areas.	
9	Sri. ManjunathShanmukhayyaSa limath, Allanagar village, Koppal	1) The PP has to take care of the residents of Allanagar, as it is near to project site, by not causing any adverse effects. 2) The PP has to ensure further job opportunities for educated un-employed youths.	
10	Sri Shivashankar , Halekanakapur village, Koppal	1) The overall development of the area has been seen only after establishment of this project. Provisions of various jobs and contract services have helped the villagers to thrive.	
11	Sri Vidyakumar, KanakapurTanda, Koppal	1) The project has lead to overall development of the area.	

Sl. No.	Name & address	Issues raised by public/villagers	Status of Implementation
		2) He pointed out that many local employees are resigning as they are not given promotions even after serving for more than 10 years.	
		3) The said employees are migrating in search of jobs, this need to be verified by Govt. and such lapses to be rectified.	
		4) The company are not promoting the locals, specially prompted by higher officers who have come out of the state. He requested the company to encourage the growth of local people.	

6.5.24 Name of the Consultant engaged: M/s M. N. Dastur & Co. (P) Ltd. QCI NABET Sl. No 101, 10<sup>th</sup> Apr, 2019

**Observations of the Committee: -**

6.5.25 The Committee noted that the proposal involves change of technology for coke making process from ‘recovery type by-product’ to ‘non-recovery type with heat recovery’ and modified wet quenching. The project proponent also proposed deletion of coke oven gas based DRI envisaged earlier.

6.5.26 The proposal was considered in the earlier meeting and the issue of prescribing dry quenching for the small coke making plants with less than 0.8 MTPA capacity was referred to the Ministry for the policy guidance.

6.5.27 The project cost will change due to proposed changes in configuration, technology and facilities. Accordingly, CER outlay could also undergo change. In view of the aforesaid, the Committee advised the project proponent to rework the details of the CER Plan.

6.5.28 During the meeting, the project proponent submitted the details of the CER Plan as given below:

Activity	Amount in Rs Lacs
<b>Public Hearing:</b>	
Drinking water	500

Installation of RO plant	25
Vacuum cleaning and water mopping on roads	200
Local employment	30
<b>Need based assessment in the local area:</b>	
Health and sanitation initiatives for locals	400
Educational initiatives for locals	250
Local infrastructure development	200
Street lighting	40
Women's welfare initiatives	50
Community activity promotion (village community centre)	100
<b>Total</b>	<b>1795</b>

The year-wise expenditure towards CER (Rs lacs) was as given below:

Rs in Lacs	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Year-wise Expenditure	230	205	470	550	340	1795

**Recommendations of the Committee: -**

- 6.5.29 Based on the observations of the Committee as given above, and furnishing of the revised CER Plan by the project proponent, the Committee after detailed deliberations, recommended the proposal for amendment of Environmental Clearance comprising following changes and stipulations.
- i. Change in configuration of coke oven from 0.6 MTPA 'by-product recovery type' to 0.6 MTPA 'non-recovery type with heat recovery' along with modified wet quenching tower.
  - ii. Deletion of 0.5 MTPA coke oven gas based DRI.
  - iii. The project proponent shall expend the revised CER outlay of Rs 17.95 Crores within first 5 years of implementation of the project in accordance with the detailed CER plan submitted by him.
  - iv. Project proponent shall abide by the policy decision or guidance on the issue of CDQ presently under consideration of the Ministry.
- 6.6. Ferro Alloy Plant "for production of 35,176 TPA (maximum) Ferro Manganese / Silico Manganese / Ferro Chrome / Silico Chrome(SAF)/ Ferro Silicon) and 2 x 4.5 MTPA to make 27,900 MTPA Low Carbon Ferro Chrome (EAF) by **M/s. Hariaksh Industries Pvt. Limited** located at Mouza-Chausal, P.S Gangajalghati, District-Bankura, **West Bengal** [Proposal No. IA/WB/IND/102361/2019; MoEF&CCFile No.J-11011/167/2019-IAII(I)] – **Terms of Reference** - regarding
- 6.6.1 M/s. Hariaksh Industries Private Limited made application vide online proposal no. IA/WB/IND/102361/2019 dated 15<sup>th</sup> April, 2019 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 the EIA Notification, 2006 and appraised at Central Level.

**Details submitted by the project proponent**

6.6.2 M/s. Hariaksh Industries Private Limited proposes to install a new Ferro Alloy Plant comprising Installation of 2 x 9 MVA Submerged Arc Furnace to make 35,176 TPA Ferro Manganese / Silico Manganese / Ferro Silicon /Ferro Chrome / Silico Chrome and 2 x 4.5 MVA Electric Arc Furnace to make 29,700 TPA Low Carbon Ferro Chrome. The project proponent submitted application in the prescribed format along with Form-1 and PFR to the Ministry online on 15<sup>th</sup> April, 2019 vide Application No. IA/WB/IND/102361/2019.

6.6.3 The proposed unit will be located at Mouza: Chausal, PS: Gangajalghati, District: Bankura, State: West Bengal.

6.6.4 The environmental settings of the project site are furnished as below:

S. No.	Features	Details	
1.	Village, Police Station, District, State	Mouza : Chausal, P S : Gangajalghati, District – Bankura , State – West Bengal	
2.	Survey of India Toposheet	73 M/3	
3.	Project Site Co-ordinates	Longitude	Latitude
		23°28'35.77"N	87°10'11.12"E
		23°28'35.35"N	87°10'12.19"E
		23°28'27.96"N	87°10'4.35"E
3.	Project Site Co-ordinates	23°28'28.21"N	87°10'2.50"E
4.	Land are and Land use of project site	10.39 acres (4.2 ha); Industrial land	
5.	National Highway & Approach Road for material transportation	NH60-3.6 km West (Raniganj-Bankura-Mednipur) Approach road–200 m South (Durlavpur-Borjora – Durgapur road)	
6.	Nearest Railway Station	Raniganj Railway Station at 15.7 KM North	
7.	Nearest Town/ City/ District HQ	Dist. Headquarter Bankura – 28.4 KM SE Town Durlavpur- 4.0 KM West. City Raniganj -15 KM North	
8.	Nearest River	Damodar River – 8.6 KM North	
9.	Forests	Gangajalghati Forest – 4.4 KM SW Borjora Forest – 6 km SE	
10.	National Park, Wildlife Sanctuary, Migratory Corridor of Wild Animals	None within 10 KM radius	
11.	Nearest Airport	Kolkata about 200 km	

S. No.	Features	Details
		Andal (Durgapur) about 30 km

- 6.6.5 The land area acquired for the proposed plant is 4.2 hectares (10.39 Acre) out of which 4.2 ha land is industrial category land. (Initially, entire land was single crop agricultural land which was got converted to industrial land). No forest land is involved. The entire land has been acquired for the project. Of the total area 1.77 ha (42.15 %) land will be used for green belt development and open area.
- 6.6.6 No national park /wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve, etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form migratory corridor for Schedule-I fauna.
- 6.6.7 Total project cost is approx. Rs.92.56 Crores. Proposed employment generation from proposed project will be 203 direct employment and 147 indirect employment.
- 6.6.8 The targeted production capacity of the Ferro Alloy Plant is 64,876 TPA. The raw material for the plant would be procured from Local Market, Private Mines of Odisha and Balaghat (MP). The raw material transportation will be done through Road. The proposed capacity for different products for new site area as below:

Name of Unit	No. of Unit	Capacity of each Unit	Production Capacity*
Submerged Arc Furnace	2 Nos	9 MVA each	35,176 MTPA Ferro Manganese / Silico Manganese / Ferro Chrome / Silico Chrome / Ferro Silicon
Electric Arc Furnace	2 Nos	4.5 MVA each	29,700 MTPA Low Carbon Ferro Chrome
Production Capacity* The maximum production capacity of the plant using the 2 x 9 MVA SAF and 2 x 4.5 MVA EAF will not exceed 64,876 Tons Per Annum (TPA)			

- 6.6.9 The electricity load of 32 MW will be procured from Damodar Valley Corporation Company has also proposed to install 2 x 250 KVA DG Set for emergency use.
- 6.6.10 Proposed raw material and fuel requirement for project are Manganese Ore, Chrome Ore, Coke, Steam Coal, Quartz, Dolomite, Lime, Ferro Manganese Slag, Mill Scale, Iron Scrap etc. The requirement would be fulfilled by purchase from local market as well as from private mines located in Odisha & Madhya Pradesh. Diesel will be used for running the DG sets.

- 6.6.11 Water consumption for the proposed project will be 87m<sup>3</sup>/day and waste water generation will be 16m<sup>3</sup>/day. Domestic waste water will be treated in STP and then reused for gardening. Cooling tower blowdown and softener blowdown (10m<sup>3</sup>/day) will be collected in settling tank and used for dust suppression.
- 6.6.12 There is no court case or violation under EIA Notification to the project or related activity.
- 6.6.13 EIA Consultant engaged for the EIA-EMP Report is M/s. Grass Root Research & Creations India Private Limited [S.No. 81, List of Accredited Consultant Organizations (Alphabetically) Rev. 75, April 10, 2019].
- 6.6.14 During deliberations, project proponent has requested to use the baseline data collected by the M/s. Grass Root Research & Creations India Private Limited during 1/03/2018 to 31/05/2018 for M/s. DSR Industries Private Limited. Further informed that the land for the instant proposal has been purchased from M/s. DSR Industries Private Limited for which EAC has recommended for grant of ToR in its 29<sup>th</sup> meeting held on 12/03/2018. The committee acceded to the request of the project proponent and advised them to adhere to the MoEF&CC circular with respect validity period of the baseline data collection.

#### **Observations and recommendations of the Committee:**

- 6.6.15 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 ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**
- i. Dry gas cleaning systems shall be provided by the project proponent to meet particulate matter emission norms of less than 30mg/Nm<sup>3</sup> for the furnace flue gases.
  - ii. Action plan to collect the dust from APC and floor sweepings, and to further briquette the same for recycling in the plant shall be provided by the project proponent.
  - iii. Surface water will be used in place of groundwater. In case of non-availability of surface water in adequate quantity, cogent and justifiable reasons for the same shall be documented by the project proponent.
  - iv. Detailed transportation plan of ferrying raw materials and finished products using the railway siding facility shall be provided by the project proponent in the EIA report.
  - v. Public Hearing is to be conducted by the concerned State Pollution Control Board.
  - vi. The issues raised during the public hearing, and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, *inter alia*, contain the year-wise activities with corresponding financial allocations.
  - vii. The project proponent should carry out the social impact assessment of the project and submit the ensuing Corporate Environment Responsibility plan as

per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.

- 6.7. Proposed expansion of the existing plant premises by **M/s Sakthi Ferro Alloys India Pvt.Ltd.**, located at Village Vasnadu, Nadumuru Village Panchayath, Kuppam, District Chittoor, **Andhra Pradesh**. - [Proposal No. IA/AP/IND/101553/2019; MoEF&CC File No. IA-J-11011/166/2019-IAII(I)] – **Terms of Reference**-regarding.

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.

- 6.8. Iron Ore Beneficiation (1.2 MTPA) by **M/s. Vedanta Washery & Logistic Solutions Pvt Ltd** located at Village Kunkuni, Tehsil Kharsia, District Raigarh, **Chhattisgarh**. [Proposal No. IA/CG/IND/100786/2019; MoEF&CC File No. J-11011/164/2019-IAII(I)] – **Terms of Reference** - regarding.

- 6.8.1 M/s. Vedanta Washery & Logistic Solutions Private Limited made application vide online proposal no. IA/CG/IND/100786/2019 dated 3<sup>rd</sup> April, 2019 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. 2(b) Mineral Beneficiation under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

**Details submitted by the project proponent**

- 6.8.2 M/s Vedanta Washery & Logistic Solutions Private Ltd. proposes to install the facility for the 1.2 MTPA iron ore beneficiation project at Village – Kunkuni, Tehsil-Kharsia, Chhattisgarh. The project proponent submitted application in the prescribed format along with Form-1 and PFR to the Ministry online on 03<sup>rd</sup> April, 2019 vide Application No. IA/CG/IND/100786/2019.
- 6.8.3 The proposed unit will be located at Village-Kunkuni, Tehsil-Kharsia, State-Chhattisgarh.
- 6.8.4 The environmental site settings of the project site are furnished as below:

S. No.	Features	Details	
1	Village, Police Station, District, State	Village-Kunkuni, Tehsil-Kharsia, Chhattisgarh	
2	Survey of India Toposheet	64O5, 64N4, 64N8 Project site: 64O1	
3	Project Site Co-ordinates	Longitude	Latitude
		83°9'52.97"E	21°59'16.24"N
		83°9'54.99"E	21°59'13.02"N

S. No.	Features	Details	
		83°10'33.36"E	21°59'12.23"N
		83°10'41.31"E	21°59'21.61"N
5	Total Land area and Land use of project site	15.630 Hectare (Including Railway Siding Area), Industrial Land	
6	Iron Ore Plant Area	4.79 Hectare (11.85 Acres)	
7	National Highway & Approach Road for material transportation	National Highway-216 is at 24.67 km towards ESE direction and SH-1 is approx. 19.60 km towards East direction from project site. Project site is attached to Kharsia Main Road directly.	
8	Nearest Railway Station	The nearest railway station is Robertson Railway Station at 1000mtr towards East direction and Kharsia railway station at a distance of 6.40 km from the proposed project site towards West	
9	Nearest Town/ City/ District HQ	District- Raigarh	
10	Nearest River	Mand River – 2.8 KM – NE Kurket River – 8.6 KM – NE	
11	Forests	Rabo RF -5.4 KM-North Endu Rf – 8.65 KM- NNW Bargarh RF – 4.5 KM - NW	
12	National Park, Wildlife Sanctuary, Migratory Corridor of Wild Animals	None in 10 km area of the project site	
13	Nearest Airport	Swami Vivekananda International Airport, Raipur at distance of 172.46 KM towards WSW direction from the project site	

6.8.5 The land area acquired for the proposed plant is 15.63 hectares (38.62 Acre). No forest land is involved. The entire land has been acquired for the project. Of the total area 5.15 hectares (33 %) land will be used for green belt development.

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

- 6.8.7 Total project cost is approx. Rs.12 Crores. Proposed employment generation from proposed project will be 50 direct employments and 15 indirect employments.
- 6.8.8 The targeted production capacity of the Plant is 1.2 MTPA. The raw material for the plant would be procured from Rungta Mines Limited, ODISHA. The raw material transportation will be done through Road.

S.No	Unit	Capacity
1	Iron Ore	1.2 MTPA

- 6.8.9 The electricity load of 0.25 MW will be procured from Chhattisgarh State Electricity Board Grid.
- 6.8.10 Proposed raw material and fuel requirement for project are mainly Iron Ore. The requirement would be fulfilled by purchase from Rungta Mines Ltd located in Odisha. Diesel will be used for running the DG sets.
- 6.8.11 Water consumption for the proposed project will be 700 m<sup>3</sup>/day and waste water generation will be 3m<sup>3</sup>/day. Domestic waste water will be treated in treated through Septic Tanks followed soak pits.
- 6.8.12 There is no court case or violation under EIA Notification to the project or related activity.
- 6.8.13 EIA Consultant engaged for the EIA-EMP Report is M/s. Grass Root Research & Creations India Private Limited [S.No. 81, List of Accredited Consultant Organizations (Alphabetically) Rev. 75, April 10, 2019].

#### **Observations and Recommendations of the Committee:**

- 6.8.14 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-1 read with additional ToRs at Annexure-2:**
- i. Project proponent shall not abstract and use ground water. Instead, only surface water shall be used by him.
  - ii. Project proponent shall ensure 100% utilization of solid waste generated from the plant, and also ensure that no dumping of solid waste is resorted to.
  - iii. Detailed transportation plan for ferrying of raw materials and finished products using the railway siding facility shall be provided by the project proponent in the EIA report.
  - iv. Project proponent shall furnish a mineralogical study, which, *inter alia*, should include the release and liberation of gangue material related to the project landscape.

