

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

**Summary record of the twenty seventh(27<sup>th</sup>) meeting of Re-Constituted Expert Appraisal Committee (REAC) held during 30-31<sup>st</sup> December, 2020 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.**

The twenty seventh meeting of the Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environment Appraisal of Industry-1 Sector Projects was held during 30-31<sup>st</sup> December, 2020 in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the ongoing Corona Virus Disease (Covid-19) issue. The list of EAC attendees is as follows.

S.No.	Name	Position	30/12/20	31/12/20
1.	Dr. ChhaviNath Pandey	Chairman	Present	Present
2.	Dr. Bipin Prakash Thapliyal, Director, CPPRI.	Member	Absent	Absent
3.	Dr. Siddharth Singh, Scientist 'E' IMD.	Member	Present	Present
4.	Dr. Jagdish Kishwan	Member	Present	Present
5.	Dr. G.V. Subramanyam	Member	Present	Absent
6.	Dr. Tejaswini Ananth Kumar	Member	Present	Present
7.	Shri. Ashok Upadhyaya	Member	Present	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present	Present
9.	Dr. Sanjay Deshmukh	Member	Absent	Absent
10.	Prof. S.K. Singh	Member	Present	Present
11.	Dr. R. Gopichandran	Member	Absent	Absent
12.	Shri Jagannadha Rao Avasarala	Member	Present	Present
13.	Shri. J.S.Kamyotra	Member	Present	Present
14.	Shri. A.K. Agrawal	Member Secretary	Present	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 26<sup>th</sup> meeting held during 16-17<sup>th</sup> November, 2020 were confirmed by the EAC as already uploaded on PARIVESH. However, the following corrections [conditions stand deleted] with respect to para 26.7.25 of Agenda item no. 26.7 on the minutes uploaded on PARIVESH.

**Agenda Item No. 26.7; Para 26.7.25**

- i. Green belt shall be developed in an area of 59 ha of the total plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
- ii. Public Health Centres shall be established in villages, Daroli, Dabok, Modi, Khemli, Nandbel and Dhunimata in consultation with local administration.

**30<sup>th</sup>December, 2020**

27.1 Expansion of Chaliyama Steel Plant (Steel Production from 1.0395 MTPA to 2.8805 MTPA by **M/s. Rungta Mines Ltd.** located at Village Chaliyama, Bankasai and Kuju, Tehsil Rajnagar, **District Seraikella-Kharsawan, Jharkhand.** [Online Proposal No. IA/JH/IND/151458/2020; File No. J-11011/305/2012-IA.II(I)] – **Environment Clearance** – regarding.

27.1.1 **M/s. Rungta Mines Ltd.** has made online application vide proposal no. IA/JH/IND/151458/2020 dated 19/12/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at 2(b) Mineral beneficiation; 3(a) Metallurgical industries (ferrous & nonferrous); 3(b) Cement plants; 4(b) Coke oven plants and 1(d) Thermal power plant under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

**Details submitted by the project proponent**

27.1.2 The detail of the ToR is furnished as below:

<b>Date of application</b>	<b>Consideration</b>	<b>Details</b>	<b>Date of accord</b>
01/09/2020	Standard ToR	Terms of Reference	08/09/2020

27.1.3 The project of M/sRungta Mines Limited located in Village, Chaliyama, Bankasai & Kuju Tehsil Rajnagar District, Seraikella-Kharsawan, Jharkhand State is for setting up expansion of production of steel manufacturing unit from 1.0395 MTPA to 2.8805 MTPA.

27.1.4 The existing project earlier accorded by Environment Clearance from MoEF&CC on 04/11/2008, 01/04/2016, 07/08/2018 and 28/01/2019. Subsequently, consolidated EC in supersession of all existing EC was accorded vide letter no. J-11011/305/2012-IA-II.(I) dated 27/08/2020. It has been reported that the Consent to Operate from the Jharkhand State Pollution Control Board obtained vide letter no. JSPCB/HO/RNC/CTO-6940536/2020/631dated 12.03.2020 and consent is valid up to 31.03.2025.

27.1.5 The implementation status of the existing EC dated 27/08/2020 is given as below:

<b>Sl. No.</b>	<b>Facilities</b>	<b>Units</b>	<b>As per EC dated 27.08.2020</b>	<b>Implementation Status as on 30.12.2020</b>	<b>Production as per CTO</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>		
<b>TOTAL PRODUCTION - 1.0395 MTPA</b>					
1	DRI Plant		752,600 (8X100, 2X350 TPD)	Operational (8X100, 2X350 TPD)	658,000
2	Mini Blast Furnace	TPA	458,500 (1X350 cum upgradeable to 1X524 cum)	Order placed	
3.0	SMS	TPA	1,039,500 (IF 12x15 T, LRF 3x20+ 4X35 T)	Operational (IF 8X15 T LRF-2x20T) Under	5,54,400

Sl. No.	Facilities	Units	As per EC dated 27.08.2020	Implementation Status as on 30.12.2020	Production as per CTO
(1)	(2)	(3)	(4)		
				construction-346,500 (IF4X15 T)	
4	Billets/slab/bloom caster	TPA	1,018,710	Operational	5,43,312
5	Continuous casting machine		3x4 strand	Operational (2X3 strand) and under construction (1X4 strand)	2X3 strand
6	Rolling mill				
6.1	Rolling mill (I)	TPA	325,988	Operational	2,60,790
6.2	Rolling mill (II)	TPA	325,988	Under construction	
6.3	Rolling mill (III)	TPA	325,988	Under construction	
		Total	977,964		
7	Captive Power Plant	MW	174	Operational	58 MW
7.1	WHRB	MW	69 53 in EC + 16 approved by JSPCB*	Operational	33 MW
7.2	AFBC/ CFBC	MW	105	Operational (25 MW). Under construction (2X40 MW)	25 MW
8	Pelletisation plant	TPA	3,000,000 (1x2.64 MTPA)	Under construction	
9	Coal washery	TPA	1,260,000	Yet to install	
10	Oxygen	cum/annum	26,950,000 (1x100 TPD)	Order placed	
11	Lime Plant	TPA	31,500 (1x90 T)	Yet to install	
12	Vacuum Degassing	Tonnes	30 T	Yet to install	
13	Ferro Alloy Plant (Ferro managanese or silico manganese or ferro chrome or ferro silicon) with Briquette Plant for ferro chrome/ferro manganese		9 MVA= 18,000 (Peak) 18 MVA=36,000 (Peak) Total = 54,000 (Peak) Briquette = 112,380 (peak)	Yet to install	
14	Sinter plant	TPA	665,280 (1x48 sq.m.)	Order placed	
15	Coke oven plant	TPA	280,000 (4 batteries x70,000 TPA)	Yet to install	
16	Producer gas plant	Nm <sup>3</sup> /hr	51,000 (17X3000 Nm <sup>3</sup> /hr)	Yet to install	

27.1.6 The following are the existing and proposed plant configuration and production capacity:

Sl. No.	Facilities	Units	As per EC dated 27.08.2020	Additional proposed production and configuration as per TOR Dated 8/9/2020	Total proposed production and configuration
(1)	(2)	(3)	(4)	(5)	(6) = (4)+(5)
	<b>TOTAL PRODUCTION</b>	<b>MTPA</b>	<b>1.0395</b>	<b>1.841</b>	<b>2.8805</b>
<b>1</b>	<b>DRI Plant</b>				
1.1	DRI kiln	TPA	360,325 (7X100 TPD)	-	360,325 (7X100 TPD)
1.2	DRI kiln	TPA	51,475 (1X100 TPD)	-	51,475 (1X100 TPD)
1.3	DRI kiln	TPA	340,800 (2X350 TPD)	-	340,800 (2X350 TPD)
1.4	DRI Kiln	TPA	-	1,725,300 (4 X 900 TPD)	1,725,300 (4 X 900 TPD)
	<b>Sub Total</b>	<b>TPA</b>	<b>752,600</b>	<b>1,725,300</b>	<b>2,477,900</b>
<b>2</b>	<b>Mini Blast Furnace</b>				
2.1	MBF-1	TPA	458,500 (1x350 initial, later upgradable to 1x524 cum)	238,420 (upgraded to 1x524 cum)	696,920 (1x524 cum)
2.2	MBF-2	TPA	-	853,125 (1 X 650 cum)	853,125 (1 X 650 cum)
	<b>Sub Total</b>	<b>TPA</b>	<b>458,500</b>	<b>1,091,545</b>	<b>1,550,045</b>
<b>3.0</b>	<b>Steel Melt Shop</b>				
3.1	SMS (I)	TPA	346,500 (IF 4x15 T, LRF 3x20 T)	-	346,500 (IF 4x15 T, LRF 3x20 T)
3.2	SMS (II)	TPA	346,500 (IF 4x15 T, LRF 2x35T)	-	346,500 (IF 4x15 T, LRF 2x35T)
3.3	SMS (III)	TPA	346,500 (4X15T IF, LRF 2X35 T)	-	346,500 (4X15T IF, LRF 2X35 T)
3.4	SMS (IV)	TPA	-	1,001,000 (13X20T IF, 4X45T LRF)	1,001,000 (13X20T IF, 4X45T LRF)
3.5	SMS (V)	TPA	-	840,000 (EAF/ EOF 1x100T or BOF 1x75T or AOD 1x100T)	840,000 (EAF/ EOF 1x100T or BOF 1x75T or AOD 1x100T)
		<b>Total</b>	<b>1,039,500</b>	<b>1,841,000</b>	<b>2,880,500</b>

Sl. No.	Facilities	Units	As per EC dated 27.08.2020	Additional proposed production and configuration as per TOR Dated 8/9/2020	Total proposed production and configuration
(1)	(2)	(3)	(4)	(5)	(6) = (4)+(5)
4	<b>Billets/slab/bloom caster</b>				
4.1	Billet caster (I)	TPA	339,570	-	339,570
4.2	Billets caster (II)	TPA	339,570	-	339,570
4.3	Billets caster (III)	TPA	339,570	-	339,570
4.4	Billets caster (IV)	TPA	-	980,980	980,980
4.4	Billets caster (V)	TPA	-	823,200	823,200
		<b>Total</b>	<b>1,018,710</b>	<b>1,804,180</b>	<b>2,822,890</b>
5	<b>Continuous casting machine</b>		3x4 strand	6x4 strand	9x4 strand
6	<b>Rolling mill (TMT/ flat/ Round/ wire rod/ structural mill/ others)</b>				
6.1	Rolling mill (I)	TPA	325,988	-	325,988
6.2	Rolling mill (II)	TPA	325,988	-	325,988
6.3	Rolling mill (III)	TPA	325,988	-	325,988
6.4	Rolling mill with Annealing & Pickling & Galvanising Line (TMT/ flat/ Round/ wire rod/Wire drawing structural mill/ others)	TPA	-	1,550,000 (1X0.5 + 1X0.45 + 2X0.3 MTPA)	1,550,000 (1X0.5 + 1X0.45 + 2X0.3 MTPA)
6.5	Rolling mill with Pickling & Galvanizing line (strip mill / sheet / coil/wire rod/structural / others)	TPA	-	200,000	200,000
6.6	Ductile Pipe Plant	TPA	-	500,000 (1X0.2 + 1X 0.3 MTPA)	500,000 (1X0.2 + 1X 0.3 MTPA)
		<b>Total</b>	<b>977,964</b>	<b>2,250,000</b>	<b>3,227,964</b>
7	<b>Captive Power Plant</b>	MW	174	483	657
7.1	WHRB	MW	69 53 in EC + 16 approved by JSPCB*	160	229
7.2	AFBC/ CFBC	MW	105	315	420
7.3	TRT	MW	-	8	8
7.4	TG	MW	5X20 + 2X40	9x25+2x65+1x70 +2x30	5x20+2x40+9x25+2x65+1x70+2x30
8	<b>Pelletisation plant</b>	TPA	3,000,000 (1x2.64 MTPA)	22,000,000 (4X3 MTPA+10X1 MTPA)	25,000,000 (5 X 3 MTPA+10X1 MTPA)

Sl. No.	Facilities	Units	As per EC dated 27.08.2020	Additional proposed production and configuration as per TOR Dated 8/9/2020	Total proposed production and configuration
(1)	(2)	(3)	(4)	(5)	(6) = (4)+(5)
9	<b>Coal washery</b>	TPA	1,260,000	-	1,260,000
10	<b>Oxygen</b>	cum/annum	26,950,000 (1x100 TPD)	134,750,000 (2X150 + 1X200 TPD)	161,700,000 (1X100 + 2X150 + 1x200 TPD)
11	<b>Lime Plant</b>	TPA	31,500 (1x90 T)	140,000 (1X400 T)	171,500 (1X90 + 1x400T)
12	<b>Vacuum Degassing</b>	Tonnes	30 T	100 T	1X30 T + 1X100 T
13	<b>Ferro Alloy Plant (9MVA +18 MVA)</b>				
a	Ferro Manganese OR	TPA	9 MVA= 18,000 18 MVA=36,000 Total = 54,000	-	9 MVA= 18,000 18 MVA=36,000 Total = 54,000
b	Silico Manganese OR	TPA	9 MVA= 14,400 18 MVA=28,800 Total = 43,200	-	9 MVA= 14,400 18 MVA=28,800 Total = 43,200
c	Ferro Chrome OR	TPA	9 MVA= 14,400 18 MVA=28,800 Total = 43,200	-	9 MVA= 14,400 18 MVA=28,800 Total = 43,200
d	Ferro Silicon	TPA	9 MVA= 6,400 18 MVA=12,800 Total = 19,200	-	9 MVA= 6,400 18 MVA=12,800 Total = 19,200
	Briquette Plant for ferro chrome	TPA	88,320	-	88,320
	Briquette Plant for ferro manganese	TPA	112,380	-	112,380
14	<b>Sinter plant</b>	TPA	665,280 (1x48 sq.m.)	1,436,292 (1x130 + 1x30 sq.m.)	2,101,572 (1x48 + 1x130 + 1x30 sq.m.)
15	<b>Coke oven plant</b>	TPA	280,000 (4 batteries x70,000 TPA)	630,000 (2+7 batteries x 70,000 TPA)	910,000 (13 batteries x 70,000 TPA)
16	<b>Producer gas plant</b>	Nm <sup>3</sup> /hr	51,000 (17X3000 Nm3/hr)	610,000 (32X12500 Nm3/hr+28X 7500 Nm3/hr)	661,000 (17X3000 Nm3/hr+ 32X12500 Nm3/hr+28X 7500 Nm3/hr)
17	<b>Cement Plant</b>	TPA	-	2,805,000 (2x2500 + 2X1000 + 1X1500 TPD)	2,805,000 (2x2500 + 2X1000 + 1X1500 TPD)

27.1.7 The total land required for the project is 377.76 ha (Private land: 258.1 ha and Government land: 119.66 ha). No forest land is involved. The land break-up details as made available by the PP is given as below:

S.No.	Type of land	Total (ha)	Land under possession of PP (ha)	Remaining land under acquisition process (ha)	Status
i.	Private	258.1	216.78	41.32	Consent letter from concerned Grama Pradhan has been submitted.
ii.	Government	119.66	60.17	59.49	For 3.85 ha Government Rajyadesh issued by Land & Revenue department on 28.12.2020; 32.65 ha - company has paid the treasury and application forwarded by Commissioner Kolhan to Secretary, Land Revenue Department, Ranchi and remaining 22.99 ha land is under process for raising demand notes by the State Government.
<b>Total</b>		<b>377.76</b>	<b>276.95</b>	<b>100.81</b>	

27.1.8 The topography of the area is flat and reported to lies between 22°33'41" to 22°35'49" N Latitude and 85°52'25" to 85°54'48" E Longitude for the plant area and 22°33'22" to 22°33'40" N Latitude and 85°52' 36" to 85°53'17" E Longitude for the raw material storage and plant area in Survey of India topo sheet No. 73 F/14 15 73-J/2 &3, at an elevation of 195-208 m AMSL. It has been reported that adjoining to the plant site Kharkai river is situated. As per the page no. C5-1, paragraph 4.2.1 of the final EIA report submitted to the Ministry, HFL of Kharkai river is 192 m RL and the plinth level of existing plant is 198.15 mRL. As per the letter issued by the Water Resources Department, Government of Jharkhand, the maximum flood level of the Kharkai river at Chaliyama gauge site varies from 190.25 to 191.45 meter. The ground water table reported to ranges between 0.89 to 5.60 m below the land surface during the post-monsoon season and 5.23 to 12.20 m below the land surface during the pre-monsoon season.

27.1.9 The National Park (Simplipal National Park), WL (Dalma Wildlife Sanctuary) are located at a distance of 82 km (in SSE) and 49 km (in NE) respectively from the site. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. There is no schedule fauna exists within

the study area. However, stray elephants sometimes come in the study area. Site Specific Conservation Plan has been prepared and approved by PCCF (Wildlife), Jharkhand on 25/01/2018. Budgetary provision of about Rs. 67.35 lakhs have been made by the Company for execution of the site-specific wildlife conservation plan.