- v. Public Hearing is to be conducted by the concerned State Pollution Control Board.
  - vi. The issues raised during the public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, *inter alia*, contain the year-wise activities with corresponding financial allocations.
  - vii. The project proponent should carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility plan as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- 6.9. Proposed Integrated Cement Project - Clinker (3.25 MTPA), Cement (2.5 MTPA), CPP (27 MW), WHRS (15 MW) and D.G. Set (1000 KVA) by **M/s. Dalmia Cement (Bharat) Limited** at Village: Kharora, Tehsil: Tilda, District: Raipur, **Chhattisgarh** [Proposal No. IA/CG/IND/100795/2019; MoEF&CC File No.J-11011/31/2001-IAII(I)] – **Terms of Reference** - regarding.
- 6.9.1 M/s. Dalmia Cement (Bharat) Limited made application vide online proposal no. IA/CG/IND/100795/2019 dated 30<sup>th</sup> March, 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

#### **Details submitted by the project proponent**

- 6.9.2 M/s. Dalmia Cement (Bharat) Ltd. (DCBL) was declared as a Preferred Bidder and was granted LOI for “Kesla-II limestone block” for specified end use of clinker/cement in Tehsil Tilda, District Raipur. TOR for the mining lease was granted by MoEFCC, New Delhi *vide* letter J-11015/13/2018-IA.II(M) dated 08<sup>th</sup> June, 2018. Now, DCBL is proposing to setup an Integrated Cement Project - Clinker (3.25 MTPA), Cement (2.5 MTPA), CPP (27 MW), WHRS (15 MW) and D.G. Set (1000 KVA) at Village: Kharora, Tehsil: Tilda, District: Raipur (Chhattisgarh). It is envisaged to set up the plant, based on Dry process technology. The project proponent submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on 30<sup>th</sup> March, 2019 *vide* Online Application No. IA/CG/IND/100795/2019.
- 6.9.3 M/s. Dalmia Cement (Bharat) Ltd. is proposing a new Integrated Cement Project: Clinker (3.25 MTPA), Cement (2.5 MTPA), CPP (27 MW), WHRS (15 MW) and D.G. Set (1000 KVA).
- 6.9.4 The alternate site analysis carried out by the project proponent are summarized as below:

<b>PARTICULARS</b>	<b>Option 1</b>	<b>Option 2 (Selected Site)</b>	<b>Option 3</b>	<b>Remarks</b>
Location	Village	Village Kharora	Village Kesla	--

PARTICULARS	Option 1	Option 2 (Selected Site)	Option 3	Remarks
	Nahardih			
Area, Ha	102	102.6	102	--
Bounding Box Maximum (Degrees Minutes Seconds)	21°26'25.0406", 81°57'08.0858"	21°25'23.1224" 81°55'29.2000"	21°25'13.7616 " 81°57'26.5261 "	--
Bounding Box Minimum (Degrees Minutes Seconds)	21°26'02.9038" 81°56'05.3211"	21°24'33.9051" 81°54'38.2996"	21°24'24.2732 " 81°56'18.00	--
SH - 9	~5.8 km	~ 2.0 km	~2.2 km	From accessibility point of view and minimum load on environment due to transportation, Option 2 is recommended.
Ease of connectivity to existing road	Approach road to SH-9 is single lane road passing through the ML area. It passes through densely habited area / market before connecting the Highway.	Tilda-Simga road (~0.16 km) is double lane; approach from site is free from any habitation and it ultimately connects to SH-9.	Approach road to SH-9 is single lane and highly habitated Kesla village road.	
Siliari Railway station	~18.5 km	~16 km	~19.2 km	Option 2 is recommended by seeing ease of railway siding from the proposed
Tilda Railway station	~19 km	~18 km	~21.6 km	proposed Kharsia-Durg Railway Corridor. It will avoid:
Kharsia-Durg Railway Corridor proposed by Chhattisgarh Railway Corporation Limited for Industries	~0.5 km Railway siding from proposed link will need steep curve and extra area front from rail link side.	Kharsia - Durg Rail Corridor is passing to the eastern boundary of project site. There will not be any requirement for purchasing of more land for railway siding	~1.52 km It is far away and also had difficulties (due to passing from mines area and distance) to take tapping from proposed rail link. It will also require more land	<ul style="list-style-type: none"> <li>• Any incremental pollution load</li> <li>• Purchase of additional land and</li> <li>• Disturbance of the local settlements.</li> </ul>

6.9.5 Site chosen by the project proponent is site 2. The proposed unit will be located at Village: Kharora, Tehsil: Tilda, District: Raipur (Chhattisgarh).

- 6.9.6 The land area for the proposed project is 102.6 ha; most of which is private land. No forest land is involved. The project area falls in the revenue village identified as **Kharora Development/ Investment area** as notified by Directorate of Town and Country Planning, Chhattisgarh, Naya Raipur, Housing and Environment Department, Govt. of Chhattisgarh *vide* its notification no 2316/2379/32/06 dated 21<sup>st</sup> Nov., 2006 under the Chhattisgarh Nagar Tatha Gram Nivesh Adhiniyam, 1973 (No. 23 of 1973). The entire land is yet to be acquired for the proposed project. The proposed project shall require about 76.5 ha for setting up of the plant, allied infrastructure & colony. Additionally, an area of about 25.1 ha (33%) will be required for Greenbelt development. A linear covered conveyor belt is proposed over an area of ~1.0 ha (~0.5 km length). Thus; total land required for setting of the proposed project is ~ 102.6 ha. However, cumulative green area in the form of gardens, lawns and above proposed greenbelt shall be maintained in overall 33% of the proposed project area i.e. 33.85 ha.
- 6.9.7 No National Park / Wildlife Sanctuary / Biosphere Reserve/ Tiger Reserve/ Elephant Reserve, etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 6.9.8 Total project cost is approx. Rs. 1800 Crores. Proposed employment generation from the project will be approx. 865 direct employment and 1000 - 1500 indirect employment.
- 6.9.9 The targeted production capacity of proposed Integrated Cement Project is: Clinker (3.25 MTPA), Cement (2.5 MTPA), CPP (27 MW), WHRS (15 MW) and D.G. Set (1000 KVA). Part of the clinker will be transported to split Grinding Units (GU). The Limestone will be transported through covered Conveyor Belt (by road initially and during emergency/breakdown situation). Laterite / Bauxite, Clay / shale, Low grade iron / Morrum will be transported by road and gypsum will be transported by rail/road. The proposed capacity for different products for new site area is as below:

Name of Unit	Proposed Capacity
Clinker (MTPA)	3.25
Cement (MTPA)	2.5
CPP (MW)	27
WHRS (MW)	15
D.G. Set (KVA)	1000

- 6.9.10 The electricity load of 45 MW will be sourced from proposed CPP (27 MW), WHRS (15 MW) and from the State Grid. Company has also proposed to install 1000 KVA DG Set.
- 6.9.11 Proposed Raw materials required for the project are Limestone; which will be sourced from proposed Captive auctioned Limestone Mine. Laterite/ Bauxite, Clay/Shale, Low grade iron/Morrum will be purchased from local markets. Fly ash

will be sourced from Captive Power Plant and IPPs like GMR Chhattisgarh Power Project, NTPC SIPAT etc. Gypsum will be sourced from Vizag etc. Slag will be sourced from nearby steel plant. Fuel for Cement Plant & CPP will be Indigenous coal; which will be sourced from SECL/Open Market / E-Auction / Raigarh / Bilaspur & Imported coal (South Africa/ Indonesia) through Paradeep port; Petcoke for Cement plant will be sourced from Jamnagar/ Saudi/ US/India, Through Paradeep port.

6.9.12 Water Consumption for the proposed project will be 2800 KLD; which will be sourced from Ground water & other means after obtaining necessary permission from regulatory authorities. The proposed cement plant will be based on zero Liquid Discharge (ZLD). Domestic wastewater generated from Plant & colony will be treated in STP and the treated water will be utilized for greenbelt development/ plantation. Wastewater from CPP & RO reject will be treated in ETP and treated water will be re-used for greenbelt development/ plantation, dust suppression.

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

6.9.14 Name of the consultant: M/s. J.M. EnviroNet Pvt. Ltd. [S.No. 92, List of Accredited Consultant Organizations (Alphabetically) Rev. 75, April 10, 2019].

#### **Observations of the Committee**

6.9.15 The Committee noted that the details of land classification and geological features of the three options for the plant site were not furnished by the project proponent in the analysis of the three alternative sites. In view of the aforesaid shortcoming, the Committee advised the project proponent to revise the Pre-Feasibility Report and also to provide certain additional information mentioned in the following paragraph.

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

6.9.16 In view of the aforesaid observations and after detailed deliberations, the Committee deferred the consideration of the proposal and sought the following information which shall be incorporated in the updated PFR to be submitted by the project proponent.

- i. Analysis of the site options along with land use classification shall be furnished for all three proposed sites by the project proponent.
- ii. Additionally, geological features of all the three proposed sites shall also be furnished by the project proponent.
- iii. Water balance study and detailed water requirement shall be submitted by the project proponent.
- iv. Proportion of total water requirement to be met through the surface water usage shall be furnished by the project proponent with justification.
- v. Detailed transportation plan using the available railway siding facility to ferry raw materials and finished products shall be provided by the project proponent.
- vi. Project proponent shall optimally utilize the waste heat recovery system for kilns.

- vii. Option to use high pressure boiler for AFBC and air cooled condensers shall be studied and furnished by the project proponent.
- 6.10. Expansion of Production capacity from 48,000 TPA to 3,00,000 TPA Billets by replacement of existing 4x8 MT/heat induction Furnaces with 4x15 MT/heat Induction Furnaces and modification of Rolling Mill by **M/s H.M. Steels Ltd.** located at Kala Amb, Trilokpur Road, Village Johran, Tehsil Nahan and Dist. Sirmaur, **Himachal Pradesh** [Proposal No. IA/HP/IND/100794/2019; MoEF&CC File No.J-11011/162/2019-IAII(I)] – **Terms of Reference** - regarding.
- 6.10.1 **M/s H.M. Steels Limited** made online application in the prescribed format along with Form-I and other reports to the Ministry vide online Application No. IA/HP/IND/100794/2019 dated 29<sup>th</sup> March 2019 for expansion and augmentation of existing steel plant. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

**Details submitted by the Project Proponent:**

- 6.10.2 It is proposed to expand the capacity of existing unit from 48,000 MT/Annum (160 MT/day) to 3,00,000 MT/Annum (1000 MT/day) along with increased quantity of raw material from 176 MT/Day to 1100 MT/day by replacement of existing induction furnaces with 4x15 MT/heat Induction Furnace capacity and expansion of rolled products from 36000 MT/Annum to 2,50,000 MT/Annum for manufacturing of GI/ERW Pipes.
- 6.10.3 The existing plant has no Environment Clearance as the plant was established in 26.06.2004. Consent to Operate (CtO) was accorded by Himachal Pradesh State Pollution Control Board vide letter. no.HPSPCB/PCB-ID 10025/21524-26 which valid upto 31<sup>st</sup> March 2019. The application for renewal of CTO has been submitted to HPSPCB on dated 05.03.2019.
- 6.10.4 The proposed unit is located at Plot no 8 Industrial Area Phase-2, Kala Amb, Tehsil Nahan, District Sirmaur, State Himachal Pradesh.
- 6.10.5 The land area acquired for the proposed plant is 3.18 Ha. Out of total land, 1.05 ha (33%) land will be used for green belt development.
- 6.10.6 There is no National Park/WL etc located at a distance of 10 Km from the site. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 6.10.7 Total project cost is approx. Rs. 55.0 Crores. The employment generation from proposed project will be 50 and total deployment of manpower will be 180 through direct employment.
- 6.10.8 The targeted production capacity of the Rolling Mill/ERW Pipes is 2,50,000MT/Annum based on 3,00,000 MT/Annum of molten metal produced in the Induction Furnaces and remaining billets direct sold to market. The raw materials required are 3,30,000 MT/Annum of MS scrap & Sponge Iron and alloying elements, purchased directly from the market and transportation will be through road.

S. No.	Particulars	Existing	Proposed expansion	Total
1.	Coal based Reheating furnace	One 14 Ton/Hour	-	Reheating Furnace will not be used
2.	Fuel consumption for Re-heating Furnace	Coal – 1 TPD		Reheating Furnace will not be used
3.	Induction Furnace	4X8MT/heat	4X15 MT/heat (By replacement of existing furnaces)	60 MT/heat
4.	Installed production capacity (Billets Production)	160 MT/day	840 MT/day	1000 MT/day Existing furnaces replaced
5.	CCM	2 Strand, 4/7 m radius	1 Strand, 4/7 m radius	3 Strand, 4/7 m radius
6.	Rolled Products	120 MT/day	774 MT/day	834 MT/day
7.	G.I. / ERW Pipes	120 MT/day	774 MT/day	834 MT/day
8.	Remaining Billets sold to Market	40 MT/day	66.6 MT/day	106.6 MT/day
9.	Fixed capital investment	25.00 Cr.	30.00 Cr.	55.00 Cr.
10.	Electrical power requirement	14800KVA	6700 KVA	21500 KVA
11.	Raw material requirement	176 MT/Day	924 MT/Day	1100 MT/Day
12.	Land area	3.18 Ha.	---	3.18 Ha.
13.	Manpower requirement	130	50	180
14.	Gross water requirement	9 KLD (Domestic + Industrial)	26 KLD (Domestic + Industrial)	35 KLD (Domestic + Industrial)
15.	Solid waste generation			
	• Slag	8 TPD	52 TPD	60 TPD
	• Mill scale	10 TPD	35 TPD	45 TPD
16.	Hazardous waste			
	• APCD dust	1 TPD	4 TPD	5 TPD

6.10.9

Power load of 21.5 MVA will be procured from Himachal Pradesh State Electricity Board (HPSEB) and the Company has an existing 1DG Set of 500 KVA capacity.

- 6.10.10 Water Consumption for the proposed project will be 35 KLD which will be sourced from the DIC. The waste water generation will be just the blow-down of cooling tower which will again be used for dust suppression in Slag Metal Extraction unit. The domestic waste water will be treated in STP and the treated water and organic manure will be used for green belt development.
- 6.10.11 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 6.10.12 Consultant: Shivalik Solid Waste Management Limited; Certificate No. NABET/EIA/1619/RA 0040;Sr. No. 140, Rev. 75, April 10, 2019

**Observations of the Committee:**

- 6.10.13 The existing plant (secondary metallurgical unit) has no Environmental Clearance and it is operating with consent as the plant was established in 2004. Now, the project proponent intends to go for expansion of the existing unit. The project proposal attracts the general condition of EIA Notification, 2006 due to proximity to interstate boundary.

**Recommendations of the Committee:**

- 6.10.14 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 ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**
- i. Project proponent shall not extract and use any ground water. Instead, only surface water shall be used by the project proponent.
  - ii. Project proponent shall formulate and furnish a rainwater harvesting plan for collecting 200 KLD of precipitation.
  - iii. Project proponent shall develop green belt in a) 1 ha within plant premises, and b) 3 ha outside the plant premises.
  - iv. Project proponent shall ensure that no reheating is used in the plant, and instead 100% hot charging is adopted in the rolling mill.
  - v. Project proponent shall furnish an action plan to ensure 100% waste utilization.
  - vi. The committee accepted the request of the project proponent to use baseline data generated during Dec 2018-Feb 2019 with respect to M/s Amba Shakti, the project on adjacent land.
  - vii. Public Hearing shall be conducted by the concerned State Pollution Control Board.
  - viii. The issues raised during public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, *inter alia*, contain the year-wise activities with corresponding financial allocations.
  - ix. The project proponent shall carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- 6.11. Proposed manufacturing of Asbestos Cement Sheets (Corrugated & Plain) of capacity 50,000 TPA & Non- Asbestos Flat Sheets of capacity 30,000 TPA by

**M/s JRT Industries LLP.** located at Village Sila, Tehsil Mouza Silasundarighopa, District Kamrup, Assam [Proposal No. IA/AS/IND/99846/2019; MoEF&CC File No.J-11011/161/2019-IAII(I)] – **Terms of Reference** - regarding.

- 6.11.1 M/s JRT Industries LLP made online application in the prescribed format along with Form-1 and other reports to the Ministry vide Proposal No. IA/AS/IND/99846/2019 dated 19.03.2019. The Project Proponent proposed to install a new manufacturing unit for 50,000 TPA of Asbestos sheets (Asbestos Cement Corrugated Sheet 40,000 TPA + Asbestos Plain Sheet 10,000 TPA) & 30,000 TPA of Non-Asbestos Flat Sheets based on Hatschek technology.