27.1.10 The major raw material required for the project is as follows:

Major Raw Material	Sanctioned as per EC, TPA	Proposed additional, TPA	Total, TPA	Inhouse, TPA	Purchased, TPA	Source
Coal	2361397	5779459	8140856	2070480 (from washery)	6070376	Domestic open market/ e-auction/ linkage
Coking coal	422800	951300	1374100	0	1374100	Imported/ linkage
Coke breeze & fines	100593	583629	684222	0	684222	Imported/ linkage
Dolomite	206881	975799	1182680	0	1182680	Rourkela, Odisha
Limestone	156492	472318	628810	0	628810	Rourkela, Odisha
Bentonite	30000	220000	250000	0	250000	Gujarat/ Open Market
Iron Ore, fines, BF grade	4862913	28948882	33811796	3776490 (from pellet plant)	30035306	Pvt. mine in Odisha/ OMC
Quartz	60365	56760	117125	0	117125	Open Market
Scrap	61875	54402	116277	43401 (from process)	72876	Open Market
Electrode paste	1344	0	1344	0	1344	Open Market
Briquettes	111360	0	111360	94656 (briquette plant)	16704	Open Market
Manganese Ore/ Lump	31104	0	31104	0	31104	Open Market
Chrome Ore Lump	8646	0	8646	0	8646	Open Market
Low-Grade High Silicon Moil Ore	37368	0	37368	0	37368	Open Market
Oil for fuel	21595	84442	106037	0	106037	Open Market
Clinker	0	1521917	1521917	0	1521917	Open Market
Gypsum	0	141254	141254	0	141254	Open Market
<b>TOTAL</b>	<b>8,795,529</b>	<b>40,281,358</b>	<b>49,076,887</b>	<b>6,797,018</b>	<b>42,279,869</b>	



- 27.1.11 The targeted production capacity of the steel is 2.8805 million TPA. The ore for the plant would be procured from OMC and other private Mines. The ore transportation will be done through rail/road.
- 27.1.12 The total water requirement of the project is estimated as 4200 m<sup>3</sup>/hr (100,800 KLD) which will be obtained from the Kharkai river. The permission for drawl of surface water is obtained from Water Resource Department, Government of Jharkhand vide agreement dated 07/07/2018 for 15,370 KLD. The application for 8630 KLD and 76,800 KLD has been submitted vide letter no. RML/CSP/F94/19-20/1009 dated 07.06.2019 and RML/CSP/F94/20-21/4000 dated 12.12.2020 respectively which are reported to be under process.
- 27.1.13 The total power requirement of the project is estimated as 657 MW, out of which 599 MW will be obtained from the captive power plant and balance 22 MW from JSEB.
- 27.1.14 Baseline Environmental Studies

Period	March 2019 to May 2019
AAQ parameters at eight locations	PM <sub>2.5</sub> = 31.1 to 40.6 µg/m <sup>3</sup> PM <sub>10</sub> = 51.2 to 69.9 µg/m <sup>3</sup> SO <sub>2</sub> = 6 to 18.1 µg/m <sup>3</sup> NO <sub>x</sub> = 8.1 to 21.8 µg/m <sup>3</sup>
AAQ modelling	PM <sub>10</sub> = 10.50 µg/m <sup>3</sup> PM <sub>2.5</sub> = 6.04 µg/m <sup>3</sup> SO <sub>2</sub> = 25.93 µg/m <sup>3</sup> NO <sub>x</sub> = 15.45 µg/m <sup>3</sup>
Ground water quality at eight locations	pH: 6.9 to 7.6, Total Hardness: 26 to 484 mg/l, Chlorides: 22 to 234 mg/l, Fluoride: 0.1 to 0.85 mg/l. Heavy metals are within the limits.
Surface water quality at eight locations	pH: 7.2 to 7.9; DO: 6.2 to 7.5 mg/l and BOD: 7.5 to 20 mg/l. COD from 11 to 39 mg/l.
Noise levels	49.30 to 63.33 dBA for daytime and 39.41 to 59.38 dBA for night time.

- 27.1.15 It has been reported that there no people in the core zone of the project. No R&R is involved. It has been envisaged that 187 land losers, which is/will be provided compensation and preference in the employment.
- 27.1.16 It has been reported that a total of 5,844,497 TPA of waste will be generated due to the project, out of which 4,902,209 TPA will be used in house and 942,288 TPA will be stored in the earmarked dump yard. It has been envisaged that an area of 124.64 ha (308 acres) will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

Sl. No.	Source	Total Generation	Consumed Inhouse	Waste storage	Dispatched outside	Remarks
<b>DRI Plant</b>						
1	Char	524,668	504,020	0	20,648	100% Char will be used for power generation

Sl. No.	Source	Total Generation	Consumed Inhouse	Waste storage	Dispatched outside	Remarks
2	ESP, Bag filter dust	194,000	194,000	0	0	100% dust will be used in Sinter Plant
3	Kiln Accretion	49,225	0	49,225	0	100% Stored in in land fill temporarily till reused in road sub-base
<b>Pelletisation Plant</b>						
1	Dust	600,900	600,900	0	0	100% recirculated to mixing bin of the pellet plant
<b>Coal Washery</b>						
1	Middlings	535,000	508,725	0	26,275	100% used for power generation
2	Rejects	95,000	0	0	95,000	Proposed to mix washery reject waste with the backfill
<b>Mini Blast Furnace</b>						
1	BF slag	451,259	425,321	0	25,938	100% Slag will be granulated, used for cement making in own proposed cement plant, balance sold for cement making to others.
2	Dust	77,502	77,502	0	0	100% dust will be reused in Sinter Plant.
<b>Sinter Plant</b>						
1	Sinter Return Fines	614,772	614,772	0	0	100% Reused In sinter plant
<b>Coke Oven plant</b>						
1	Bag Filter Dust	41,223	41,223	0	0	100% reused in sinter plant
<b>SMS-IF</b>						
1	BF dust	49,682	49,682	0	0	100% reused in sinter plant or pellet plant

Sl. No.	Source	Total Generation	Consumed Inhouse	Waste storage	Dispatched outside	Remarks
	Slag	365,538	0	0	365,538	100% slag will be given for metal recovery, converted to aggregates (special balls) and used in road making
<b>SMS-EAF</b>						
1	BF Dust	19,567	19,567	0	0	100% reused in pellet plant or sent sinter plant
2	Slag	255,961	0	0	255,961	100% slag will be given for metal recovery, converted to aggregates (special balls) and used in road making
<b>Rolling Mill</b>						
1	Reject	36,719	36,719	0	0	100% reused in SMS
2	Mill scale	53,563	53,563	0	0	100% Re-used in Sinter
<b>Strip Mill</b>						
1	Reject	2,090	2,090	0	0	100% reused in SMS
2	Mill scale	2,554	2,554	0	0	100% Re-used in Sinter
<b>Ductile pipe</b>						
1	Reject	4,592	4,592	0	0	100% reused in SMS
2	Mill scale	5,612	5,612	0	0	100% Re-used in Sinter
3	Zinc recovered			0		100% sale to paint manufacturer
4	Cement slurry		√	0		100% recover water & manufacture of brick/ cement tiles

Sl. No.	Source	Total Generation	Consumed Inhouse	Waste storage	Dispatched outside	Remarks
5	Core sand (in casting area & Annealing furnace)		√ (part)	0		100% used for land levelling
<b>Producer gas plant</b>						
1	Coal Ash	415,397	415,397	0	0	100% reused as per MoEF&CC Notification 2009. Used in cement making, brick making, paver block making, aggregate making and road making.
2	Coal Tar	69,987	0	0	69,987	100% Sale
<b>Power Plant</b>						
1	Ash	1,293,546	349,749	0	943,797	100% reused as per MoEF&CC Notification 2009. Used in cement making, brick making, block making, aggregate making, low-lying area filling and road making.
<b>Cement Plant</b>						
1	Fly Ash	10,500	10,500	0	0	100% reused as per MoEF&CC Notification 2009. Used in cement making, brick making, block making, aggregate making, low-lying area filling and road making.
<b>Ferro Alloys Plant</b>						
1	Fe-Mn Slag	64,821	31,104	0	33,717	100% Re-used-part in silico-manganese plant in house and balance sold

Sl. No.	Source	Total Generation	Consumed Inhouse	Waste storage	Dispatched outside	Remarks
2	Fines	10,821	10,821	0	0	100% Reused in sinter plant
	<b>Total</b>	<b>5,844,497</b>	<b>4,902,209</b>	<b>49,225</b>	<b>893,063</b>	

27.1.17 The Public hearing for the expansion project was held on 27/11/2020 at 11 A.M. at Kuju (inside main gate of Chaliyama Steel Plant at Kuju on National Highway 220), under the Chairmanship of Sri Subodh Kumar, Additional Deputy Commissioner, Seraikella-Kharsawan. The issues raised during public hearing are generation of employment opportunity, opening ITI, making arrangement of free electricity, sprinkling of water for dust control, plantation & for fair wages etc. An amount of 49.2 Lakhs capital cost has been earmarked to address the issues raised during public consultation.

Action Plan	Cost		Year 1	Year 2	Year 3	Year 4	Year 5	
	Capital	Recurring						
<b>EDUCATION</b>								
The arrangement should be done to get quality education for the children. Free Private school to be opened in Chaliyama village.	<ul style="list-style-type: none"> <li>One private Senior secondary, one govt. middle school and one govt. primary school is already in Chaliyama village. Hence, Company will provide:</li> <li>Scholarship to intelligent students for higher education</li> <li>Infrastructure facilities in school</li> </ul>	-	<ul style="list-style-type: none"> <li>20 students X Rs. 2000 = Rs. 0.40 lakhs</li> <li>3 schools X 1 lakh = Rs 3 lakhs</li> </ul>	0.4 (recurring)	0.4 (recurring)	0.4 (recurring) + 1 (capital)	0.4 (recurring) + 1 (capital)	0.4 (recurring) + 1 (capital)
<b>HEALTH</b>								
<ul style="list-style-type: none"> <li>Address health related issue like Hospital, Dispensary, Nurse etc.</li> <li>One free Hospital should be opened where good treatment should be given</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly mobile health/ medical camps shall be organized in future.</li> <li>Rungta Mines Limited (Chaliyama Steel Plant) has a 4-bedded OHS centre inside the plant premises. It includes a first aid center which is well equipped and manned by competent person. Qualified MBBS doctor with compounder &amp; assistant has been appointed to run the centre. A separate entrance is being provided to villagers for treatment and supply of medicine free of cost medicine</li> </ul>	-	<ul style="list-style-type: none"> <li>OHS centre cost - Rs. 15 lakh</li> <li>Ambulance - Rs. 3 lakh</li> <li>Doctor on village rotation with assistant &amp; medicine - Rs. 18 lakhs</li> <li>Camps (monthly) - Rs. 6 lakhs</li> </ul>	42 (recurring)	42 (recurring)	42 (recurring)	42 (recurring)	42 (recurring)
<b>DRINKING WATER</b>								
Drinking water provided to villagers	<ul style="list-style-type: none"> <li>Potable water through pipeline is being provided in 2 Tolas of Chaliyama Village. Where there is no</li> </ul>	1 Overhead tank with Pipeline - Rs. 5lakhs	Power, R&M- Rs. 1.5 X 5 villages =	25 (capital)	1.5 (recurring)	1.5 (recurring)	1.5 (recurring)	1.5 (recurring)

	Action Plan	Cost		Year 1	Year 2	Year 3	Year 4	Year 5
		Capital	Recurring					
	pipeline, potable water is being and will be supplied through tankers. Piped supply will be provided in villages Bankasai, Kuju, Kewatsai, Soso and Rengalbeda in the next 3months	X 5villages = Rs. 25 lakhs	7.5 lakhs					
<b>INFRASTRUCTURE</b>								
Facility of Electricity (Electricity produced from Unit) should be given to the villagers	<ul style="list-style-type: none"> <li>This is not in our purview. However, company will make arrangement for solar lighting in streets of the villages and assist in rooftop solar panels, wherever possible</li> </ul>	6 villages X Rs. 2lakhs = Rs. 12 lakhs	Rs. 0.50 lakhs	2 (capital)	0.5 (recurring) + 2 (capital)	0.5 (recurring) + 2 (capital)	0.5 (recurring) + 2 (capital)	0.5 (recurring) + 2 (capital)
The road and road to cremation ground should not be blocked.	<ul style="list-style-type: none"> <li>Over bridge from Banksai village to Kharkai river has already been constructed to go to the cremation ground. As per the request of local villagers, shed, waiting room and toilets are being constructed and shall be completed within 3 months</li> </ul>	Shed (Rs.0.5 lakh), waiting room(Rs. 1.5 lakh), toilets(Rs. 0.2lakh)	Rs. 0.05 lakhs	2.2 (capital)	0.05 (recurring)	0.05 (recurring)	0.05 (recurring)	0.05 (recurring)
Dust on road should be cleaned	<ul style="list-style-type: none"> <li>One Mechanical sweeping machine is already there. Onemore shall be provided to clean road</li> </ul>	Rs. 10 lakhs	Rs. 2.5 lakhs (driver, diesel)	10 (capital)	2.5	2.5	2.5	2.5
<b>OTHERS</b>								
Trees to be planted	<ul style="list-style-type: none"> <li>Green belt has been planted in periphery of existing plant and shall also be planted in proposed expansion.</li> <li>For villagers, fruit bearing saplings are being distributed every year for planting on their land. Last year 5,000 nos. of fruit bearing saplings were distributed. The effort will continue in future also</li> </ul>	-	For company - part ofEMP  For villagers - Part of CSR (Rs.0.25 lakhs)	0.25 (recurring)	0.25 (recurring)	0.25 (recurring)	0.25 (recurring)	0.25 (recurring)
<b>TOTAL (lakhs)</b>		<b>Rs. 49.2</b>	<b>Rs. 57.4</b>	<b>83.05</b>	<b>50.4</b>	<b>51.4</b>	<b>51.4</b>	<b>53.4</b>

27.1.18 The capital cost of the project expansion is Rs. 7360 Crores and the capital cost for environmental protection measures in expansion is proposed as Rs. 7045.85 Lakhs. The annual recurring cost towards the environmental protection measures for expansion is proposed as Rs.1329 Lakhs. The employment generation from the proposed expansion is 3600 persons.

27.1.19 The details of cost for environmental protection measures are as follows:

Sl.	Description	Capital cost			Recurring cost		
		Sanctioned as per EC	Additional	Total	Sanctioned as per EC	Additional	Total
1	Air pollution control	3120	6435	9555	492.48	1265.59	1758.07
2	Water pollution control	125	90	215	16.91	2.24	19.15
3	Noise pollution control	10		10	1.43	0.24	1.67
4	Environment Monitoring and management	136	334	470	42.73	22.1	64.83
5	Occupational health	70	60	130	30.05	36.36	66.41
6	Green belt	73.01	51.64	124.65	15.73	7.73	23.46
7	Others	0	26	26	9.20	10.84	20.04
8	Overheads (3% of dep., energy, R&M)	-	-	-	123.45	less 73.42	50.03
9	Additional for expansion from 0.7 to 1.0395 MTPA	100	-	100	50	-	50
10	To address issues raised in public hearing dated 27.11.2020 (see table 10.4 for details)	-	49.20	49.20	-	57.4	57.4
	<b>Total</b>	<b>3634</b>	<b>7045.85</b>	<b>10679.85</b>	<b>781.98</b>	<b>1329.08</b>	<b>2111.06</b>

27.1.20 Greenbelt will be developed in 124.64 ha which is about 33% of the total project area. A 5-50 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total number of 308000 saplings will be planted and nurtured in 124.64 hectares in 5 years.

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

27.1.22 Name of the EIA consultant: The EIA report was originally prepared by the consultant namely Min Mec Consultancy Pvt. Ltd. and thereafter the report was revalidated by the M/s Centre for Envotech and Management Consultancy Pvt Limited [S.No. 89, List of ACOs with their Certificate / Extension Letter no. Rev. 05, Dec. 18, 2020] as the former consultant was not accredited by the QCI/NABET.

#### **Certified compliance report from Regional Office**

27.1.23 Certified compliance report of MoEF&CC Regional office, Jharkhand was issued vide letter no. 103-498/ROR/2019/4053 dated 07/07/2020 for all the existing ECs. Action taken report was submitted by Rungta Mines Limited (Chaliyama Steel Plant) to MoEF&CC RO Ranchi for compliance to the observations made in the certified report on 17/07/2020. MoEF&CC (RO), Ranchi evaluated the same and has issued letter on 23/07/2020. The details of the observations made by RO in the report dated 23/07/2020 along with its present status as furnished by the PP is given as below.

Observation	Details required	Action Taken by RML
	Recent data for TCLP & IF emission	TCLP Analysis conducted and data submitted. IF data emission submitted.