**Details submitted by the Project Proponent:**

- 6.11.2 The proposed unit will be located at Plot No. 43,24,25,122,149,580,195,147,522,353,439,392, Village: Sila, Taluka: Mouza Silasundarighopa, District: Kamrup, State: Assam.
- 6.11.3 The land area acquired for the proposed plant is 4.34 Ha out of which nil ha is an agricultural land, nil ha is grazing land and 4.34 ha is others (nil Government Land). No forestland involved. The entire land has been acquired for the project. Of the total area 1.43 ha (33.001 %) land will be used for green belt development.
- 6.11.4 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 6.11.5 Total project cost is approx. 71.75 Crore rupees. Proposed employment generation from proposed project will be 100 direct employment and 150 indirect employment.
- 6.11.6 The targeted production capacity of the Asbestos Cement Sheets is 0.05 million TPA and Non Asbestos Flat Sheets is 0.03 million TPA. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of Unit (TPA)	Production Capacity (TPA)
Asbestos Sheet Unit	1	50,000	50,000
Non Asbestos Sheet Unit		30,000	30,000

- 6.11.7 The electricity load of 1513.3 KW will be procured from Assam State Electricity Board and solar power. Company has also proposed to install 900 KVA & 320 KVA DG Sets.

- 6.11.8 Proposed raw material and fuel requirement for project are 64200 TPA and 6000 litre/month respectively. The requirement would be fulfilled by Local Industries (O.P.C. Cement), Russia (Asbestos Fibre), NTPC, Assam and West Bengal (Fly Ash), Local Suppliers (Paper Pulp) as well as Tasmania and Chile (Virgin Pulp). Fuel consumption will be mainly diesel.
- 6.11.9 Water Consumption for the proposed project will be 100 KLD. Domestic waste water will be treated septic tank and soak pit and industrial wastewater generated will be recycled and reused 20 KLD.
- 6.11.10 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 6.11.11 Consultant: Ecomen Laboratories Pvt. Ltd.

**Observations of the Committee:**

- 6.11.12 The project proposal is a greenfield installation for manufacturing of Asbestos Cement Sheets (Corrugated & Plain) of capacity 50,000 TPA & Non- Asbestos Flat Sheets of capacity 30,000 TPA.

**Recommendations of the Committee:**

- 6.11.13 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 ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**
- i. Project proponent shall prepare and furnish an action plan for six-monthly health survey of workers as part of its occupational health programme.
  - ii. Project proponent shall conduct six-monthly community health survey covering all habitations within 2.0 km radius around the plant site. Data emerging from the first such survey will serve as the baseline data. Project proponent shall bear entire cost of treatment of a local resident detected with an ailment solely attributable to the activities of the plant.
  - iii. Monitoring plan of the work zone and community exposure shall be prepared and furnished as per the judgement of the Hon'ble Supreme Court in Kalyaneswari case.
  - iv. Public Hearing shall be conducted by the concerned State Pollution Control Board.
  - v. The issues raised during public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, *inter alia*, contain the year-wise activities with corresponding financial allocations.
  - vi. The project proponent shall carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility plan as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.

6.12. Setting up of 2 MTPA pellet plant by **M/s KIOCL Ltd.**, in the premises of Rashtriya Ispat Nigam Limited (RINL) at Visakhapatnam, **Andhra Pradesh** [Proposal No. IA/AP/IND/99687/2019; MoEF&CC File No.J-11011/160/2019-IAII(I)] – **Terms of Reference** - regarding.

6.12.1 M/s. KIOCL Limited made online application in the prescribed format alongwith Form-1 and other reports to the Ministry vide Proposal No. IA/AP/IND/99687/2019 dated 18.03.2019. The project proponent proposed to install a new manufacturing unit for producing iron ore pellets of capacity 2.0 MTPA based on Travelling Grate Technology. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

**Details submitted by the Project Proponent:**

6.12.2 The proposed unit will be located within existing premises of M/s Rashtriya Ispat Nigam Limited. Village: Kanithi (part), Pedagantyada (part), Nellimukkee (part), Taluka: Visakhapatnam, District: Visakhapatnam, State: Andhra Pradesh

6.12.3 The land area identified for the proposed plant is 92 acres which is an industrial area and is located within the premises of RINL. The entire land has been already acquired by RINL for the project. Of the total area of 92 acre about 37 acre of land (40.2% of the total area) is planned for green belt development.

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

6.12.5 Total project cost is approx. Rs.1032.8 Crore (INR). Proposed employment generation from proposed project will be 197 nos. direct employment.

6.12.6 The targeted production capacity of the pellet plant is 2.0 MTPA. The iron ore fines and other raw materials for the plant would be sourced from following locations:

Sl. No.	Raw material	Quantity (T/Year)	Source
1	Iron ore fines	20,65,380.40	Indigenous(NMDC, Chhattisgarh and other sources from Odisha)
2	Limestone	59,098.21	Indigenous (Nearby locations)
3	Coke breeze	28,859.63	Indigenous (From RINL and other sources)
4	Bentonite	13,592.59	Indigenous (From Kutch)

6.12.7 The ore transportation is planned through rail upto Gangavaram. The existing facilities of KIOCL will be used for ore transportation from Gangavaram to RINL site by road. The list of facilities for the proposed plant are given in the following.

<b>Sl. No.</b>	<b>Unit Name</b>
1	Iron ore day bin building
2	Iron ore grinding building
3	High rate thickener
4	Slurry storage tank
5	Filter feed pump house
6	Filtration building
7	Storage shed for filter cake
8	Storage shed for bentonite
9	Storage shed for coke breeze
10	Additive grinding building
11	Mixing & balling building
12	Induration building for straight grate machine
13	<b>ESPs &amp; process fans</b>
14	<b>Process chimney</b>
15	Central control room
16	Hearth layer separation building & product screening
17	<b>Dedusting unit for hearth Layer Separation Building (HLSB) &amp; chimney</b>
18	<b>Dedusting unit for Induration discharge end &amp; chimney</b>
19	Fines bin building
20	Pellet stockyard
21	Furnace oil and Light Diesel Oil (LDO) storage unit & fuel oil pump house
22	Main Receiving Sub Station (MRSS)
23	Diesel generator
24	Load Centre Sub Station (LCSS)
25	Central laboratory

SI. No.	Unit Name
26	Compressed air station
27	Water pump house and soft water treatment plant

- 6.12.8 The estimated power requirement of the proposed plant is 20 MVA. A new transmission line is proposed for drawing power from Gangavaram port grid sub-station of APTRANSCO, through double circuit 132 kV overhead transmission line.
- 6.12.9 Proposed raw material requirement is given in Table 01 and fuel requirement for project are Furnace oil - 30,928 m<sup>3</sup>/yr (from nearest oil storage company), LDO and LPG. Fuel consumption mainly is LDO for pelletisation process and LPG is planned for initial startup of the project.
- 6.12.10 Water consumption for the proposed project will be 84 m<sup>3</sup>/hr and effluent generation is not expected as complete recirculation of waste water generated from the plant is envisaged. Domestic waste water will be treated in MBR based sewage treatment plant and treated water will be reused.
- 6.12.11 The proponent, M/s KIOCL Limited has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 6.12.12 Name of the Technical Consultant: **M/s MECON Limited**, (Govt. of India Enterprise) Ranchi / Bangalore. **Sl. No. in the QCI list - 101**

**Observations of the Committee:**

- 6.12.13 The proposed pellet plant is within the premises of RINL, Visakhapatnam and a joint venture of KIOCL and RINL.

**Recommendations of the Committee:**

- 6.12.14 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 ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**
- i. Project proponent shall conduct the Cumulative Impact Assessment for the project.
  - ii. Project proponent shall study and analyze if excess gas generated in the RINL could be gainfully utilized.
  - iii. Public Hearing shall be conducted by the concerned State Pollution Control Board.
  - iv. The issues raised during public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, *inter alia*, contain the year-wise activities with corresponding financial allocations.
  - v. The project proponent should carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility plan as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- 6.13. Steel and Captive Power Plant along with installation of Iron Ore Beneficiation Plant, Pelletization Plant and Coal Washery located by **M/s. Brand Steel and Power Pvt**

**Limited** at Village Murusan, District Keonjhar, Odisha [Proposal No. IA/OR/IND/5548/2011; MoEF&CC File No.J-11011/540/2009-IAII(I)] - Validity extension of Environment Clearance -regarding.

6.13.1 M/s. Brand Steel and Power Pvt Limited has made online application vide proposal no. IA/OR/IND/5548/2011 dated 15<sup>th</sup> April, 2019 along with Form I sought for validity extension of the environmental clearance accorded by the Ministry vide letter no. F.No. J-11011/366/2010- IA-II(I) dated 5<sup>th</sup> March, 2012.

**Details submitted by the project proponent**

6.13.2 The expansion project of M/s Brand Steel & Power Pvt. Ltd. located at Murusuan, Keonjhar (Odisha), has obtained EC for "Expansion of Steel Plant and Captive Power Plant along with installation of Iron Ore Beneficiation Plant, Pelletization Plant and Coal Washery at village- Murusuan, District- Keonjhar, Odisha" (vide F. No. J-1101/540/2009-IA-II (I); dated 5<sup>th</sup> March, 2012) but the EC for the expansion project has expired on 4<sup>th</sup> March 2019 (more than 7 Yrs. from the date of EC granted) and the construction work has yet not completed for the proposed units due to slump in market, limited raw material availability and change in management.

6.13.3 The EC accorded vide letter no. J-1101/540/2009-IA-II (I) dated 5<sup>th</sup> March, 2012 was transferred in name of Brand Steel & Power Pvt. Ltd. by MoEF & CC vide letter dated 20.12.2016.

6.13.4 Application for EC validity extension was filed after more than 1 month but within three months after expiry of validity period.

6.13.5 Only the existing plant, Sponge Iron Plant (Cap. 60,000 TPA; 2x100 TPD DRI Kilns), has been installed and is in operation after CTO of SPCB, Odisha vide letter Ref. No. 944/IND-I-CON-6368; Dtd. 25.01.2018 and valid up to 31.03.2020.

6.13.6 The following table highlights the work completed so far for the proposed units and balance implementation schedule:

<b>Facilities</b>	<b>Existing Capacity</b>	<b>Proposed Capacity</b>	<b>Implementation Status</b>	<b>Implementati on Schedule</b>
Coal Washery	-	5,00,000 TPA	Installed, not commissioned 5,00,000 TPA	Already installed
Iron ore beneficiation & Pelletization plant	-	6,00,000 TPA	Iron ore beneficiation installed 6,00,000 TPA  Pellet plant work not yet started	Already installed   Request to

				drop from EC
Sponge Iron Plant	60,000 TPA (2x100 TPD Kilns)	1,00,000 TPA (1x350 TPD Kilns)	Sponge Iron in operation 60,000 TPA  Foundation work completed for 1 x 350 TPD Kiln	Already installed  By 31 <sup>st</sup> March 2021
Steel Melting Shop	80,000 TPA (2 x 12 T)	90,000 TPA (2 x 15 T)	Only Shed pillar completed	By 28 <sup>th</sup> February 2022
Captive Power Plant	6 MW WHRB	7 MW – WHRB & AFBC – 11 MW	Only Foundation Completed	By 31 <sup>st</sup> March 2021

6.13.7 The proposed units of the project will get completed as per above schedule and thus request for re-validation of EC for three years up to 04.03.2022.

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

6.13.9 M/s. Brand Steel & Power Pvt. Ltd. has retained "M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar which is a QCI-NABET accredited consultancy (vide accreditation No. NABET/EIA/1720/RA0090 (Rev-1) Dated 28.05.2018), enlisted in the list of Accredited Consultant Organizations Rev. 75, April 10, 2019; QCI Sr. No.-162.

### **Observations of the Committee**

6.13.10 The Committee noted that the application for EC validity extension was filed by the project proponent after more than one month, but within three months after expiry of validity period. In this regard, the Member Secretary apprised the Committee that if the application for EC validity extension is submitted more than one month after the validity period of the EC but less than three months after such validity period, then based on the recommendations of EAC, the delay shall be condoned with the approval of the Minister in-charge of Environment, Forest and Climate Change.

The Committee also noted that the Pelletisation plant of 6,00,000 TPA capacity has been dropped by the project proponent from the proposal for environmental clearance.

**Recommendations of the Committee**

6.13.11 After detailed deliberations, the Committee recommended to extend the validity of the Environmental Clearance for a period of three years beyond 04/03/2019, *i.e.*, from 05/03/2019 to 04/03/2022 subject to environmental safeguards. Further, the Committee also recommended to drop the Pelletisation plant of 6,00,000 TPA capacity from the environmental clearance dated 4<sup>th</sup> March, 2012. All other terms and conditions stipulated in the environmental clearance accorded vide letter no. J-11011/540/2009- IA-II(I) dated 4<sup>th</sup> March, 2012 shall remain unchanged.

**30<sup>th</sup> April, 2019 (Brahmputra)**

6.14 “Installation of Energy Efficient Multiple Effect Falling Film evaporators and Energy Efficient Recovery boiler (600 BD-TPD black liquor solids firing capacity) without increasing the overall Pulp and Paper/Tissue by **M/s Orient Paper and Industries Ltd.** located at Amlai, District Shahdol, Madhya Pradesh -[Proposal No. IA/MP/IND/98866/2019; MoEF&CC File No.J-11011/1142/2007-IAII(I)] – Environmental clearance under para 7(ii) of EIA Notification, 2006 - regarding

6.14.1 M/s Orient Paper and Industries Ltd (OPM) made online application vide proposal No. IA/MP/IND/98866/2019 dated 12 Mar 2019 for installation of Energy efficient Multiple Effect Falling Film Evaporators and Recovery Boiler under the provisions of EIA Notification, 2006. The proposed project activity is listed at Sl. No. 5(i) Pulp and Paper Industry under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

**Details Submitted by the Project Proponent:**

6.14.2 OPM was accorded environmental clearance by MoEF&CC vide letter F. No. J-11011/1142/2007-IA.II (I) dated 28<sup>th</sup> Jan 2019 to Enhance the Pulp Production Capacity from 62,000 BD TPA to 90,000 BD TPA by adopting conversion of EC (Elemental Chlorine) to ECF (Elemental Chlorine Free) bleaching technology with minor modifications in the recovery section without increasing the permitted paper production capacity of 1,00,000 TPA.

6.14.3 The chronology of all the ECs obtained for the existing facility is presented in the table below.

**Table 1. Chronology of the Existing Environmental Clearances (ECs)**

SI. No.	EC No.	Dated	Details on Environmental Clearance
1	F. No. J-11011/1142/2007-IA-II(I)	19 <sup>th</sup> March 2008	Modernization, balancing and expansion of paper mill (85,000 TPA to 1,00,000 TPA) New Tissue Paper Machine of 59 TPD Upgradation of existing Bamboo/Hardwood pulping system by new Oxygen Delignification pulp production to 275 TPD Augmentation power generation 6 MW Extraction-condensing type Turbo Generator Set
2	Amendment of EC -F. No. J-11011/1142/2007-IA-II(I)	18 <sup>th</sup> August 2008	Amendment in capacity of power generation (Total 43 MW)
3	Amendment of EC -F. No. J-	2 <sup>nd</sup> December	Modernization, balancing and expansion of paper mill (from 85,000 TPA to

Sl. No.	EC No.	Dated	Details on Environmental Clearance
	11011/1142/2007-IA-II(I)	2010	1,00,000 TPA) Captive Power Plant capacity from 43 MW to 55 MW
4	Amendment of EC- F. No. J-11011/1142/2007-IA-II(I)	17 <sup>th</sup> October 2016	Enhancement of Tissue Paper Production from 25,000 TPA to 55,000 TPA by installation of additional 30,000 TPA Tissue Machine without increasing permitted Paper Production of 1,00,000 TPA  The existing writing/printing paper machine was de-rated from the existing capacity of 60,000 TPA to 45,000 TPA  In house pulp generation was reduced to 62,000 TPA
5	F. No. J-11011/1142/2007-IA-II(I)	28 <sup>th</sup> January 2019	Enhancement of Pulp Production from 62,000 BD TPA to 90,000 BD TPA by upgrading the existing pulp mill without increasing the permitted Paper Production of 1,00,000 TPA.

6.14.4 The facility has been inspected by MoEF&CC regional office periodically and latest certified compliance report issued by MoEF&CC, Bhopal office vide letter No 5-210/2008(ENV)/1259 dated 23.03.2018. As per the compliance letter, the facility is adhering to all stipulated conditions stated in the earlier environmental clearances issued for the facility. No further activities have been undertaken at site since then.