Monitoring report requirement	Requirement to restructure submitted data analysis	submitted after restructuring.
	modification of measurement units	submitted
	increase frequency of fugitive emission	Increased the frequency of fugitive emission monitoring.
Document requirement	Six monthly compliance reports of old ECs of 2008 & 2016	Explanation given- Reporting ceased with subsequent ECs were obtained
	EC advert in newspaper- delay >7 days	Advertised within 7 days of receipt by post
	financial closure	Not applicable, self-funded project
	MOEF concurrence for change of source of coal	Informed to MoEF on change. Also explained that taken permission obtained in subsequent ECs.
	ESC plan, CER plan details	Submitted
	fly ash utilization plan	Submitted
	Copy of Emergency preparedness plan	Submitted
Implementation concerns	Air pollution control - Dust extraction and suppression systems, water sprinklers, IF hood, wind shelter, online monitoring systems on IF	Water sprinklers already exist, IF hood repaired, provided tarpaulin covers on storage yard (alternative to wind shelter), online monitoring system are under installation and will be completed by 10.01.2021
	Water & runoff management - bottom holes in boundary wall, garland drains & collection pits for runoff & its monitoring & treatment, piezometers, protection of Kharkai, full capacity reservoir	Bottom holes constructed; pre-monsoon maintenance of garland drains & collection pits carried out; testing water quality in the in-house lab; ETP for treatment is under construction and to be completed by 28.02.2021; Piezometers installed; protection measures plan for Kharkai will be followed; full capacity reservoir not required.
	Solid waste disposal	Char have been removed completely & Ash dumps have reduced due to reutilization and will be removed completely by March 2021.
	Commitments during PH	Commitments fulfilled and status submitted to RO
	Housekeeping - tyre washing, silt on road, solar lights	increased vacuum cleaning frequency, proper tyre washing system & solar lights are now in place
	Green belt - gap in boundary plantation	15,000 tree gap plantations completed
	Others- over bridge from Bankasai to Kharkai,	Bridge completed; photographs submitted.
	GHG reduction program	GHG reduction will be implemented with operation of expansion phase.



**27.1.24 Written submission made during the course of meeting**

PP has submitted written clarifications on the following points during the course of meeting:

- i. Implementation status of the existing EC.
- ii. Land acquisition details
- iii. Letter from State Government regarding Maximum Flood Level of the Kharkai river for the period 2014-19 which varies from 190.25 m to 191.45m.
- iv. Coal tar and phenolic water treatment plant of Producer Gas Plant
- v. SO<sub>x</sub> control mechanism in power plant
- vi. Commitment to Hot charging
- vii. Zinc dust monitoring and management
- viii. Parking area for trucks
- ix. Green belt development towards Kharkai river
- x. Wastewater management arising out of pickling operation
- xi. Connection between the pellet plant and the main plant
- xii. Village wise action plan to address the public hearing concerns.

**Observations of the Committee**

27.1.25 The Committee noted the following:

- i. The Committee found the EIA/EMP in order reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee also found that the baseline data reported and incremental GLC due to the proposed project were within NAAQ standards.
- ii. The Committee also deliberated on the public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.
- iii. Written response submitted during the course of meeting by the project proponent is found to be addressing the concerns of the Committee.
- iv. As per the page no. C5-1, paragraph 4.2.1 of the final EIA report submitted to the Ministry, HFL of Kharkai river is 192 m RL and the plinth level of existing plant is 198.15 mRL.

**Recommendations of the Committee**

27.1.26 In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to integrated steel plants based on project specific requirements:

**A. Specific conditions**

- i. No construction activity/infringement will take place in flood plain of Kharkai river. The flood plain corresponding to HFL of Kharkai river shall be verified and depicted on map by an authority not below the rank of District Magistrate/Executive Engineer of the State Government.
- ii. The PP will raise green belt in 33% of the plant area. This will include 50 m wide green belt along the boundary of the plant situated towards the river side.

- iii. Application for the environmental clearance for the residential colony envisaged within the plant site shall be submitted to the appropriate authority.
- iv. Blast furnace shall be equipped with TRT, Dry Gas cleaning plant, stove heat recovery and cast house /stock house ventilation facilities.
- v. EAF shall have 4<sup>th</sup> hole extraction system for fume control.
- vi. Particulate matter from the stacks shall not exceed 30mg/Nm<sup>3</sup>.
- vii. 85-90% billets/slabs shall be hot charged for rolling and balance through RHF using LDO/FO/BF Gas/Producer gas as fuel.
- viii. Zinc dust shall be monitored in AAQ inside the plant in galvanizing area and DI Pipe area.
- ix. Acid Recovery Plant shall be installed in pickling area.
- x. Noise monitoring shall be done every month towards three villages and data shall be submitted to RO on six monthly basis.
- xi. Proper ventilation shall be provided in bitumen coating area of DI Pipe for odor control.
- xii. Briquetting and Jigging Plant shall be installed in Fe-Cr circuit.
- xiii. TCLP test shall be conducted on Fe-Cr slag and data shall be submitted to RO on six monthly basis.
- xiv. Sinter cooler waste heat recovery system shall be installed.
- xv. Producer Gas Plant shall be of closed-circuit type. Phenolic water shall be burnt in DRI Kilns.
- xvi. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species. The greenbelt shall inter alia cover the entire periphery of the plant.
- xvii. Kharkai river water quality shall be monitored at upstream and downstream on monthly basis and data shall be submitted to RO.
- xviii. All new chutes in Raw Material handling area adjacent to village shall be provided with rubber lining to reduce noise pollution.
- xix. Adequate parking space for trucks shall be provided. No trucks pertaining to plant/ plant activity will be parked on road side/public places.
- xx. PTFE or equivalent bags shall be used in all filter bag houses and designed for 150% of the maximum air flow as per the engineering design.

## **B. General conditions**

### **I. Statutory compliance:**

- i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

### **II. Air quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and

- CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems 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 fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
  - iii. The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.
  - iv. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
  - v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
  - vi. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
  - vii. Secondary emission control system shall be provided at SMS Converters.
  - viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
  - ix. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
  - x. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
  - xi. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).
  - xii. Land-based APC system shall be installed to control coke pushing emissions.
  - xiii. Monitor CO, HC and O<sub>2</sub> in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.
  - xiv. Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.
  - xv. In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NO<sub>x</sub> control facility shall be provided to meet the prescribed standards.

- xvi. The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.
- xvii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xviii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.
- xix. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.
- xx. Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke

### **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 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 through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in 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 as amended from time to time;
- iv. Adhere to 'Zero Liquid Discharge'
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- vii. Tyre washing facilities shall be provided at the entrance of the plant gates
- viii. CO<sub>2</sub> injection shall be provided 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 practice rainwater harvesting to maximum possible extent.
- x. Treated water from ETP of COBP shall not be used for coke quenching.
- xi. Water meters shall be provided at the inlet to all unit processes in the steel plants.
- xii. The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

#### **IV. Noise monitoring and prevention**

- i. Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation And Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

#### **V. Energy Conservation measures**

- i. The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.
- ii. Coke Dry Quenching (CDQ) shall be provided for coke quenching for the coke oven plant.
- iii. Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.
- iv. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
- v. Use hot charging of slabs and billets/blooms as far as possible.
- vi. Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.
- vii. Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.
- viii. Restrict Gas flaring to < 1%.
- ix. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- x. Provide LED lights in their offices and residential areas.
- xi. 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 to use slag as river sand in construction industry.

- ii. Tar Sludge and waste oil shall be blended with coal charged in coke ovens.
- iii. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
- iv. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.
- v. Used refractories shall be recycled as far as possible.
- vi. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.
- vii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
- viii. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.
- ix. Kitchen waste shall be composted or converted to biogas for further use.

## **VII. Green Belt**

- i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees.

## **VIII. Public hearing and Human health issues**

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

## **IX. Corporate Environment Responsibility**

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating

procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

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

#### **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.
- viii. 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.

- ix. 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).
- x. 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.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. 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.
- 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.

27.2 Greenfield Integrated Steel Plant of 3.0 million MTPA and Captive Power Generation of 84.7 MW by **M/s. AP High Grade Steels Limited** located at Sunnapurallapalle and Peddandluru villages, Jammalamadugumandal, **YSR district, Andhra Pradesh**. [Online Proposal No. IA/AP/IND/146236/2020; File No. J-11011/70/2012-IA. II(I)] –**Environment Clearance** – regarding.

27.2.1 **M/s. AP High Grade Steels Limited** has made online application vide proposal no. IA/AP/IND/146236/2020 dated 20/12/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at 3(a) Metallurgical industries (ferrous & non-ferrous); 4(b) coke oven plants and 1(d) thermal power plant under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

**Details submitted by the project proponent**

27.2.2 The detail of the ToR is furnished as below:

<b>Date of application</b>	<b>Consideration</b>	<b>Details</b>	<b>Date of accord</b>
07/05/2020	19 <sup>th</sup> Meeting of EAC during 20 <sup>th</sup> – 21 <sup>st</sup> May, 2020	Terms of Reference	09/07/2020
10/10/2020	24 <sup>th</sup> Meeting of EAC during 27 <sup>th</sup> – 28 <sup>th</sup> October, 2020	Amendment in ToR	15/12/2020

27.2.3 The project of **M/s. AP High Grade Steels Limited** is located in Sunnapurallapalle and Peddandluru Villages, Jammalamadugu Mandal, YSR District, Andhra Pradesh is for setting up of a new greenfield integrated steel plant of 3.0 million MTPA and Captive power generation of 84.7 MW.



- 27.2.4 The total land required for the project is 1453.49 ha (3591.65 acres) is Government land. No forest land is involved. Out of the total land of 1453.49 ha, 1274.25 ha land is acquired by the project proponent and acquisition of remaining land 179.24 ha is under process. It has been reported that Pennuru (Penna) River is at a distance of 1.6 km in North direction from the project and no diversion in the existing natural drainage pattern at any stage has been proposed.
- 27.2.5 The topography of the area is undulated and reported to lie between 14°44'31.87" to 14°46'31.44" N Latitude and 78°23'52.23" to 78°26'49.08" E Longitude in Survey of India topo sheet No D44G05, 6, 9, 10 (57 J/5, 6, 9, 10), at an elevation of 172 -315 m AMSL. The ground water table reported to range between 26 - 32 below the land surface during the post-monsoon season and 24 – 28 below the land surface during the pre-monsoon season.
- 27.2.6 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc are within 10 km of the study area. The authenticated list of flora and fauna provided through the Divisional forest officer, Proddatur (WL) division, vide letter no. Rc.No.236/2020-P8, dt.30.09.2020 reporting presence of Schedule-I fauna in the study area namely Indian peafowl or blue peafowl (*Pavocristatus*). Conservation Plan of schedule I fauna has been prepared and submitted to the Chief Wildlife Warden for approval.
- 27.2.7 The proposed capacity for different products for new site area as below:

**Major plant facilities and their capacities**

Name of the unit	No of Units / capacity of each unit	Product	Production Capacity, TPA
Coke oven and by-product plant	2 x 67 ovens, 7 m tall	Coke	1754100
Sinter plant	1 x 496 m <sup>2</sup>	Sinter	5384600
Blast furnace	4700 m <sup>3</sup> (UV)	Hot Metal	3433500
<b>Steelmaking and continuous casting shop</b>			
Basic Oxygen Furnaces	2 x 175 t	Liquid steel	3099000
Ladle furnaces (LF)	2 x 175 t	Liquid steel	3092800
RH-Degasser	1 x 175 t	Liquid steel	
Billet casters	2 x 6 - strand	Billets	2273400
Slab caster	1 x 1 - strand	Slab	734100
<b>Rolling mills</b>			
Plate mill	668000 tons/yr	Plates	668000
Merchant mill	1200000 tons/yr	TMT rebar, Plain rounds, Equal Angles and Channels	1200000
Wire rod mill	1000000 tons/yr	Wire Rods (5.5 to 22 mm)	1000000
Oxygen plant (BOO Basis)	2 x 1350 TPD	Oxygen, Nitrogen and Argon	2 x 1350 TPD

Name of the unit	No of Units / capacity of each unit	Product	Production Capacity, TPA
Calcination plant			
Calcined lime plant	2 x 500 tons/day	Calcinated	Lime-314100
Calcined dolo plant	1 x 500 tons/day	Dolo	Dolo-68000
Steam turbine generator (STG) at power blowing station	(3 x 15 MW) – 2 Working + 1 Standby	Electric Power	30 MW
Backpressure turbine generator (BPTG) at CDCP	1 x 12.7 MW	Electric Power	12.7 MW
Top recovery turbine generator (TRT) at Blast Furnace	1 x 27 MW	Electric Power	27 MW
Waste heat recovery boiler generator (WHRB) at the Sinter Plant	1 x 15 MW	Electric Power	15 MW

#### Manufacturing capacity

Items	Capacity, (TPA)	Remarks, TPA
BF Coke	136100	BF Coke - 1754100, Saleable – 136100
Coke Breeze	27200	Saleable – 27200
Iron Shots	300200	
Wire Rods	1000000	Saleable -1000000
Merchant Product	1200000	Saleable -1200000
Plates	668000	Saleable -668000
Granulated Slag	978600	Saleable -978600
Oxygen Plant	891000 Nm <sup>3</sup> /hr	
<b>By-products</b>		
Coke oven gas	84360 Nm <sup>3</sup> /hr*	
Crude Tar	92000	Saleable -92000
Elemental Sulphur	2500	Saleable -2500
Naphthalene	150	Saleable -150
<b>In house power generation</b>		<b>84.7 MW</b>
Steam turbine generator (STG) at power blowing station	(3 x 15 MW) – 2 Working + 1 Standby	
Backpressure turbine generator (BPTG) at CDCP	1 x 12.7 MW	
Top recovery turbine generator (TRT) at Blast Furnace	1 x 27 MW	
Waste heat recovery boiler generator (WHRB) at the Sinter Plant	1 x 15 MW	

27.2.8 The major raw material required for the project is as follows:

Raw material	Units	Quantity	Source
Iron ore lump (BF grade)	TPA	1139900	Bailadila(Kirandul/Bacheli)iron ore mines, NMDC transported by wagon train
Iron ore lump (SMS grade)	TPA	37100	
Iron ore lump(total)	TPA	1177100	
Iron ore fines	TPA	3795700	
Limestone (SMS grade)	TPA	411900	The Source will be in the vicinity of 240 km, transport by goods wagon train
Dolomite	TPA	540100	Imported (middle east),through Krishnapatnam port at a distance of 190km,transport by goods wagon train.
Limestone (BF Grade)	TPA	6024000	
Dolomite (SMS grade)	TPA	139800	
Blended coking coal	TPA	2308000	Australia and then through Krishnapatnam port at a distance of 190 km, transport by goods wagon train.
Non-coking coal for CDI	TPA	571200	
Quartzite	TPA	202600	Mines within100 km from the site, transport by trucks.
Ferroalloys	TPA	61850	Localmanufacturerswithin100km from the site, transport by trucks.
Purchased DRI	TPA	151000	
Propane	TPA	4160	For steel plant including sinter, SMS, to meet the requirementof10–15 days casters, and rolling mills, drawn from local Petro product storage at a distance of 100km, transport by bullet trucks.

27.2.9 The targeted production capacity of the integrated steel plant of 3.0 million MTPA and Captive power generation of 84.7 MW. The ore for the plant would be procured from (linkage MOU with NMDC). The ore transportation will be done through Rail.

27.2.10 The water requirement for the project is estimated as 2285 m<sup>3</sup>/hr, out of which 1880 m<sup>3</sup>/hr of fresh water requirement will be obtained from the Gandikota reservoir and the remaining requirement of 405 m<sup>3</sup>/hr will be met from the recycled water. The permission for drawl of surface water is obtained from Water Resources department, Govt of Andhra Pradesh. vide Lr. No. G.O.MS.No. 84, dated 20/12/2019.

27.2.11 The power requirement of the project is estimated as 250.94 MW, out of which 166.24 MW will be obtained from the Southern Power Distribution Company (APSPDCL) and 84.7 MW from Captive power plant generation.

27.2.12 Baseline Environmental Studies

Period	1 <sup>st</sup> March 2020to 13 <sup>th</sup> June 2020
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AAQ parameters at nine locations	PM <sub>2.5</sub> = 14 to 21 µg/m <sup>3</sup> PM <sub>10</sub> = 41µg/m <sup>3</sup> to 59µg/m <sup>3</sup> SO <sub>2</sub> = 6 to 20 µg/m <sup>3</sup> NO <sub>x</sub> = 7 to 24 µg/m <sup>3</sup>
AAQ modelling	PM = 15.1 µg/m <sup>3</sup> SO <sub>2</sub> = 22.9 µg/m <sup>3</sup> NO <sub>x</sub> = 26.4 µg/m <sup>3</sup>
Ground water quality at nine locations	pH: 6.82 to 8.21, Total Hardness: 125 to 520 mg/l, Chlorides: 42 to 317 mg/l, Fluoride:0.22 to 0.56 mg/l. Heavy metals are within the limits.
Surface water quality at nine locations	pH: 7.52 to 8.72; DO: 3.7 to 4.9 mg/l and BOD: 3.9 to 13 mg/l. COD from 16 to 228 mg/l.
Noise levels	38 to 54 dBA for daytime and 31 to 38 dBA for nighttime.

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

27.2.14 It has been reported that a total of 1864520 tons of waste will be generated due to the project, out of which 885920 tons will be used Sinter plants, SMS plant, Coke oven and 978600 tons will be sold to cement plants. It has been envisaged that an area of 484.18 ha (33.31%) 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.