**6.14.5 Overview of Proposal (Modernization under Section 7(ii):**

6.14.6 During the detailed pre-feasibility study phase conducted by OPM before obtaining Consent to Operate (CTO) for the commencement of project, it was discovered that by installing a new energy efficient recovery boiler with higher solids consistency will provide better thermal energy efficiency and thereby will help to achieve thermal energy neutral status in pulp and recovery section. Therefore, OPM intends to obtain amendment to EC vide letter F. No. J-11011/1142/2007-IA.II (I) dated 28<sup>th</sup> Jan 2019 under section 7 (ii) of EIA notification for the installation of new energy efficient recovery boiler and up-gradation of pulp mill capacity without increasing the overall annual pulp production capacity beyond the permitted levels (90,000 BD TPA), before commencing the project.

The salient features of the proposed project as presented as here under;

- **Improvement on steam generation** due to the proposed new energy efficient recovery boiler section (i.e., from 3.6 T of steam per ton of BD- BL solids to 3.7 T/T-BD solids).
- **Achieving thermal energy neutral** in the pulp mill section, which means, steam demand in the pulp and recovery section will be balanced with the steam generated

from the proposed environmental friendly black liquor fired recovery boiler (biomass fired). Hence no additional steam from the coal fired boilers will be drawn for pulp mill and recovery section operations

- **Reduced steam consumption in the evaporators** by upgrading the existing cascade type evaporator with high efficiency 7 effect evaporator from current level of 0.25 T of steam per ton of evaporator feed to 0.16 T of steam per ton of feed.
- **Reduction in overall electrical power consumption** by an order of 52 Million units per year in the plant.
- **Reduction in coal consumption** by an order of 30,000 TPA.
- No increase in the annual pulp mill production beyond the permitted level of 90,000 BD-TPA (As per EC 2019)
- No additional land requirement for the proposed project
- No additional fresh water requirement beyond the permitted levels (As per EC 2019)
- No increase in wastewater discharge quantities beyond the consented levels
- Marginal decrease in air emissions due to reduced coal consumption in power boilers.

The overview of the plant capacities (permitted levels as per EC 2019 v/s proposal of Modernization under section 7 (ii)) is presented in the below Table.

**Table 2 Overview of the Plant Capacities during Post Project Scenario**

SL No .	Description	Units	Existing Installed Capacity	Consented Levels as per CTO-2018	Permitted levels as per EC-2019	Proposal of Modernization under section 7 (ii)	Remarks
<b>1</b>	<b>Products</b>						
1.1	Paper (Writing, printing and color)	TPA	45,000	45,000	45,000	45,000	No change from EC 2019.
1.2	Tissue Paper	TPA	55,000	55,000	55,000	55,000	No change from EC 2019.
1.3	Total Paper Production	TPA	1,00,000	1,00,000	1,00,000	1,00,000	No change from earlier ECs granted.
<b>2</b>	<b>Pulp Mill</b>						

SL No	Description	Units	Existing Installed Capacity	Consented Levels as per CTO-2018	Permitted levels as per EC-2019	Proposal of Modernization under section 7 (ii)	Remarks
2.1	In house Pulp Mill	BD TPA	93,500	62,000	90,000	90,000	The existing pulp mill capacity will be upgraded from 265 BD-TPD to 275 BD-TPD to achieve consistent production with a plant load factor of 85 to 87%, however the annual pulp production remains same (90,000 BD TPA).  Additional two digesters in pulp mill will be installed
<b>3</b>	<b>Steam Generation</b>						
3.1	Stoker fired boilers	TPH	2x90	2x90	2x90	2x90	No change
3.2	CFBC boiler	TPH	1x100	1x100	1x100	1x100	No change
3.3	AFBC boiler	TPH	1x150	1x150	1x150	1x150	No change

SL No .	Description	Units	Existing Installed Capacity	Consented Levels as per CTO-2018	Permitted levels as per EC-2019	Proposal of Modernization under section 7 (ii)	Remarks
3.4	Recovery Boiler steam generation	TPH	70	60	70	83	A new energy efficient recovery boiler of capacity 83 TPH will be installed. Existing recovery boiler will be kept as standby.
3.5	Total Steam Generation installed capacity of all boilers ( power boiler + Recovery Boiler )	TPH	500	490	500	513	Higher energy efficiency of the new recovery boiler will yield higher specific steam generation per ton of BL solids firing
<b>4</b>	<b>Captive Power Generation</b>						
4.1	TG#1	MW	30	30	30	30	No Change
4.2	TG#2	MW	25	25	25	25	No Change
4.3	Total Captive Power Plant Capacity	MW	55	55	55	55	No Change

SL No	Description	Units	Existing Installed Capacity	Consented Levels as per CTO-2018	Permitted levels as per EC-2019	Proposal of Modernization under section 7 (ii)	Remarks
<b>5 Others</b>							
5.1	Producer Gas (PG) Plant	Nm <sup>3</sup> /hr	4645	4645	4645	4645	No Change
5.2	Precipitated Calcium Carbonate (PCC) Plant (Slurry form)	TPA	8000	8000	8000	8000	No Change
5.3	Rotary Lime Kiln	TPA	39,600	39,600	39,600	39,600	No Change
<b>6 Water and Wastewater</b>							
6.1	Water Allocation for withdrawal from River	m <sup>3</sup> /day	36,000	36,000	36,000	36,000	No Change
6.2	Fresh water consumption	m <sup>3</sup> /day	20,250	22,150	17,225	17,225	No Change
6.3	Supply of Fresh water to nearby villages as a part of CSR program	m <sup>3</sup> /day	5,000	5,000	5,000	5,000	No Change
6.3	Wastewater generation	m <sup>3</sup> /day	10,790	12,120	9265	9545	Within the consented levels
6.4	Wastewater Treatment Plant capacity	m <sup>3</sup> /day	20,500	20,500	20,500	20,500	No change

**6.14.7 Prediction of Impacts and Management Plan**

**Air Quality:** A new energy efficient recovery boiler will be installed in place of existing old recovery boiler. The proposed new recovery boiler will be operated at a plant load factor of 85 to 87% with an average BL solids throughput of 523 BD-TPD. Hence additional BL solids will be fired (by 46 BD-TPD) in the proposed new chemical recovery boiler.

The proposed new energy efficient recovery boiler will improve steam generation in the facility thereby causing the steam demand in the pulp mill section to become thermal energy neutral, this means, steam demand in the pulp and recovery section will be balanced with the steam generated from the proposed environmental friendly black liquor fired recovery boiler (biomass fired). Hence no additional steam from the coal fired boilers will be drawn for pulp mill and recovery section operations. Due to the overall coal consumption reduction of about 30,000 TPA during post project scenario, a marginal decrease in air emissions is envisaged.

**EMP:** It is proposed to install high efficiency Electrostatic Precipitator with a stack of adequate height to control the particulate matter emissions well within the prescribed emission norms.

6.14.8 **Water Quality:** No increase in fresh water consumption is envisaged for the proposed project as against 17,225 m<sup>3</sup>/day as per EC-2019. By means of recovery of additional foul condensate from the proposed 7 effect evaporator in the recovery section and reuse of the treated foul condensate in the main plant, wastewater generation will be limited to 9,545 m<sup>3</sup>/day which is well within the consented limit of 12,120 m<sup>3</sup>/day as per existing CTO 2018 and similar to the existing operations, entire treated wastewater will be utilized for plantation and horticulture applications.

6.14.9 **Solid Waste Generation and Management:** No increase in annual solid and hazardous waste generation is envisaged beyond the permitted levels as per EC-2019 during the post project scenario. There will be reduction of fly ash generation by about 18,000 TPA due to the decrease in coal consumption. The existing disposal practices will be adopted during the post project scenario.

**Project Cost and EMP Budget:**

Description	As per EC-2019 (In Rs.)	Additional as per proposal for modernization under section 7 (ii) (In Rs.)	Total Cost (In Rs.)
Project Cost	40 Crores	185 Crores	225 Crores
EMP Budget	28 Crores	12 Crores	40 Crores
CER Budget as per OM issued by MoEF&CC dated 1 <sup>st</sup> May 2018	40 Lakhs	1.28 Crores	1.68 Crores

**Proposed Project Cost (Budget as per EC-2019 v/s Proposal for modernization under section 7 (ii))**

Description	Budget for the proposal as per EC 2019 (Rs. Lakhs)	Additional budget for current proposal (Rs. Lakhs)	Total (Rs. Lakhs)
Wood handling and chipper house - additional units	NA	500	500
Digester section - additional units and retrofit	NA	700	700
Conversion of EC to ECF technology with MEPs	2800	NA	2800
Upgrading the ClO <sub>2</sub> plant	500	NA	500
Upgrading the MEE in recovery section - 7 effect system	NA	6000	6000
Installation of new high energy efficient recovery boiler with ESP	NA	7000	7000
Upgrading the re-causticizing unit	NA	1500	1500
Upgrading the NCG gas collection system	200	NA	200
Electrical, plumbing and instrumentation etc	NA	1300	1300
Civil costs	300	1500	1800
Contingency costs	200	NA	200
<b>Total</b>	<b>4000</b>	<b>18500</b>	<b>22500</b>

6.14.10 **CER Budget Allocation** - As per the EC-2019 proposal, CER budget of Rs. 40 lakhs was allocated based on the project cost of Rs. 40 Crores. However, due to the revised total project cost of Rs 225 Crores, an additional CER budget of Rs. 1.28 Crores is allocated and the revised CER budget allocation is as below;

S.No	Sector	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	Education Promotion	6.72	6.72	6.72	6.72	6.72	33.6
2	Skill Development Programs	6.72	6.72	6.72	6.72	6.72	33.6
3	Health Promotion	6.72	6.72	6.72	6.72	6.72	33.6

4	Drinking Water Facility	3.36	3.36	3.36	3.36	3.36	16.8
5	Environment	10.08	10.08	10.08	10.08	10.08	50.4
	<b>Total</b>	<b>33.6</b>	<b>33.6</b>	<b>33.6</b>	<b>33.6</b>	<b>33.6</b>	<b>168</b>

Proposed mitigation plan for dealing of additional pollution load

6.14.11 **Air Quality:** Due to the increased steam generation from new recovery boiler there will be a considerable decrease in the steam generation in coal fired boilers thus resulting in decrease in coal consumption. Hence there will be decrease in air emissions from boilers post project scenario. It is proposed to install new ESP and stack for the proposed new recovery boiler to meet the prescribed standards of MPPCB.

6.14.12 **Water and Wastewater:** No increase in fresh water consumption is envisaged for the proposed project beyond the permitted quantity as per EC-2019. No increase in wastewater generation and treated wastewater discharge quantities beyond the consented levels is envisaged due to the proposed project. The existing ETP of capacity 20,500 m<sup>3</sup>/day will be adequate to treat the total wastewater generation of 9,545 m<sup>3</sup>/day during post project scenario. The quality of treated wastewater will be maintained well within the prescribed limit of MPPCB. As per the existing practices, the treated wastewater will be utilized for land irrigation and thus discharge to river is not envisaged.

6.14.13 **Solid and Hazardous Waste:** No increase in annual solid and hazardous waste generation is envisaged beyond the permitted levels as per EC-2019. The existing disposal practices will be adopted during the post project scenario.

6.14.14 Name of the Consultant: Cholamandalam MS Risk Services Limited, Chennai  
Sl. No. in the QCI List: 26

**Observations of the Committee:**

6.14.15 The proposal involves installation of Energy Efficient Multiple Effect Falling Film evaporators, and deployment of Energy Efficient Recovery process without increasing the overall Pulp and Paper/Tissue production. The existing boiler will be kept to serve as stand by, till the time of stabilization of new boiler.

**Recommendations of the Committee:**

6.14.16 After detailed deliberations, the committee recommended the proposal for environment clearance with the following specific conditions.

- Old chemical recovery boilers shall be phased out by the project proponent immediately after stabilization of the new energy efficient chemical recovery boiler.

- Project proponent shall provide for the revised CER expenditure of Rs.1.94 Crore, which shall be spent in 5 years.
- 6.15 Proposed expansion of Pig Iron Plant (from 0.21 MTPA to 0.587 MTPA), Integrated Steel Plant comprising of 0.387 MTPA TMT Rods, Angles and Channels and 0.20 MTPA of Pipes by M/s. **KIC Metaliks Limited** located at Raturia Industrial Area, Angadpur, Durgapur, District Pashchim Bardhaman, **West Bengal** [Proposal No. IA/WB/IND/5612/2011; MoEF&CC File No. J-11011/556/2009-IAII(I)]-**Environment Clearance** -regarding.
- 6.15.1 M/s. KIC Metaliks Limited has made an online application vide proposal no. IA/WB/IND/5612/2011 dated 9<sup>th</sup> April, 2019 along with copies of EIA/EMP report and Form – 2 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 project is appraised at the Central level.

#### **Details submitted by the project proponent**

- 6.15.2 The Expansion Project of M/s KIC Metaliks Ltd located in Village-Angadpur Tehsil Kanksa, District Bardhaman (West), State-West Bengal was initially received in the Ministry on 09.12.2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 20th meeting held on 01.06.2017 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 20.07.2017 vide Lr. No. J-11011/556/2009-IA-II(I)]
- 6.15.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 09.04.2019 vide Online Application No. IA/WB/IND/5612/2011.
- 6.15.4 The project of M/s KIC Metaliks Ltd located in Angadpur Village ,Kanksa, Tehsil , Bardhaman (West)District, West Bengal State is for Expansion and Modification of 0.21 MTPA Pig Iron Plant to 0.378 MTPA Integrated Steel Plant. The existing project was accorded environmental clearance vide lr.no J-11011/556/2009-IA II (I) dated 24.05.2011.
- 6.15.5 The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide Lr.No.102-385/10/495 dated 20/02/2018 wherein various non-compliances have been observed. Subsequently, PP has submitted Action Taken report to the Regional Office. Regional Office vide letter dated 27/07/2018 issued closure report to the observed non-compliances.
- 6.15.6 The proposed capacity for different products for new site area as below:

S.No	Facilities	Existing configuration	Existing Capacity in TPA	Proposed configuration	Proposed Capacity in TPA	Final Configuration	Final product & Capacity in TPA
1.	MBF	1x215 m <sup>3</sup>	2,10,000	1x245 m <sup>3</sup>	2,35,000	1x245 m <sup>3</sup>	Hot Metal/pig 2,35,000
2.	DRI	Nil	NA	2x350 TPD	2,24,000	2x350 TPD	Sponge Iron 2,24,000
3.	SMS	Nil	NA	1x30 T EAF 4x15 T IF With LF & V D 1200 TPD CCM	3,84,000	1x30 T EAF 4x15 T IF With LF & V D 1200 TPD CCM	Billet 3,84, 000
4.	Rolling Mill	-	NA	1200 TPD	3,78,000	1200 TPD R M	TMT rods, angles 3,78,000
5.	Sinter Plant	1x25 m <sup>2</sup>	1,80,000	1x25m <sup>2</sup>	1,80,000	2x25 m <sup>2</sup>	Sinter 3,60,000
6.	CPP-BF gas fired	5 MW	5MW	Nil	NA	5 MW	5MW
7.	CPP DRI(WHRB)	Nil	NA	14MW	14MW	14 MW	14 MW
8.	CPP-AFBC	-	NA	1x11 MW	11 MW	1x11 MW	11MW
9.	Cement Grinding Unit	100 TPD	30,000	Nil	NA	1x100 TPD	PSC 30,000
10.	Oxygen Plant	-	NA	1x50TPD(VPSA) & 1x100TPD(ASU)	4,500 m <sup>3</sup> /hr	1x50TPD & 1x100TPD	Oxygen 4,500 m <sup>3</sup> /hr
11.	Nitrogen Plant	-	NA	1x50TPD(PSA)	5,500 m <sup>3</sup> /hr	1x50TPD	Nitrogen 5,500 m <sup>3</sup> /hr

S.No	Facilities	Existing configuration	Existing Capacity in TPA	Proposed configuration	Proposed Capacity in TPA	Final Configuration	Final product & Capacity in TPA
12.	PCI plant	-	NA	1x100 TPD	32,000	1x100 TPD	Pulverized coal 32,000

6.15.7 During deliberations, project proponent informed that they are dropping the Induction Furnace (2x20T), DI pipes (2x0.11MTPA), cement grinding unit (300 TPD) and Ferro Alloy Plant (2x9 MVA). The updated configuration of the various units are given as below:

Unit	Existing Configuration	Revised Configuration	Final Configuration	Capacity
MBF	245 m <sup>3</sup> MBF	245 m <sup>3</sup> MBF	245 m <sup>3</sup> MBF	2,35,000 TPA
Sinter Plant	1x25 m <sup>2</sup>	1x25 m <sup>2</sup>	1x25 m <sup>2</sup>	1,80,000 TPA
Sponge Iron DRI	2x350 TPD	2x350 TPD	2x350 TPD	2,24,000 TPA
WHRB	14 MW	14 MW	14 MW	14 MW
AFBC	11 MW	11 MW	11 MW	11 MW
EAF	1x30 T	1x30 T	1x30 T	3,87,000 TPA
IF	4x15 T	4x15 T	4x15 T	
	2x20 T	Dropped	-	
CCM	2x600 TPD	2x600 TPD	2x600 TPD	3,84,000 TPA
Oxygen Plant	50 TPD (VPSA) 100 TPD (ASU)	50 TPD (VPSA) 100 TPD (ASU)	50 TPD (VPSA) 100 TPD (ASU)	4,500 m <sup>3</sup> /hr
Rolling	1200 TPD	1200 TPD	1200 TPD	3,78,000

<b>Unit</b>	<b>Existing Configuration</b>	<b>Revised Configuration</b>	<b>Final Configuration</b>	<b>Capacity</b>
Mill				TPA
Nitrogen Plant	50 TPD (PSA)	50 TPD (PSA)	50 TPD (PSA)	5,500 m <sup>3</sup> /hr
DI Pipes	2x0.11 MTPA	Dropped	-	-
Cement Grinding Unit	300 TPD	Expansion to 300 TPD Dropped	100 TPD	30,000 TPA
Ferro Alloy Plant	2x9 MVA	Dropped	Dropped	-

6.15.8 The revised production capacities of various units are given as below;

<b>Unit</b>	<b>Product</b>	<b>Capacity</b>
MBF	Pig Iron	2,35,000 TPA
Sinter Plant	Sinter	1,80,000 TPA
Sponge Iron DRI	Sponge Iron	2,24,000 TPA
WHRB	Power	14 MW
AFBC	Power	11 MW
EAF	Steel	3,84,000 TPA
IF with LF & VD		
CCM	--	3,84,000 TPA
Oxygen Plant	Oxygen	4,500 m <sup>3</sup> /hr
Rolling Mill	TMT bars, Angles, Channels	3,78,000 TPA

Unit	Product	Capacity
Nitrogen Plant		5,500 m <sup>3</sup> /hr

6.15.9 The total land required for the project is 30.65 ha. No /forestland involved. Total land is under acquisition. No River passes through the project area. It has been reported that no water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

6.15.10 The topography of the area is Flat (flat/undulated) and reported to lies between to 230 30' 24.58'' N, to 230 30' 48.75'' N Latitude and 870 16' 22.70''E to 870 16'43.23'' E Longitude in Survey of India topo sheet No. F45D6 at an elevation of 72m AMSL. The ground water table reported to ranges between 2m-5m below the land surface during the post-monsoon season and 5m-10m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 3000 ham. Further, the stage of groundwater development is reported to be 16% and 41% in core and buffer zone respectively and thereby these are designated as safe.

6.15.11 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form Page 9 of 38 corridors for Schedule-I fauna. The authenticated list of flora and fauna provided through the Base Line study. Reports states that there is no presence of Schedule-I fauna in the study area.

6.15.12 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process. The Process involves production of TMT rods and DI pipes using DRI-IF-CCM & SINTER-MBF-EAF-VOD routes utilizing I/O lumps, fines, Dolomite, Coal etc.

6.15.13 The targeted production capacity of the project is 0.378 million TPA. The ore for the plant would be procured from Barbil Odisha (linkages-MoU between Mideast Integrated Steels Ltd. on 20.06.2017 & KIC Metaliks. The ore transportation will be done through Rail & Road (Rail/Road).

6.15.14 The details of the raw materials required and mode of transportation is furnished as below:

Sl. No.	Raw Material	Quantity in TPA		Source	Mode of Transport
		Earlier	Proposed		
1	Hematite Iron Ore Lumps	3,25,000	3,25,000	Badbil, Odisha/ Jharkhand	Rail/ Road

2	Iron ore Fines	4,00,000	4,00,000	Odisha/Jharkhand	Rail/Road
3	Non-Coking Coal for DRI	2,70,000	2,70,000	Sister Unit	Rail/Road/Ship
4	Boiler grade Coal for AFBC	60,000	60,000	Raniganja	Rail/Road
5	Coal for PCI	28,500	28,500	Sister unit	Ship/Road
6	Lime stone/Dolomite	8,960	8,960	Sundergarh (Odisha)	Rail/ Road
7	Scrap	1,30,000	45,000	Local Purchase	Road
8	Coke	98,000	98,000	Local Purchase	Road

6.15.15 The fresh water requirement of the project is estimated as 5316.2 m<sup>3</sup> /day, the required water will be drawn from Durgapur Valley Corporation and Durgapur Projects Ltd. The permission for drawl of surface water is obtained from DVC & DPL vide Lr. No.DP/7W/14N-I/1122 date 08.12.09.

6.15.16 The power requirement of the project is estimated as 47.0 MW, out of which 17 MW will be obtained from the DPL.

6.15.17 Baseline Environmental Studies were conducted during Winter season i.e. From 01.12.2018 to 28.02.2019, Ambient air quality monitoring has been carried out at 8 locations during baseline, and the data submitted indicated: PM<sub>10</sub> (61.17 µg/m<sup>3</sup> to 82.9 µg/m<sup>3</sup>), PM<sub>2.5</sub> (23.02 to 45.21µg/m<sup>3</sup>), SO<sub>2</sub> (7.22 to 17.53µg/m<sup>3</sup>) and NO<sub>x</sub> (16.17µg/m<sup>3</sup> to 29.64 µg/m<sup>3</sup>). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 3.34 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 2.72 µg/m<sup>3</sup> with respect to PM<sub>2.5</sub>, 9.49 µg/m<sup>3</sup> with respect to SO<sub>2</sub>, 11.19. µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.

6.15.18 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH:7.52 to 7.25, Total Hardness 116.9.to 144.1 mg/l, Chlorides: 65.2 to 76.9 mg/l, Fluoride:0.15 to 0.29 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 8 locations. pH: 7.25 to 7.74; DO: 4.85 to 6.35 mg/l and BOD: 9.1 to 6.1.mg/l. COD from 21.4 to 36.5mg/l.

6.15.19 Noise levels are in the range of 49.8 to 62.8 dBA for daytime and 32.3 to 50.5 dBA for night time.

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

provided compensation and preference in the employment.

- 6.15.21 It has been reported that a total of 398720 tons/m<sup>3</sup> of waste will be generated due to the project, out of which 46600 tons will be used in Power Plant & Co-processing, 230520 tons will be given to recyclers and 130600 will be dumped in the earmarked dump yard. It has been envisaged that an area of 10.11 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.
- 6.15.22 It has been reported that the Consent to Operate from the West Bengal State Pollution Control Board for the existing unit has been obtained vide Lr. No COO90244.dated18.03.2016 and consent is valid up to 31.03.2019.
- 6.15.23 The Public hearing of the project was held on 17.11.2017 at Tathya Municipal Corporation Building. under the chairmanship of A.Samanta, Dy Magistrate & Dy Collector (designation) for the proposed expansion project of pig iron plant (from 0.21 MTPA to 0.587 MTPA) Integrated Steel Plant Comprising of 0.387 MTPA TMT rods. Angles, Channels and 0.20MTPA DI pipes. An amount of 4.41 Lakhs has been earmarked for CER, based on public hearing issues.

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

#### CER Budget

S. NO	Item	Description	Ist Yr (in lacs)	2nd Yr (in lacs)	3rd Yr (in lacs)	Total (in lacs)
1	Repair and widening of village Roads	1)Tamulipada 2)Bauripada 3) Bagadipada , approximate road length taken together 6km, which will be black top	80	70	60	210
2	Erection of Bus stops	There is no bus stop for villagers two no of Bus stop to be erected	10	10	6	26

S. NO	Item	Description	Ist Yr (in lacs)	2nd Yr (in lacs)	3rd Yr (in lacs)	Total (in lacs)
3	Setting up upper primary school	For 20 no of villages there are only 3 primary schools, these primary schools need development and one upper primary school needs to be set up	15	15	10	40
4	Education & Training program	100 no of local youth from 20 villages are to be given education on developed farming and industrial training on various trades	15	05	05	25
5	Overhead tank erection, commissioning with deep bore well	To cater drinking water supply to villagers, bore well to be set up, water to be stored on overhead tank and single point supply to each village.	30	20	10	60
6	Development of MSW dump yard	Under swachha Bharat yojana dump yard to be created for dumping of MSW of villages & supply of bins for waste collection	20	15	10	45
7	Electrification of village roads	Street LED lights to be setup	15	10	10	35
Total			441			

6.15.24 The capital cost of the project is Rs 555 Crores and the capital cost for environmental protection measures is proposed as Rs3000.Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 351Lakhs. The employment generation from the proposed project / expansion is 1200 Nos.

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

6.15.25 Greenbelt will be developed in 10.11 Ha which is about 33% of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 1500 trees per ha. Total no. of 5760 saplings will be planted and nurtured in 3.77 ha in next two years.

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

6.15.27 Name of the consultant: GLOBALTECH Enviro Experts Pvt. Ltd. [S.No. 78, List of Accredited Consultant Organizations (Alphabetically) Rev. 75, April 10, 2019].

**Observations of the Committee: -**

6.15.28 The committee noted that the aforesaid proposal was considered in the 1<sup>st</sup> Meeting of the Reconstituted Expert Appraisal Committee held on 26-28<sup>th</sup> November, 2018, and recommended to return the proposal in the then form as the baseline data did not reflect the ground reality, and also as data needed to be validated. The Committee also felt that the proposed units will cause congestion in the layout. Therefore, the committee advised in its November 2018 Meeting, the project proponent to submit a revised EIA/EMP with fresh data and a de-congested layout. After detailed deliberations, the Committee found that the revalidated EIA/EMP report including revised lay out submitted by the project proponent addressed the earlier observation of the Committee satisfactorily.

6.15.29 The committee observed that the public hearing was chaired by Shri Kaushik Mukherjee, Dy Magistrate & Dy Collector, who is below the rank of ADM. The committee noted that the Addl Chief Secretary, West Bengal has requested the ministry to consider the public hearing chaired by the Dy. Collector as the district was formed newly and there exists shortage of ADM level officers to attend public

hearings. The competent authority in the Ministry had approved the conduct of the public hearing under the chairmanship of Dy. Collector also.

**Recommendations of the Committee: -**

6.15.30 After detailed deliberations, the Committee recommended the proposal for grant of environmental clearance under the provisions of EIA Notification, 2006 subject to the following specific and general conditions:

**A. Specific Conditions:**

- Project proponent shall ensure that water consumption per ton of steel shall not exceed 4 m<sup>3</sup> per tonne of pig iron production.
- Project proponent shall ensure 100% utilization of solid waste generated by the plant, and also ensure that no dumping of solid waste ensues.
- Project proponent shall provide the Top Recovery Turbine over the blast furnace.
- Rain water harvesting to recharge quantity of water equivalent to the consumption in the plant, or more shall be carried out in the project premises. In case, rain water recharge is not possible within the project premises, the project proponent shall carry out the recharging outside the project premises.

**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, and from the competent authority in case of use of surface water required for the project.
- iii. The project proponent shall also 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 issued vide G.S.R 277 (E) dated 31<sup>st</sup> March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30<sup>th</sup> May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7<sup>th</sup> December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers, and calibrate the plant monitoring system from time to time according to equipment supplier specification using services of 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 using services of labs recognized under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criteria parameters relevant to the main pollutants

released (e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emissions, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.

- iv. The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on both sides of coke oven batteries and video recordings shall be preserved for at least one-month after recording date.
- v. Sampling facility at process stacks and at quenching towers shall be provided by the project proponent as per CPCB guidelines for manual monitoring of emissions.
- vi. 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.
- vii. 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 with the prescribed stack emission and fugitive emission standards.
- viii. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for efficient maintenance of bags.
- ix. Secondary emission control system shall be provided by the project proponent at SMS Converters.
- x. Pollution control system in the steel plant shall be provided by the project proponent as per the CREP Guidelines of CPCB.
- xi. Sufficient number of mobile or stationery vacuum cleaners shall be provided by the project proponent to clean plant roads, shop floors and roofs, etc regularly.
- xii. The project proponent shall 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.
- xiii. The project proponent shall use leak proof trucks/dumpers carrying coal and other raw materials, and also cover them with tarpaulin to check release of coal and other raw material dust into atmosphere.
- xiv. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles by the project proponent to check release of raw material dust into atmosphere.
- xv. The project proponent shall install Dry Gas Cleaning Plant with bag filter(s) for Blast Furnace and SMS converter.

### **III. Water quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 issued vide G.S.R 277 (E) dated 31<sup>st</sup> March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30<sup>th</sup> May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7<sup>th</sup> December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time

according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- 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 using services of labs recognized 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. Project proponent shall adhere to 'Zero Liquid Discharge'.
- v. Sewage Treatment Plant shall be provided by the project proponent for treatment of domestic wastewater to meet the prescribed standards.
- vi. Garland drains and collection pits shall be provided by the project proponent 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. Vehicle tyre washing facilities shall be provided by the project proponent at the entrance gates of the plant.
- viii. CO<sub>2</sub> injection shall be provided by the project proponent in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.
- ix. The project proponent shall undertake rainwater harvesting to collect maximum precipitation.
- x. Water meters shall be provided by the project proponent at the inlet(s) of all units using water in the steel plant.
- xi. The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practising cascade method 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 by the project proponent to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. Project proponent shall ensure that the ambient noise levels 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 TRTs to recover energy from top gases of Blast Furnaces.
- ii. Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.

- iii. Project proponent shall use torpedo ladle for hot metal transfer to the maximum extent possible. If torpedo ladles are not used, the project proponent shall provide covers for open top ladles.
- iv. Project proponent shall use hot charging of slabs and billets/blooms to the maximum extent possible.
- v. Waste heat recovery systems shall be provided by the project proponent in all units where the temperature of flue gas or process gas exceeds 300°C.
- vi. Project proponent shall study feasibility to install WHRS to utilise Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces.
- vii. Project proponent shall restrict Gas flaring to < 1%.
- viii. Project proponent shall provide solar panels for power generation on roof tops of buildings, for lighting of all common areas, street lighting, parking area lighting, and also carry out regular maintenance of the same.
- ix. Project proponent shall provide LED lights in their offices and residential areas of the project.
- x. Project proponent shall ensure installation of regenerative type burners on all reheating furnaces.

## **VI. Waste management**

- i. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed by the project proponent to use slag in place of river sand in construction industry.
- ii. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed by the project proponent.
- iii. Waste recycling Plant shall be installed by the project proponent to recover scrap, metallic waste and flux for recycling to sinter plant and SMS.
- iv. Used refractories shall be recycled by the project proponent as far as possible.
- v. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, as railway track ballast and in other applications. The project proponent shall install a waste recycling facility to recover metallic waste and flux for recycling to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.
- vi. 100% utilization of fly ash shall be ensured by the project proponent. 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.
- vii. Oil Collection pits shall be provided by the project proponent in oil cellars to collect and reuse/recycle spilled oil. Additionally, oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.
- viii. The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills, etc. shall be disposed of as per the Hazardous &

Other Waste (Management & Transboundary Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens

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

## **VII. Green Belt**

- i. Green belt shall be developed by the project proponent in an area equal to 33% of the total plant area with native broad-leaved 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 through carbon sequestration, including by raising 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 prepared and 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 proper housing for the 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, and crèche, etc. The housing may be in the form of temporary structures, which may 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 the Ministry's OM issued vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, while preparing the Corporate Environment Responsibility Plan.
- 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 clearly defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stakeholders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection

measures shall be kept in separate account and 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 Iron and Steel 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<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- 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.
- iv. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- v. 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.

6.16 Expansion of Integrated Steel Plant (1 MTPA to 1.3 MTPA) of **M/s JSW Steel Ltd.**, located at Mecheri, Taluk Mettur, District Salem, **Tamil Nadu** [Proposal No. IA/TN/IND/26508/2015; MoEF& CC File No. J-11011/281/2006IA.II(I)] – **Amendment in Environmental Clearance** – regarding.

6.16.1 M/s. JSW Steel Limited has made online application vide proposal no. IA/TN/IND/26508/2015 dated 15<sup>th</sup> March, 2019 along with Form I sought for amendment in the specific condition no. vii pertaining to zero liquid discharge of the Environmental Clearance accorded by the Ministry vide letter no. F.No. J-11011/281/2006- IA-II(I) dated 7<sup>th</sup> July, 2017.