Type of Solid Waste	Unit	Quantity	Remarks (Recycle / reuse / sale as new products)
Granulated BF Slag	TPA	978600	Sold to the cement plant
LD slag	TPA	440000	Recovery of metallics and balance used as sub base in roads, ballast for railways sinter plants, SMS, and cement making
Iron ore fines	TPA	126700	Reused in the sinter plant
Flue dust, Dust from ESP, bag filter, dedusting system,	TPA	223000	Reused in the sinter plant
Solid waste from mill scales	TPA	72700	Reused in the sinter plant
Lime fines dust	TPA	20200	Reused in the sinter plant
Tar sludge from tar decanters and muck from naphthalene plant	TPA	1720	Transported to coal handling plant for mixing with coal and used in coke oven battery.
Sludge from the ETP	TPA	1100	Mixed with the coal charge being fed to the coke ovens
Sludge from the STP	TPA	500	Used to compost
Used Batteries	Nos	500	Sent to Authorized recyclers

Type of Solid Waste	Unit	Quantity	Remarks (Recycle / reuse / sale as new products)
Waste Oil	KL/year	500	Transported to coal handling plant for mixing with coal and used in coke oven battery /Sent to Authorized recyclers
Transformer Oil	KL/year	20	Sold to APTRANSCO authorized contractors.
E-waste	TPA	5	Sent to recyclers
Municipal solid waste	TPA	720	Bio degradable waste sent to Vermicompost and reused as manure, recyclables are sent to recyclers, inerts are used for filling low lying areas
Packing material	TPA	100	Sent to recyclers
Biomedical medical waste	TPA	15	Sent to BMW facilities

27.2.15 The Public hearing for the project was held on 11/11/2020 at proposed project site, Sunnapurallapalle and Peddandluru Villages, Jammalamadugu Mandal, YSR District, Andhra Pradesh under the chairmanship of Smt. M. Gowthami, IAS, Joint Collector and Addl. Dist. Magistrate, YSR district. The issues raised during public hearing are local employment, Schools, Hospitals, skill development etc. An amount of 4247 Lakhs (0.26 % of Project cost) has been earmarked to address the issues raised during public consultation.

27.2.16 The capital cost of the project is Rs.16986 Crores and the capital cost for environmental protection measures is proposed as Rs.180663 Lakhs in construction and operation phases. The annual recurring cost towards the environmental protection measures is proposed as Rs. 6214.1 Lakhs in construction and operation phases. The employment generation from the proposed project is 1500 during construction and 4350 direct and 2000 indirect during operation phase respectively.

27.2.17 The details of cost for environmental protection measures is as follows:

Description	Capital cost in Rs. Lakhs		Recurring cost in Rs. Lakhs	
	Construction Phase	Operation Phase	Construction Phase	Operation Phase
Air Pollution Control	67477	1000	100	2525
Water Pollution Control	31346	900	8	320
Rainwater harvesting structures and tank	1000	20	1	20
Check dam repairs and Management	800	80	1	10
Noise Pollution Control	1827	182	30	50

Environmental Monitoring & Management	8846	400	9.6	255.5
Energy conversation costs	35165	20	50	200
Green belt & Open area development	8000	500	50	100
Solid Waste	17000	2000	624	1500
Others Occupational health and safety	4000	100	60	300
<b>Total</b>	<b>175461</b>	<b>5202</b>	<b>933.6</b>	<b>5280.5</b>

27.2.18 Greenbelt will be developed in 484.18 ha which is about 33.31% of the total acquired area. A minimum of 30 - 50 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 hectare. Total no. of 726270 saplings will be planted and nurtured in 484.18 hectares in 5 years.

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

27.2.20 Name of the EIA consultant: M/s Team Labs and Consultants [S.No. 141, List of ACOs with their Certificate / Extension Letter no. Rev. 05, Dec. 18, 2020].

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

27.2.21 The Committee noted the following:

- i. Compliance to specific ToR points have not been addressed adequately.
- ii. Issues raised during the public consultation have not been addressed in the final EIA report.
- iii. Action plan to address the issues raised public consultation as per MoEF&CC O.M. dated 30/09/2020 has not been provided.
- iv. Action plan to control the fugitive emission has not been provided.
- v. Generic TOR point no. 9 pertaining to Corporate Environment Policy has not been addressed adequately.
- vi. BOD Plant details for treatment of effluent emanating from Coke Oven Plant has not been provided.
- vii. Storm water management details have not been provided.
- viii. Calibration of instruments as per CPCB guidelines has not been included in the EIA report.
- ix. Concrete Plan to compensate for loss of grazing land as pointed out during PH has not been proposed.
- x. No commitment is given to improve upon the plant approach road.
- xi. Air quality management for Temple area not described in the EIA report.

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

27.2.22 In view of the foregoing and after deliberations, the committee recommended to return the proposal in present form.

27.3 Expansion of Integrated Cement Plant - Clinker (4 to 8 MTPA), Cement (4 to 8 MTPA) and WHRS (16 MW to 32 MW) by **M/s. UltraTech Cement** located at Village Mohanpura, Tehsil Kotputli, **District Jaipur, Rajasthan**. [Online Proposal No. IA/RJ/IND/185607/2018; File No. J-11011/971/2007 - IA. II(I)] – **Environment Clearance** – regarding

27.3.1 **M/s. UltraTech Cement** has made online application vide proposal no. IA/RJ/IND/185607/2018 dated 21/12/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at 3(b) Cement plants and 1(d) thermal power plants under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

**Details submitted by the project proponent**

27.3.2 The detail of the ToR is furnished as below:

<b>Date of application</b>	<b>Consideration</b>	<b>Details</b>	<b>Date of accord</b>
26/04/2018	32 <sup>nd</sup> meeting held during 11 <sup>th</sup> to 13 <sup>th</sup> June, 2018	Terms of Reference	19/06/2018
08/09/2018	1 <sup>st</sup> meeting of REAC held during 26 <sup>th</sup> to 28 <sup>th</sup> November, 2018	Amendment in ToR	17/09/2019

27.3.3 The project of M/s. UltraTech Cement Ltd. (Unit: Kotputli Cement Works) located at Villages Mohanpura, Gordhanpura, Kanwarpura, Kujota, Tehsil Kotputli, District Jaipur (Rajasthan) is for Expansion of Integrated Cement Plant - Clinker (4 to 8 MTPA), Cement (4 to 8 MTPA) and WHRS (16 MW to 32 MW).

27.3.4 The existing project of Clinker/Cement production of 4 MTPA was accorded environmental clearance vide letter no. J-11011/971/2007-IA.II(I) dated 27<sup>th</sup> Feb., 2008 and amended on 08<sup>th</sup> Nov., 2017 for construction of Raw Mill Silo. EC for enhancement of capacity of the Captive thermal power plant from 30MW to 46 MW was obtained Vide MoEF&CC letter no. J-11011/301/2005-IA II (I) dated 17<sup>th</sup> Aug., 2007. It has been reported that Consent to operate from Rajasthan State Pollution Control Board vide File: F (Tech) / Jaipur (Kotputli) /4 (1) / 2008–2009 / 2258 - 2260 & Order No. 2018 – 2019 / CPM / 5256, dated 11<sup>th</sup> July, 2018, which is valid up to 31<sup>st</sup> Jan., 2023 for Clinker and Cement. CTO for 16 MW WHRS has been obtained from RSPCB vide File *F(Tech) / Jaipur (Kotputli) / 4(1)/ 2008 – 2009 / 1703-1705 order no.2019-2020 / CPM / 5484* dated 26<sup>th</sup> July, 2019 which is valid up to 30<sup>th</sup> June 2024. CTO for residential Colony has been obtained from RSPCB vide letter no. F(Tech)/Jaipur (Kotpitli) /4(1)/2008-2009/2430-2432 dated 16.10.2019.

27.3.5 The following are the existing and proposed plant configuration and production capacity:

<b>S. No.</b>	<b>Units</b>	<b>Existing Capacity</b>	<b>Additional Capacity</b>	<b>Total Capacity After Expansion</b>
1.	Clinker (MTPA)	4.0	4.0	8.0
2.	Cement (MTPA)	4.0	4.0	8.0
3.	CPP (MW)	46	Nil	46
4.	WHRS (MW)	16	16	32

- 27.3.6 Total land required for the project is 161.874 ha (proposed expansion will be done within the existing plant premises); which is already industrial land and totally under the possession of M/s. UltraTech Cement Ltd. (Unit: Kotputli Cement Works). No forest land is involved. No River passes through the project area. It has been reported that three water bodies exist around the project site i.e. SotaNadi (~3.5 km, NNW), SabiNadi (~9.5 km, ENE), Benari Canal (~5.5 km, SW) and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.
- 27.3.7 The topography of the area is almost flat and reported to lies between 27° 39' 41.09'' N to 27° 40' 34.32'' N Latitude and 76° 07' 30.48'' E to 76° 08' 34.64'' E Longitude in Survey of India toposheet no. G43E1 and G43E2 at an elevation of about 365 – 374 m. The ground water level reported to ranges between 25.1 m bgl to 72.7m bgl below the land surface during the post-monsoon season and 35 m bgl to 50 m bgl below the land surface during the pre-monsoon season.
- 27.3.8 The project proponent has reported that there is 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 authenticated list of flora and fauna provided through the primary survey reporting presence of two schedule-I fauna (i.e. Indian Peafowl (*PavoCristatus*) and Monitor lizard (*Varanusbengalensis*) in the study area. Site specific wild life conservation plan has been prepared and submitted to the concerned Competent Authority for approval. Presently, the approval is under process.
- 27.3.9 The raw materials required for the proposed expansion project are Limestone, Laterite / Iron ore, Bauxite / Red Ochre / Al. Clay / China Clay, Gypsum, Fly ash. Cement Plant is based on Dry Process Technology for Cement manufacturing with Pre- Heater and Pre- Calciner Technology. The type of cement manufactured is / will be OPC and PPC.