#### **Details submitted by the project proponent**

6.16.2 M/s. JSW Steel Limited has been granted Environmental Clearance (EC) for expansion of its integrated steel plant from 1.0 to 1.3 MTPA of special steel product vide letter no. J-11011/281/2006-IA.II (I) dated 7<sup>th</sup> July, 2017 located at Mecheri, Taluk Mettur, District Salem, Tamil Nadu.

6.16.3 Status of implementation of the earlier EC facilities and schedule of completion of balance facilities are given as below:

<b>Manufacturing Facilities</b>	<b>Existing Capacity</b>	<b>Proposed Expansion</b>	<b>Total Capacity after Expansion</b>	<b>Remarks</b>
Coke Oven Plant -1 (Non – Recovery Type )	0.50	-	0.50	Commissioned*
Sinter Plant – 1 (20 Square Meter)	0.175	-	0.00	Commissioned*
Sinter Plant – 2 (90 Square Meter)	1.06	-	1.06	Commissioned*
Sinter Plant – 3 (90 Square Meter)	-	1.06	1.06	Yet to be installed
Blast Furnace – 1 (402 to 650 Cubic Meter)	0.367	0.316	0.683	Yet to be installed <sup>#</sup>
Blast Furnace – 2 (550 to 650 Cubic Meter)	0.578	0.105	0.683	Proposed Expansion is completed
Energy Optimizing Furnace – 1 (45 T to 65 T)	0.41	0.23	0.64	Proposed Expansion is completed
Energy Optimizing Furnace – 2 (65 T)	0.62	-	0.62	Commissioned*
Ladle Furnace - 1 with Common VD (45 T to 65 T)	45 T/heat	20 T/heat	65 T/heat	Proposed Expansion is completed
Ladle Furnace – 2 (65 T)	65 T/heat	-	65 T/heat	Commissioned*
Ladle Furnace - 3 common VD (65 T)	65 T/heat	-	65 T/heat	Commissioned*
Ladle Furnace - 4 (65 T)	65 T/heat	-	65 T/heat	Commissioned*
Continuous Casting Machine - 1	0.35	-	0.35	Commissioned*
Continuous Casting Machine - 2	0.50	-	0.50	Commissioned*
Continuous Casting Machine - 3	-	0.45	0.45	Establishment is completed
Bar & Rod Mill	0.40	0.08	0.48	Proposed Expansion

<b>Manufacturing Facilities</b>	<b>Existing Capacity</b>	<b>Proposed Expansion</b>	<b>Total Capacity after Expansion</b>	<b>Remarks</b>
Augmentation				is completed
Blooming Mill Augmentation	0.36	0.12	0.48	Proposed Expansion is completed
Pickling and Annealing Steel unit	-	0.06	0.06	Annealing steel unit Establishment is completed. Pickling steel unit establishment is under progress
Peeled and ground	-	0.04	0.04	Establishment with capacity of 0.01 MTPA is completed.
Air Separation Plant 1 – 150 Ton/Day	150 T/day	-	150 T/day	Commissioned*
Air Separation Plant 2 – 390 Ton/Day	390 T/day	-	390 T/day	Commissioned*
Air Separation Plant 3 – 250 Ton/Day	-	250 T/day	250 T/day	Yet to be installed
Captive Power Plant 1 (7 MW)	7 MW	-	7 MW	Commissioned*
Captive Power Plant 2 (2 x 30 MW)	2X30 MW	-	2X30 MW	Commissioned*
Captive Power Plant 3 (1 x 30)	-	30 MW	30 MW	Establishment is nearing completion stage
DG sets	3x625 KVA	1x1250 KVA	3x625 KVA and 1x1250 KVA	1 x 1250 KVA is installed

6.16.4 As per specific condition no. vii, “no effluent shall be discharged outside the plant premises and Zero discharge shall be adopted”. Project proponent sought amendment in the condition as “Zero discharge for the complete steel plant complex including CPPs”.

6.16.5 Project proponent informed that following are the reasons for seeking amendment in the specific condition no. vii.

- EC is issued for Steel Plant complex including CPP units.
- CPP I (1 X 7 MW), CPP II (2 X 30 MW) & additional 1 X 30 MW (CPP III) are integral part of steel plant operations.
- Wastewater from all process units including CPP is being collected in a Guard Pond.  
Treated wastewater is reused within Steel plant in non-critical applications (like Slag quenching, gas cleaning plant, dust suppression system, Gardening etc.,)
- Complying to ZLD since 2015 and the real time parameters are hooked up to TNPCB/CPCB servers.
- At the stage of issuing of CTO, TNPCB is asking JSW, SALEM to set up a dedicated ZLD unit for CPP III-30 MW CPP as per norms applicable for TPP.
- Since, Steel and CPP units are existing in the same premises with common wastewater treatment and reuse plant, request to amend the Specific condition vii of EC dated 07.07.2017 as follows
- “Common Zero discharge system for 1.3 MTPA integrated steel plant and CPP [1x7 MW and 3x30 MW] shall be adopted and no effluent shall be discharged outside the plant premises”

### **Observations of the Committee**

6.16.6 The Committee noted that CPP I (1 X 7 MW), CPP II (2 X 30 MW) & additional 1 x 30 MW (CPP III) are integral part of steel plant operations for which Environmental Clearance was accorded by the Ministry vide letter dated 7<sup>th</sup> July, 2017.

### **Recommendations of the Committee**

6.16.7 After detailed deliberations, the Committee recommended to clarify the specific condition no. vii of the EC dated 7<sup>th</sup> July, 2017 as given below:

“Zero discharge for the complete steel plant complex including CPPs”.

6.17 Expansion of Ore Beneficiation Plant from 0.6 MTPA to 1.5 MTPA within the existing premises by **M/s Thakur Industries** located at Village Hirebagnal, Tehsil & District Koppal, **Karnataka** – [Proposal No. IA/KA/IND/97633/2018; MoEF& CC File No. J-11011/208/2016-IA.II(I)] - **Amendment in Environmental Clearance** – regarding.

6.17.1 M/s Thakur Industries made an application vide online proposal no. IA/KA/IND/97633/2018 dated 28.02.2019 for seeking corrigendum in Environmental Clearance under the provisions of the EIA Notification, 2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 2(b) Mineral beneficiation under Category “A” of EIA Notification, 2006 and the proposal is appraised at Central level.

### **Details Submitted by the Project Proponent:**

6.17.2 The Environmental Clearance for expansion of Ore Beneficiation Plant from 0.6 MTPA to 1.5 MTPA within the existing premises was accorded by the Ministry vide letter F.No. J-11011/208/2016-IA.II(I) dated 28.08.2018.

6.17.3 Now, the request for corrigendum in the Environmental Clearance letter is as below:

Sr. No.	Environmental Clearance Issued	Amendment in Environmental Clearance (as per EIA Report)	Reference No
1.	The targeted production capacity of the Beneficiation Plant is 1.5 million TPA. The ore for the plant would be procured from (linkages through E-auction).  The ore transportation will be done through Road.	Raw material will be procured from Karnataka and adjoining state of Telangana and Andhra Pradesh including Goa and also from any state of India. Also would be met by imports from other countries as and when required.  <ul style="list-style-type: none"> <li>Through E-auction (as is prevalent now) in the state of Karnataka:</li> <li>Low-grade ore from existing nearby mines of Bellary District (Bellary-Hosapete-Sandur region) and Chitradurga-Tumakuru region approximate distance is about 100-200 km and mode of transportation by road/train.</li> </ul>	Para No. 7.0 & page No. 2 of 9
2.	Iron Ore Beneficiation Plant	Ore Beneficiation Plant	Para No. 25.0 & page No. 4 of 9

6.17.4 **Observations of the Committee:**

The corrigendum request is factually correct and justified based on the details furnished in the EIA report by the project proponent, which was appraised by the Committee for grant of Environmental Clearance.

6.17.5 **Recommendations of the Committee:**

After detailed deliberations, the Committee recommended for issuance of the corrigendum requested for by the project proponent.

6.18 Expansion of Iron Ore Beneficiation Plant and Pelletisation Plant at village Tandwa&Kundru, Tehsil Tilda, Dist. Raipur, **Chhattisgarh** by **M/s Shri Bajrang Power and Ispat Ltd.** [Proposal No. IA/CG/IND/20501/2012; J-11011/394/2009-IA.II (I)] - **Validity Extension of Environmental Clearance** – regarding.

The project proponent vide their e-mail dated 27/04/2019 expressed their inability to attend the meeting on 30/04/2019 and requested to consider the proposal in forthcoming EAC meeting. The Committee agreeing to the request of the project proponent, recommended to consider the proposal in the forthcoming EAC meeting.

6.19 Manufacturing of Medium Carbon Ferro-Manganese & Low Carbon Ferro-Manganese (2400 TPA) or Ferro Molybdenum (80 TPA) or Ferro Vanadium (80 TPA) or Ferro Titanium (80 TPA) or Manganese Oxide (2400 TPA) by **M/s Vibhuti Alloys** at plot no.B17/1 Butibori Industrial Area, District Nagpur, **Maharashtra**. – [Proposal

No. IA/MH/IND/100767/2019; MoEF&CC File No.IA-J-11011/168/2019-IA-II(I)]-  
**Terms of Reference** - regarding.

6.19.1 M/s. Vibhuti Alloys made online application vide proposal No. IA/MH/IND/100767/2019 dated 29<sup>th</sup> March 2019 in the prescribed format along with Form-1 and other reports to the Ministry. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

**Details Submitted by the Project Proponent:**

- 6.19.2 The project proponent proposed to install Manufacturing unit of Medium Carbon Ferro-Manganese & Low Carbon Ferro-Manganese: 2400 TPA OR Ferro Molybdenum: 80 TPA OR Ferro Vanadium: 80 TPA OR Ferro Titanium: 80 TPA by Thermite Process and Manganese Oxide: 2400 TPA.
- 6.19.3 Consent to Operate was accorded by Maharashtra State Pollution Control Board vide Ir. no. MPCB/UAN No. 43657/1807000498 for the grinding of manganese, grinding of silico-manganese, grinding of Ferro-manganese and grinding of coal and validity of CtO is up to 30/08/2021.
- 6.19.4 The proposed unit will be located at plot no.B17/1 Butibori Industrial Area, District Nagpur, Maharashtra.
- 6.19.5 The land area leased by MIDC for the plant is 0.1 Ha (1000Sq. m). No forestland involved. A constructed shed of 500sqmt has been leased out by MIDC to M/s. Vibhuti Alloys. Of the total area 0.1 ha (33%) land will be used for green belt development.
- 6.19.6 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 6.19.7 Total project cost is Rs. 3.0 Crores. Proposed employment generation from proposed project will be 22 direct and indirect employments.
- 6.19.8 The targeted production capacity is 2400 TPA Manganese Oxide, 2400 TPA Ferro Manganese M.C./L.C OR, 80 TPA Ferro Titanium OR, 80 TPA Ferro Vanadium OR, 80 TPA Ferro Molybdenum. (By Thermite process)
- 6.19.9 The electricity load of 47KW will be procured from State Electricity Board.
- 6.19.10 Proposed raw material for project are Manganese Ore, Aluminum scrap, lime powder, silico-manganese, Ilmenite, Iron Ore, Molybdenum Concentrate, Vanadium Pentoxide (flakes) and Coal. The requirement would be fulfilled by MOIL as well as Open Market. Coal will be used for manufacturing of Manganese oxide.
- 6.19.11 Water Consumption for the proposed project will be 5 KLD and waste water generation will be 2.5 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.
- 6.19.12 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 6.19.13 Name of Consultant: M/s Pollution Control Ecology Service. Sr No in QCI List: 121

**Observations of the Committee:**

- 6.19.14 The project site is located in the notified industrial estate, Butibori Industrial Area. The proposal involves primary metallurgy by termite process.

**Recommendations of the Committee:**

- 6.19.15 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 ToRs enclosed at **Annexure-1 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 shall carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility Plan as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.
  - iv. The project Proponent shall also make an application to seek recommendation of the National Board for Wildlife.
  - v. Plantation of 2500 saplings outside the project site shall be carried out by the project proponent and details thereof shall be furnished in the EIA report.
- 6.20 Expansion of Silica Sand production (Glass Grade), LPG Storage capacity and the interlinked development of a second Float Glass Line (FL2) in Existing Glass Manufacturing Unit at Village: Kondh, Valia Road, Tal: Ankleshwar - 393001, Dist: Bharuch, **Gujarat** by **M/s Gujarat Guardian Limited** [Proposal No. IA/GJ/IND/99843/2019; MoEF&CC File No. J-11011/382/2017-IA.II(I)]- **Terms of Reference** – regarding.

- 6.20.1 M/s. Gujarat Guardian Limited made online application in the prescribed format along with Form-1 and other reports to the Ministry vide Proposal No. IA/GJ/IND/99843/2019 dated 19 March 2019 for prescribing Terms of Reference to conduct detailed EIA study for the proposed expansion of the existing silica sand processing plant (glass grade) by demolishing the existing sand plant and rebuilt new sand plant, New float glass line 2 (interlinked project) & LPG storage capacity enhancement for glass manufacturing unit. The proposed project activity is listed at Sl. No. 2(b) Mineral Beneficiation under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

**Details Submitted by the Project Proponent:**

- 6.20.2 The project proponent proposed to set up silica sand processing plant (glass grade), new float glass line 2 (interlinked project) & LPG storage capacity enhancement for glass manufacturing unit based on Spiral Technology of sand beneficiation and also floatation as well magnetic separation process.

- 6.20.3 The existing plant is well-established manufacturing unit which was established in 1993 and possess NOC vide order no. PC/BRCH-630/2117 dated 23 Feb 1990 from Gujarat Pollution Control Board (GPCB). Consent to Operate was accorded by GPCB vide Sr. No. AWH-98592 dated 08 January 2019 validity of CTO is up to 21 January 2024.
- 6.20.4 The expansion unit will be located in existing manufacturing facility / plot at Valia Road Village: Kondh, Taluka: Ankleshwar – 393 001, District: Bharuch, State: Gujarat
- 6.20.5 The land area acquired for the expansion plant is 65.599 Ha, Colony area is 37.445 Ha, so total area of plant and colony is 103.044 Ha. No forestland is involved. The entire land has been acquired/ not acquired for the existing operation and proposed project. Of the total area 43.008 Ha (Plant is 11.804 Ha & Colony is 31.204 Ha) land is been used for green belt development.
- 6.20.6 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 6.20.7 Total project cost is approx. 2184 {(584 Existing) + (1600 Expansion)} Crore rupees. Proposed employment generation from proposed new sand plant project will be Nil as the existing manpower used for operation and maintenance of sand plant will be used for new expansion sand plant as well. Existing manpower used for operation is 24 persons and the same for Maintenance is 10 persons.
- 6.20.8 The targeted production capacity of the Silica Sand (Glass Grade) + By Products (Coarse, Fines and rejects) is 1038000 TPA. Raw silica sand shall be procured from mines located near to the plant which is Rajpadi area using road transportation for bringing the raw silica sand.

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

Sr. No.	Name of Unit	Name of Product	Existing Capacity	Additional Proposed Capacity	Total Proposed Capacity	Remarks
1	Glass Manufacturing Unit	Float Glass Mirror, Lacquered Glass, Coater Glass	2,50,00,000 m <sup>2</sup> /Annum	4,00,00,000 m <sup>2</sup> /Annum	6,50,00,000 m <sup>2</sup> /Annum	-
2	Silica & Sand Production Unit	Silica Sand (Glass Grade) & By-Products (Coarse,	33,120 MT/Month	53,380 MT/Month	86,500 MT/Month	-

		Fines & Rejects)				
3	LPG Storage	-	225 MT (4 x 56.25 MT of Length = 16.2 m & Diameter = 3200 mm)	495 MT	720 MT (6 x 120 MT of Design Pressure = 21 Kg/cm <sup>2</sup> , Overall Length = 24000 mm, Tank ID = 4010 mm, Tank Shell = 28 mm Thick, Dished End= 18 mm Thick)	The Existing LPG Storage Yard will be relocated to new location with increased capacity of 720 MT.

- 6.20.9 The electricity load of 14.7 MW (Existing – 8.7 MW + Additional – 6 MW) is being procured from GEB. Company already has installed 4 Nos. of (155 KVA each), 2 Nos. of (2.5 MW each), 1 Nos. of (500 KVA) & proposed to install 3 Nos. of (2.1 MW each) & 1 Nos. of (500 KVA) DG Set.
- 6.20.10 Proposed raw material and fuel requirement for project are attached as Annexure - 1 Requirement would be fulfill by suitable supplier. Fuel consumption will be mainly Natural Gas @ 16150 m<sup>3</sup>/hr (Existing – 6000 m<sup>3</sup>/hr + Additional – 10150 m<sup>3</sup>/hr), LPG @ 10.4 MT/Hr (Existing – 4 MT/hr + Additional – 6.4 MT/hr) & Diesel @ 3540 Ltrs/Hr (Existing – 1515 Ltrs/Hr + Additional – 2025 Ltrs/Hr)
- 6.20.11 Water Consumption for the existing operations and expansion project on cumulative basis would be 2725 KL/Day (Fresh 2075 KL/Day + Recycled 650 KL/Day) (Existing 1920 KL/Day + Additional Proposed 805 KL/Day) and waste water generation is 1400 KL/Day (Existing – 980 KL/Day + Additional Proposed – 420 KL/Day). Domestic waste water @ 410 KL/Day (320 + 90) will be treated in STP: 90 KL/Day will be reused for gardening and 320 KL/Day will be stored in soak pit or septic tank and industrial waste water @ 990 KL/Day generated will be corrected for pH whenever needed and reused. Proposed waste water recycling plant capacity (FL 1: 500 KLD, FL 2: 200 KLD). Total ETP or waste water recycling capacity: 700 KLD and out of that 650 KLD will be recycled. Ultimately it is a Zero Liquid Discharge Unit and after proposed expansion it will remain ZLD.
- 6.20.12 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

- 6.20.13 Name of Consultant: M/s. Aqua-Air Environmental Engineers Pvt. Ltd. QCI  
**Accreditation No. :** Stay Order from Hon 'able High Court

**Observations of the Committee:**

- 6.20.14 The Committee noted that threshold limit of LPG storage by the project proponent within the project site does not attract the provisions of the EIA Notification, 2006 under schedule 6(b).

**Recommendations of the Committee:**

- 6.20.15 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 ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- i. Zero liquid discharge shall be adopted by the project proponent.
  - ii. No ground water abstraction or use by the project proponent is permitted.
  - iii. Scheme for handling storage and handling of hazardous chemicals shall be prepared by the project proponent as per MSIHC Rules, 1989 and subsequent amendments.
  - iv. Scheme for hazardous waste storage, handling and disposal as per Hazardous and other Wastes Rules, 2016 shall be prepared and furnished by the project proponent.
  - v. Storage of LPG shall be as per OISD norms and prior permission shall be obtained by the project proponent from Competent Authority.
  - vi. Detailed beneficiation flow sheet of sand shall be furnished in the EIA report by the project proponent.
  - vii. Bag filter(s) shall be used for control of fugitive dust emissions emanating from process areas.
  - viii. Action plan for green belt development covering 33% of the plant area shall be furnished by the project proponent.
  - ix. Public Hearing shall be conducted by the concerned State Pollution Control Board.
  - x. The issues raised during public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, *inter alia*, contain the year-wise activities with corresponding financial allocations.
  - xi. The project proponent shall carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility Plan as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- 6.21 Expansion of Steel Manufacturing Unit for production (24000 TPA to 96,000 TPA of billets) by adding Induction Furnace, Rolling Mill and Continuous Casting Machine by **M/s Saboo Tor Pvt Ltd.**, at Trilokpur road, Kala Amb, Tehsil- Nahan, District: Sirmaur, State: **Himachal Pradesh**. [Proposal No. IA/HP/IND/98317/2019; MoEF&CC File No. IA-J-11011/169/2019-IA-II(I)]- **Terms of Reference**- regarding.
- 6.21.1 **M/s. Saboo Tor Pvt. Ltd.** made online application vide proposal No. IA/HP/IND/98317/2019 dated 13.03.2019 in the prescribed format along with Form-1 and other reports to the Ministry for prescribing ToRs for proposed expansion of the existing manufacturing unit for production of steel ingots/billets. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

**Details Submitted by the Project Proponent:**

- 6.21.2 The existing project did not require EC as its existing capacity of 24,000 TPA as per MOEFCC notification No. S.O. 30367 (e) dated 1<sup>st</sup> Dec, 2009. Consent to operate was accorded by Himachal Pradesh State Pollution Control Board, Shimla vide consent No.HPSPCB/PCB/ID-14132 13804-6 dated 29/08/2018. Validity of CTO is upto 31/03/2021.
- 6.21.3 The proposed expansion will be undertaken in the existing plant located at Trilokpur road, Kala Amb, Tehsil- Nahan, District: Sirmaur, State: Himachal Pradesh.
- 6.21.4 The expansion will be done in the existing having 15,005m<sup>2</sup> (3.71ha) of land having land use 'Industrial'. No forest land is involved. The entire land is already under the possession of industry. Of the total area, a minimum of 33% will be used for Green belt development which includes the existing Green belt.
- 6.21.5 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 6.21.6 Total project cost is approx 39.12 Crore including the existing cost of Rs. 15 Cr. Proposed employment for the project will be 25 persons as direct employment and 150 as indirect employment.
- 6.21.7 The targeted production capacity of the Steel Ingots/Billets after expansion is 96,000 TPA which includes the proposed capacity enhancement of 72,000TPA. The raw material mostly steel scrap and additives will be sourced from local and international market. The transportation of materials will be primarily through road. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity (TPA)		Total Capacity (TPA)
		Existing	Proposed	
M/s Saboo Tor Pvt. Ltd.	1	24,000	72,000	96,000

- 6.21.8 The electricity load of 3500 KW (3.5MW) for the proposed expansion will be sourced from H.P.S.E.B. and an additional D.G. set of 350KVA will be installed in addition to the existing DG set of 125 KVA.
- 6.21.9 Proposed raw material and fuel requirement of the project are MS Scrap, additives & electricity. The requirement would be fulfilled by Local as well as International markets. Fuel consumption will be mainly electricity.
- 6.21.10 Water consumption for the proposed project will be Nil and no waste water will be generated from the process. The water requirement for cooling purpose will be 9.4 KLD as make up water. Domestic waste water will be treated through STP. No industrial waste water will be generated. The cooling tower blow down will be treated in STP & reused as make up water and used in plantation.

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

6.21.12 The name of consultant is **M/s Chandigarh Pollution Testing Laboratory- EIA Division (CPTL-EIA)** listed **no. 25** in the QCI list.

**Observations of the Project Proponent:**

6.21.13 The proposal is for expansion of existing unit, which is operating with consent from the Himachal Pradesh State Pollution Control Board. The proposed expansion attracts the provisions of EIA Notification, 2006.

**Recommendations of the Committee:**

6.21.14 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 ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- i. The project proponent shall not use any reheating furnace, and shall adopt 100 % hot charging process.
- ii. Rain water harvesting action plan to recharge the quantity of water that is equivalent to the consumption, or more shall be carried out in the project premises. In case, rain water recharge is not possible within the project premises, the project proponent shall carry out the recharging outside the project premises.
- iii. Public Hearing shall be conducted by the concerned State Pollution Control Board.
- iv. The issues raised during public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, *inter alia*, contain the year-wise activities with corresponding financial allocations.
- v. The project proponent shall carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility Plan as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.

6.22 Expansion of Steel Plant Sponge Iron (175 TPD to 375 TPD), Rolling Mill (72,000 TPA) and Captive Power Generation 12 MW (WHRB 6 MW, AFBC 6 MW) at Village Chikkabaganal, Post Kerikihalli and District Koppal, **Karnataka** by **M/s Baba Akhila Sai Jyothi Industries Pvt Ltd.** [Proposal No. IA/KA/IND/98841/2019; MoEF&CC File No. IA-J-11011/163/2010-IA.II(I)]- **Terms of Reference**-regarding.

6.22.1 M/s. Baba Akhila Sai Jyothi Industries Pvt. Ltd. (BASJIPL), made online application for expansion of existing steel plant vide proposal No. IA/KA/IND/98841/2019 dated 11.03.2019 in the prescribed format along with Form-1 and other reports to the Ministry for prescribing ToRs for proposed expansion of the existing manufacturing unit for production of steel ingots/billets. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

**Details Submitted by the Project Proponent:**

- 6.22.2 The company has established 30,000 MTPA capacity of manufacturing of Sponge Iron at Village Chikkabaganal, Post Kerikihalli and District Koppal. Environmental Clearance has been obtained from Department of Ecology & Environment, Govt. of Karnataka vide file ref. no. FEE 317 ECO 2005 dated 1<sup>st</sup> July 2008. Consent for Establish (CFE) vide letter no.: CFE/CELL/BASJIPL/NE-1058/2005-06/73 dated 30<sup>th</sup> July 2005 was obtained and started construction activities.
- 6.22.3 Further, the proposal was made for the expansion from 100 TPD to 175 TPD capacity of Sponge Iron Plant. Environmental Clearance has been obtained from SEIAA, Karnataka Govt. of India vide file ref. no. SEIAA 19 IND 2009 dated 22nd March 2011. Consent for Establish (CFE) vide letter no.: 23/KSPCB/SEO/MINES/CFE/2011-12/231 dated 07th July 2011 was obtained and started construction activities. Consent for operate (CFO) was obtained from Karnataka State Pollution Control Board (KSPCB) vide letter no.: 205/PCB/MIN/CFO/2011-12/1022 dated 17th March 2012 and started its operation.
- 6.22.4 Terms of Reference were issued from Ministry of Environment & Forests vide file ref. no. J-11011/163/2010-IA-II (I) dated 12th August 2010 for the following capacities.
- 6.22.5 Due to the market condition and ban on iron ore mining in three Districts of Karnataka including Bellary vide MoEF OM dated 05.10.2011. Proponent could not take-up the proposal.
- 6.22.6 Later, Proponent wants to expand the project within the existing area by adding Induction Furnace and Power Plant. The capacities are given in below table. Accordingly, obtained Environmental Clearance from SEIAA, Karnataka, Govt. of India vide letter no. SEIAA 32 IND 2012 dated 1st October 2013.

**Table 1.1: Facilities for which EC issued in 2013**

Sr. No.	Particulars	Existing Facility	Proposed Facilities
1	Sponge Iron Plant	175 TPD	No Change
2	Induction Furnace	--	1 X 20 T
3	Captive Power Plant	--	12 MW (WHRB – 8 MW & AFBC – 4 MW)

- 6.22.7 Consent for Establish (CFE) vide letter no.: CFE/PCB/EXP/LR/2014-15/216 dated 30th May 2014 was obtained and started construction activities but not implemented due to Financial Problem.
- 6.22.8 Consent to Operate (CFO) from Karnataka State Pollution Control Board for the existing sponge iron plant is being renewed time to time.
- 6.22.9 Further, proponent intended to expansion and modification in the existing integrated steel plant. The facilities are given in following table.

**Proposed Manufacturing Facilities**

Sr. No.	Particulars	Existing Facilities	Proposed Facilities
1.	Sponge Iron	1X 100 TPD	1 X 125 TPD
2.	Sponge Iron	1 X 75 TPD	1 X 125 TPD
3.	Sponge Iron	--	1 X 125 TPD
3.	Induction Furnace	1 X 20 TPD	No Change
4.	Rolling Mill	--	72,000 TPA
5.	Captive Power Plant	12 MW (WHRB - 8MW & AFBC - 4MW)	12 MW (WHRB – 6 MW + AFBC – 6 MW)

**Observations of the Committee:**

6.22.10 The existing unit was accorded Environmental Clearance by the SEIAA, Karnataka in the year 2013. The project Proponent could not implement activities to construct the facilities of Induction Furnace and Power Plant.

**Recommendations of the Committee:**

6.22.11 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 ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- i. Power generation from sponge iron kiln shall be reviewed by the project proponent.
- ii. Project proponent shall not install any reheating furnace, and instead adopt the process for 100 % hot charging.
- iii. Rain water harvesting action plan to recharge quantity of water equivalent to the consumption or more shall be carried out in the project premises. In case, rain water recharge is not possible within the project premises, the project proponent shall carry out the recharging outside the project premises.
- iv. Action plan for green belt development covering 33% of the plant area, and eight acres of land area outside the plant premises shall be furnished by the project proponent.
- v. Action plan for CER based on public hearing and social impact assessment shall be incorporated in the EIA report.
- vi. Public Hearing shall be conducted by the concerned State Pollution Control Board.
- vii. The issues raised during public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, *inter alia*, contain the year-wise activities with corresponding financial allocations.
- viii. The project proponent should carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility Plan as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.

6.23 Expansion of cement plant for increase of production (clinker: 0.99 to 1.30 MTPA & cement: 1.122 to 1.65 MTPA), at Ganeshpahad, Taluka: Damaracherla, District: Nalgonda, State: **Telangana** by **M/s Penna Cement Industries Ltd** [Proposal No. IA/TG/IND/101132/2019; MoEF&CC File No. J-11011/31/2001-IA.II(I)]- **Terms of Reference** – regarding.

6.23.1 M/s Penna Cement Industries Ltd (PCIL) made online application for expansion of existing cement plant vide proposal no. **IA/TG/IND/101132/2019** dated. 02.04.2019 in the prescribed format along with Form-I and other reports to the Ministry. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

**Details submitted by the Project Proponent:**

6.23.2 It is proposed to expand the existing cement manufacturing unit for Increase of production of Clinker from 0.99 to 1.30 MTPA, Cement from 1.122 to 1.65 MTPA.

6.23.3 The existing project was accorded environmental clearance vide Ir. No. J-11011/31/2001-IA II (I) Dated 12.12.2001. Consent to Operate was accorded for the existing plant by Telangana State Pollution Control Board vide Ir. No. TSPCB/RCP/NLG/CFO&HWA/HO/2018-3432 Date.18.01.2018 validity of CTO is up to 31.12.2022.

6.23.4 The proposed expansion is within the existing cement plant located at Ganeshpahad village, Taluka: Damaracherla, District: Nalgonda, State: Telangana.

6.23.5 The existing cement plant is located in an area of 85 acres. The proposed expansion is within the existing cement plant. No forest land is involved. The entire land has been acquired for the project. Of the total area 85 acres, 35 acres (41%) has already developed under greenbelt development.

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

6.23.7 Total project cost is approx. Rs. 25Crores. Present manpower working is about 120. No additional manpower will be involved.

6.23.8 The targeted production capacity of the expansion of the plant is increase of Clinker production from 0.99 to 1.30 million TPA and Cement production from 1.122 MTPA to 1.65 MTPA.

6.23.9 The peak power consumption in the PCIL Cement plant complex including mine is 15 MW. Power requirement is met from 7.0 MW Waste Heat Recovery Power plant and 77 MW coal based Captive Power Plant. An additional power of 5 MW is required for the proposed expansion project which will be obtained from the same power plant.

6.23.10 The raw material required for production of clinker is Limestone, laterite, Bauxite and Coal. The requirement of raw material before and after expansion of cement plant is presented in below table:

**Raw Material Requirement Of Cement Plant (MTPA)**

S.No	Raw material	Present	Expansion	Source
1	Limestone	1.50	1.80	Captive mines
2	Bauxite	0.02	0.03	Rajamundry AP
3	Laterite	0.075	0.10	Warangal, Telangana
4	Gypsum	0.06	0.08	Coramandel Fertilizers Ltd., Vizag
5	Coal	0.148	0.192	Singareni Collieries Company Ltd
6	Ash requirement for PPC	0.252	0.4	PCILs power plant Vijayavada Thermal power plant, Kothagudem Power Plant

- 6.23.11 The present water requirement of the Cement plant, Power plant & mine is 9600 KLD and is sourced from River Krishna. PCIL has obtained the permission from irrigation department wide G.O. No. 28, dated. 17.05.2016 from Dept. of Irrigation & CAD, Government of Telangana to draw 11820 KLD (0.152 TMC/annum) water from river Krishna, which is flowing at a distance of 2 km from site in the Southern direction. Additional water requirement will be 250 m<sup>3</sup>/day and is met from the same source.
- 6.23.12 In cement plant water is used for cooling, raw material addition at various stages. This water is totally absorbed in the process or will be subjected to evaporation and hence no wastewater is released from the cement plant.
- 6.23.13 Wastewater generated is only from domestic activities at cement plant and residential colony. A full-fledged sewage treatment plant (STP) is in operation for treatment. Treated domestic wastewater is reused for greenbelt development within PCIL cement plant complex.
- 6.23.14 The proponent has mentioned that there is no court case or violation under EIA notification to the project or related activity.

**Observations of the Committee:**

- 6.23.15 The expansion is proposed in the premises of the existing cement plant. The plant has captive lime stone mines.

**Recommendations of the Committee:**

- 6.23.16 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 ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- i. The unit shall comply with the latest emission norms of cement plant, notified by the MoEFCC.
  - ii. Certified compliance report of all existing environmental clearances from Regional Office shall be furnished by the project proponent.
  - iii. Project proponent shall not abstract and use any ground water. Scheme for co-processing of hazardous waste shall be furnished.
  - iv. Project proponent shall recalculate the heat recovery potential and furnish the details thereof in the EIA report.
  - v. Public Hearing shall be conducted by the concerned State Pollution Control Board.
  - vi. The issues raised during public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, *inter alia*, contain the year-wise activities with corresponding financial allocations.
  - vii. The project proponent should carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility Plan as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- 6.24 Installation of 0.8 MTPA slag grinding unit Expansion of Integrated Steel Plant (1 MTPA to 1.3 MTPA) of **M/s JSW Steel Ltd.**, located at Mecheri, Taluk Mettur, District Salem, **Tamil Nadu** [Proposal No. IA/TN/IND/99452/2018; MoEF& CC File No. J-11011/281/2006- IA.II(I)] – **Amendment in Terms of Reference** – regarding.

6.24.1 M/s. JSW Steel Limited has made online application vide proposal no. IA/TN/IND/99452/2018 dated 16<sup>th</sup> March, 2019 along with revised Form I and pre-feasibility project report and sought for amendment in the Terms of Reference (ToR) accorded by the Ministry vide letter no. F.No. J-11011/281/2006- IA-II(I) dated 9<sup>th</sup> November, 2018.

#### **Details submitted by the project proponent**

6.24.2 M/s. JSW Steel Limited has been granted Environmental Clearance (EC) for expansion of its integrated steel plant from 1.0 to 1.3 MTPA of special steel product vide letter no. J-11011/281/2006-IA.II (I) dated 7<sup>th</sup> July, 2017 located at Mecheri, Taluk Mettur, District Salem, Tamil Nadu.

6.24.3 As a part of value addition, it was proposed to set up a 0.8 MTPA slag grinding unit. The granulated slag produced in the blast furnaces will be dried for removal of moisture and subsequently ground to meet the standard for GGBS (IS-16714-2018). This will help in producing consistent quality of GGBS for construction purpose, besides associated environmental benefits. In addition to the these, some of the existing units are being upgraded to improve the work area environment and balancing the steam requirement for power generation. The details are as follows:

Manufacturing Facilities	Existing Capacity	Proposed Expansion for which EC has been issued	Total Capacity after Expansion	Modification
Coke Oven Plant -1 (Non – Recovery Type)	0.50	-	0.5	The existing weakened 80m RCC chimney of Battery 1, is being replaced with two nos. of MS refractory lined chimney of 75m height.
Sinter Plant – 2 (90 Square Meter)	1.06	-	1.06	<b>Waste heat utilization:</b>
Sinter Plant – 3 (90 Square Meter)	-	1.06	1.06	<p>About 6,00,000 m<sup>3</sup>/hr of hot air (275°C) planned to be diverted from sinter cooler of SP 2 &amp; 3 to GGBS grinding unit to recover the sensible heat which is presently vented into atmosphere.</p> <p><b>Emission reduction:</b></p> <p>At present, Sinter machine-2 waste gas stack is operating at an average of 110 mg/Nm<sup>3</sup> of SPM as against the norm of 150 mg/Nm<sup>3</sup>, which is planned to be revamped to meet 50 mg/Nm<sup>3</sup> as an voluntary APC measures.</p>

<b>Manufacturing Facilities</b>	<b>Existing Capacity</b>	<b>Proposed Expansion for which EC has been issued</b>	<b>Total Capacity after Expansion</b>	<b>Modification</b>
Blast Furnace – 1 (402 to 650 Cubic Meter)	0.367	0.316	0.683	It is proposed to install 0.8 MTPA slag grinding unit to produce Ground Granulated Blast furnace Slag (GGBS) as a value added facility.
Blast Furnace – 2 (550 to 650 Cubic Meter)	0.578	0.105	0.683	
Ladle Furnace - 1 with Common VD (45 T to 65 T)	45 T/heat	20 T/heat	65 T/heat	<p>The existing primary de-dusting system of LRF 1 (38000 m<sup>3</sup>/hr) has been taken to common secondary de-dusting system of LRF's which is having designed capacity of 5,50,000 m<sup>3</sup>/hr but working at 4,00,000 m<sup>3</sup>/hr.</p> <p>The existing LRF-1 primary de-dusting stack of 30m height became redundant and planned to be used for CCM-3 billet grinding (surface preparation) fume extraction.</p>
Ladle Furnace – 5 (65 T with VD)	-	-	65 T/heat (New)	Additional facility planned now. Since JSW Salem is producing special steels, the per heat process time increased from 30 min to

<b>Manufacturing Facilities</b>	<b>Existing Capacity</b>	<b>Proposed Expansion for which EC has been issued</b>	<b>Total Capacity after Expansion</b>	<b>Modification</b>
				105 min due to vacuum degassing. Hence, additional LRF-5 is envisaged.
Continuous Casting Machine – 1	0.35	-	0.35	<b>Additional stacks</b>  Since, CCM-2 is provided with auto cutter fume extraction system with stack, it is planned to provide the same facility to CCM-1 & 3 APC measures. The height of the chimney will be 20m.  In addition, grinding fume extraction facility will be provided with bag filters for CCM 1 to 3 with stack height of 30m.
Continuous Casting Machine – 2	0.5	-	0.5	
Continuous Casting Machine – 3	-	0.45	0.45	
Pickling and Annealing Steel unit	-	0.06	0.06	A wet scrubber is envisaged to scrub the acid fumes generated from the acid bath as APC measures.  Three hot water generators are envisaged to meet the following process

<b>Manufacturing Facilities</b>	<b>Existing Capacity</b>	<b>Proposed Expansion for which EC has been issued</b>	<b>Total Capacity after Expansion</b>	<b>Modification</b>
				<p>requirement to minimize fresh acid consumption and to ensure ZLD in the proposed ETP.</p> <p>To maintain the acid temperature of 55<sup>0</sup> in the pickling bath.</p> <p>To maintain the treated spent acid temp. of 55<sup>0</sup> for reuse.</p> <p>To supply hot water to thermal fluidic system of evaporator for ETP to ensure ZLD</p>
Captive Power Plant 2 (2 x 30 MW)	2X30 MW	-	2X30 MW	<p>One coal-based boiler installed in the year 2006 with a capacity of 127 TPH is operating at emission concentration of SPM, SO<sub>2</sub> &amp; NO<sub>x</sub> with 70, 1000 and 600 mg/Nm<sup>3</sup> respectively. This unit has been planned to be upgraded, to meet the revised emission standard</p>

Manufacturing Facilities	Existing Capacity	Proposed Expansion for which EC has been issued	Total Capacity after Expansion	Modification
				as per CPCB letter dated 16.04.2018 of 50, 600 and 300 mg/Nm <sup>3</sup> respectively.
Captive Power Plant 3 (1 x 30)	-	30 MW	30 MW	The total capacity of 30MW remains unaltered. Since, COP capacity remains same there is no additional waste gas is expected. The additional BF gas as expected due to expansion is planned to be diverted to SMS (VD Boilers) and various shops, a coal based boiler of 105 TPH is envisaged to meet the planned power generation of 30 MW.
DG sets	3x625 KVA	1x1250 KVA	3x625 KVA and 1x1250 KVA	2x1250 KVA 1x1750 KVA 3x275 KVA 1x650 KVA 1x400 KVA  The above DG sets are envisaged to meet the emergency conditions of plant black out

<b>Manufacturing Facilities</b>	<b>Existing Capacity</b>	<b>Proposed Expansion for which EC has been issued</b>	<b>Total Capacity after Expansion</b>	<b>Modification</b>
				requirements.

6.24.4 The aforesaid proposal was considered in the 36<sup>th</sup> meeting of Expert Appraisal Committee [EAC] (Industry-I) held on 9-10<sup>th</sup> October, 2018 and recommended for grant of Terms of Reference. Accordingly, ToR was accorded by the Ministry on 9<sup>th</sup> November, 2018.

6.24.5 The present proposal of project proponent is regarding amendment in the ToR dated 9/11/2018 for inclusion of the following units:

<b>S.No.</b>	<b>Name of the unit</b>	<b>Production capacity envisaged</b>	<b>Purpose</b>
i.	Paver block making facility	25000 Nos. of paver block/day	<p>The utilization of the steel slag has been a major challenge in all integrated steel plants. Our R&amp;D has successfully developed a technology for using steel slag in the manufacture of paver blocks. The study has established successful production paver blocks at 30% lower costs than with natural aggregates with lower use of cement and use of steel slag.</p> <p>It is proposed to install a paver block making facility for 25000 Nos. of paver block/day for demonstration purposes. It is intended with its installation, entrepreneurs will utilize this to supply good quality pavers for use in construction purposes.</p>

S.No.	Name of the unit	Production capacity envisaged	Purpose
ii.	Etching Lab	Nil	PP is receiving requests from their customers of special steels for the results of macro structure of steel products to assess its internal soundness. In order to carry out this test, the test samples of 25 mm thick will be collected from 160 to 310 mm round, 130 to 340/400 square and rectangle of bar products. The samples are to be immersed in hydrochloric acid in a tank of 100-liter volume for preparing the sample for further testing. It is proposed to install an acid fume extraction system to improve the work area for the laboratory personnel.
iii.	SMS slag crushing plant	Crushing unit of 50 TPH capacity	It is proposed to install a crushing unit of 50 TPH Capacity with suitable air pollution control facilities for crushing and separation of iron bearing material from slag.
iv.	Batching plant	Batching plant of 30 m <sup>3</sup> /hr capacity	The construction activity for the expansion units in the 1.3 MTPA steel plant expansion is under progress. For this purpose, it is proposed to install a batching plant within the steel works with suitable air pollution control facilities for catering to the ready mix concrete

S.No.	Name of the unit	Production capacity envisaged	Purpose
			for construction
v.	Coke oven plant	Installation of bag filter with associated equipment to capture the coke dust emission	Existing Coke oven, fugitive emissions are observed while transporting coke in the conveyors (width: 1200mm) whenever it is in operation. In order to control this visible emission, it is proposed to install a bag filter with associated equipment to capture the coke dust emission
vi.	Coke Oven Plant	Coke Oven Stack 2A (COP)	Coke Oven battery # 2 existing 80m RCC chimney is found weakened, will be replaced with two nos. of MS refractory lined chimney of 75m height.
vii.	Coke Oven Plant	Coke Oven Stack 2B (COP)	
viii.	Coke Oven Plant	Coke oven # III chimney	To maintain and control draft at ovens the existing stack height of 38m will be increased to 65m.
ix.	Coke Oven Plant	Waste Heat Recovery Boiler# III	It is envisaged that additional sensible heat source from COP battery # 3 and to meet the requirement the existing stack dia and height will be modified to 1.8m and 35m respectively.
x.	SMS – CCM# 3	Steam Exhaust System stack #2	To maintain draft in the casting area an additional steam exhaust stack will be provided with the height of 26m
xi.	Pickling plant ETP	Hot water generator to ATFD	It is anticipated that Agitated Thin Film Drier (ATFD) will be

S.No.	Name of the unit	Production capacity envisaged	Purpose
			installed after evaporator of ETP. To supply heat source to ATFD a Hot water generator (HSD based) will be installed
xii.	Pickling plant ETP	ETP plant ATFD vent	It is anticipated that there is a vent stack to release water vapor from ATFD.
xiii.	CPP II	ETP plant ATFD vent	It is proposed to install a ETP (ZLD) plant in CPP II and steam will be used for heating application. It is anticipated that there is a vent stack to release water vapor from ATFD.

6.24.6 Project proponent informed that aforesaid amendment is for enhancement in waste utilization and environmental quality improvement.

#### **Observations of the Committee**

6.24.7 The committee noted that the additional units envisaged in the proposal of the project proponent are environmental friendly and enhance the waste utilization.

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

6.24.8 After detailed deliberations, the Committee recommended the proposal for amendment in the ToRs dated 9/11/2018 for inclusion of additional units envisaged as above. Further, the Committee also recommended that the decision to consider the instant proposal under para 7(ii) (a) will be based on findings of the EIA Report to be submitted to the Ministry by the project proponent. Thereafter, EAC will consider the proposal in its meeting exercising due diligence, *inter-alia*, and also ascertain the need for conduct of a fresh public consultation by the project proponent.

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**ANNEXURE –1**

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

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

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

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

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

6. **Environmental Status**

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the predominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

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

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

- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
- v. Details of stack emission and action plan for control of emissions to meet standards.
- vi. Measures for fugitive emission control
- vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
- viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
- ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
- x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
- xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
- xii. Action plan for post-project environmental monitoring shall be submitted.
- xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

## 8. Occupational health

- i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
- ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre-designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analysed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
- iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
- iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

9. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. Corporate Environment Responsibility (CER)
  - i. To address the Public Hearing issues, an amount as specified under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018 amounting to Rs. ....crores, shall be earmarked by the project proponent, towards Corporate Environment Responsibility (CER). Distinct CER projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These CER projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat & District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/donations and or free camps shall be included in the above CER budget
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.

- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.
- ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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**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<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

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**ADDITIONAL ToRS FOR 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<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

#### **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.

**ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY**

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

**ADDITIONAL ToRs FOR COKE OVEN PLANT**

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

**ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS**

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

**ADDITIONAL ToRs FOR  
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.

**ADDITIONAL ToRs FOR  
METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)**

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

## **Executive Summary**

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

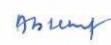
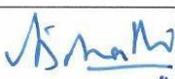
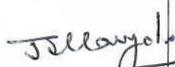
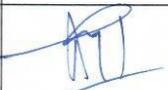
- i. Project name and location (Village, Dist, State, Industrial Estate (if applicable))
- ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
- iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)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

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**LIST OF PARTICIPANTS OF EAC (I) IN 6<sup>th</sup> MEETING OF EAC (INDUSTRY-I) HELD  
ON 29<sup>th</sup> to 30<sup>th</sup> APRIL, 2019**

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE	
			29 <sup>th</sup>	30 <sup>th</sup>
1	Dr. Chhavi Nath Pandey, IFS(Retired) Email: <a href="mailto:pandeychhavinath55@gmail.com">pandeychhavinath55@gmail.com</a>	Chairman	Absent	Absent
<b>Members</b>				
2.	<sup>DIRECTOR</sup> Dr. B.P. THAPLIYAL, Representative of Central Pulp and Paper Research Institute, Saharanpur.	Member	Absent	
3.	, Representative of Indian Meteorological Department, New Delhi.	Member	Absent	Absent
4.	Dr. G. Bhaskar Raju Email: <a href="mailto:gbraju55@gmail.com">gbraju55@gmail.com</a>	Member		
5.	Dr. Jagdish Kishwan, IFS (Retd.) Email: <a href="mailto:jkishwan@gmail.com">jkishwan@gmail.com</a>	Member	 29.04.2019	 30.04.2019
6.	Dr. G.V. Subramanyam Email: <a href="mailto:sv.godavarthi@gmail.com">sv.godavarthi@gmail.com</a>	Member	Absent	Absent
7.	Shri. Ashok Upadhyaya Email: <a href="mailto:ahupadhy@rediffmail.com">ahupadhy@rediffmail.com</a>	Member		
8.	Shri. R.P. Sharma Email: <a href="mailto:rps2@hotmail.com">rps2@hotmail.com</a>	Member		
9.	Shri. Sanjay Deshmukh Email: <a href="mailto:sanjaydeshmukh@mu.ac.in">sanjaydeshmukh@mu.ac.in</a>	Member	Leave of absence	
10.	Prof. S.K. Singh	Member		

MoM of 6<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held during 29-30<sup>th</sup> April, 2019

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE	
			29 <sup>th</sup>	30 <sup>th</sup>
	Email: <a href="mailto:sksinghdee@gmail.com">sksinghdee@gmail.com</a> <a href="mailto:singhsk@email.com">singhsk@email.com</a>			
11.	Dr. R. Gopichandran Email: <a href="mailto:r.gopichandran@vigyanprasar.gov.in">r.gopichandran@vigyanprasar.gov.in</a>	Member		
12.	Shri. Jagannath Rao Avasarala Email: <a href="mailto:avasaraajagan@gmil.com">avasaraajagan@gmil.com</a>	Member		
13	Shri. J.S. Kamyotra Email: <a href="mailto:kamyotra@yahoo.co.in">kamyotra@yahoo.co.in</a>	Member		
14.	Shri. Aravind Kumar Agrawal Director, MoEF&CC	Member Secretary		

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