Raw Material	Quantity (MTPA)			Source	Distance (km) & Mode of Transportation
	Existing	Additional	Total After Expansion		
Limestone	5.64	5.64	11.28	Captive Limestone Mines	~1.0 km / Covered Conveyer Belt
Laterite / Iron ore	0.3	0.3	0.6	Narayani, Chittorgarh	~475 km / Road
Bauxite / Red Ochre / Al. Clay / China Clay	0.2	0.2	0.4	Sawa, Chittorgarh	~430 km / Road
Gypsum	0.14	0.14	0.28	FCI (Khal Mines) & RSMM (Ballar Mines), Bikaner; RSMM (Gotmanglod) - Nagaur	~280 - 480 km / Road
Fly ash	0.62	0.62	1.24	CPP, JPL& APCPL (NTPC), Jhajar; RGTPP, Hisar	~145 - 250 km / Road

- 27.3.10 The targeted production capacity of the Clinker (4.0 to 8.0 MTPA), Cement (4.0 to 8.0 MTPA) and WHRS (16 MW to 32 MW). Limestone is being / will be sourced from the Captive Limestone Mines by Covered Conveyor Belt. Laterite / Iron ore is being / will be



sourced from Narayani, Chittorgarh and transported through Road. Bauxite / Red Ochre / Al. Clay / China Clay is being / will be sourced from Sawa, Chittorgarh and transported through Road. Gypsum is being / will be sourced from FCI (Khal Mines) & RSMM (Ballar Mines), Bikaner; RSMM (Gotmanglod) - Nagaur and transported through road. Fly ash is being / will be sourced from CPP, JPL & APCPL (NTPC), Jhajjar; RGTTP, Hissar and transported through road.

27.3.11 Existing total fresh water requirement for the plant is 1800 KLD, additional fresh water requirement for the expansion project will be 1200 KLD. Thus, the total fresh water requirement after expansion will be 3000 KLD; which is being / will be sourced from Ground Water and rain water harvested in plant and mine area. The permission for withdrawal of groundwater has been obtained from CGWA vide letter no. 21-4(II)/WR/CGWA/2005-/1696 dated 25th Sept., 2017 (Valid up to 25.09.2020). Application for renewal of the permission for withdrawal of 3190 m<sup>3</sup>/day of ground water has been submitted to CGWA on 03.07.2020. The same is under process with the department.

27.3.12 Existing power requirement for the plant is 45 MW. Additional power requirement will be 40 MW. Thus, the total power requirement after proposed expansion will be about 85 MW; which is being / will be sourced from Existing CPP (46 MW) & WHRS (16MW) and proposed WHRS (16MW) & Grid.

27.3.13 Baseline Environmental Studies

Period	March 2019 to May 2019
AAQ parameters at eight locations	PM <sub>2.5</sub> = 30.2 to 54.6 µg/m <sup>3</sup> PM <sub>10</sub> = 50.4 to 85.4 µg/m <sup>3</sup> SO <sub>2</sub> = 5.9 to 15.7 µg/m <sup>3</sup> NO <sub>x</sub> = 8.9 to 34.2 µg/m <sup>3</sup> CO = BDL to 0.95 mg/m <sup>3</sup>
AAQ modelling	PM = 2.34 µg/m <sup>3</sup> SO <sub>2</sub> = 1.6 µg/m <sup>3</sup> NO <sub>x</sub> = 4.4 µg/m <sup>3</sup>
Ground water quality at eight locations	pH: 7.39 to 7.96, Total Hardness: 228 to 470 mg/l, Chlorides: 57.07 to 270.48 mg/l, Fluoride: 0.62 to 1.17 mg/l. Heavy metals are within the limits.
Surface water quality	Surface water samples were not collected from the above locations as all the water bodies are seasonal and were found dry during the study period.
Noise levels	52.6 to 66.2 Leq dB(A) for day time and 42.8 to 59.7 Leq dB(A) for night time.

27.3.14 It has been reported that there is no habitation in the core zone of the project. No R&R is involved.

27.3.15 It has been reported that no solid waste will be generated in the cement manufacturing process. Dust collected from various air pollution control equipment is being / will be totally recycled back into the process. STP Sludge is being / will be utilized as manure for greenbelt development within the plant premises. Used oil and waste or residue containing oil are being / will be generated from plant machinery / Gear boxes; which is being / will be sold out to the CPCB authorized recycler. It has been envisaged that an area of 54.0 ha (i.e. 33% of the total project area – 161.874 ha) has already been developed under greenbelt / plantation which

attenuates the noise level and traps the dust generated due to the project development activities.

S. No.	Plant Unit	Type of Waste	Waste Category	Treatment/Disposal
<b>Non-Hazardous Solid waste</b>				
1.	Cement Plant	Dust (TPD)	-	Dust collected from various APCE is being / is totally recycled into the process.
2.	CPP	Fly ash (TPD)	-	Used in manufacturing of PPC grade cement
3.	STP	STP Sludge (kg/d)	-	Used as manure for greenbelt development / plantation
<b>Hazardous Solid waste</b>				
4.	Plant maintenance	Used Oil	5.1	Sold to recycler
5.		Waste or residues containing Oil	5.2	Sold to recycler
<b>Municipal Solid waste</b>				
6.	Plant and Colony (Dry)	Bottles, paper, cans, textile, etc.	-	Will be sold to registered recycler.
7.	Plant and Colony (Wet)	Kitchen and canteen/ Green waste	-	After vermi- compost and utilized as a manure for greenbelt development / plantation.

27.3.16 Public hearing for the aforesaid project was held on 22<sup>th</sup> Sept., 2020 at 11:00 am at Government Senior Secondary School, Kujota, Tehsil Kotputli, District Jaipur (Rajasthan) under the chairmanship of Dr. Satyavir Yadav, Additional District Collector Kotputli, District Jaipur. The major issues raised during public hearing are Employment opportunities, Vocational training and skill development program, Environmental pollution, ground water resources, CSR activities, Land Compensations, Health Issues (Silicosis), infrastructure development and plantation in nearby areas. As per OM dated 30<sup>th</sup> September, 2020, an amount of Rs. 7.257 Crores has been earmarked for implementation of the commitments made during Public Hearing.

Sector	Activity	1st Year	2nd Year	3rd Year	Total Amount (Rs. Lacs)
Education	Construction of running track in the premises of Gov. school, Kujota Construction of running track [Length (400 m) x Width (3 m) and area covered 1200 m <sup>2</sup> ] (Rs. 143 per m <sup>2</sup> )	1.7	-	-	1.7

Sector	Activity	1st Year	2nd Year	3rd Year	Total Amount (Rs. Lacs)
	Free coaching / training to children (Girls) of board classes from nearby villages. 50 number of girl students of class 10 <sup>th</sup> for 05 villages Mohanpura, Jodhpura, Kujota, Kansli, Kalyanpura and Gordhanpura (Rs. 3000 per student)	5	5	5	15
	Plantation of trees with tree guard in the Govt. School of Kujota Village 150 number of plants covering 300 m <sup>2</sup> area (Rs. 1700 /plant including tree guard)	2.5	-	-	2.5
Health	Checkup / testing facility for silicosis at plant site	3.5	-	-	3.5
Water resources	Installation of RO plant, Water ATM Room & water Tanki in Kujota Village 1. Installation of RO Plant (1000 ltr/hrs) (Rs. 4.0 lacs/-) 2. Construction of Water ATM Room of 25 m <sup>2</sup> size (Rs. 4.0 lacs /-) 3. Construction of Water Tanki (Rs. 1.0 Lacs /-) 4. O and M of the RO Plant for 03 Years (Rs. 03/year)	6	6	-	12
	Rain water harvesting structures in 5 villages Mohanpura, Jodhpura, Kujota, Kansli, Kalyanpura and Gordhanpura	10	5	5	20
Livelihood	Vocational training and skill development program Rs. 10000/- per student for motor winding, cooler and TB repairing, household item making, tailoring, embroidery, computer coaching, bag making, spices preparation etc. and construction of skill development centre at villages Mohanpura – Jodhpura.	10	10	5	25
	Awareness Camps for Local Farmers: organic farming, new agricultural technic, promotion of vegetable / cash crop farming and horticulture. Total 12 number of villages will be covered covering total beneficiaries about 200 farmers	2	2	2	6
Infrastructure	Construction of the cowshed (Gaushala) in Kujota Village (including cost of land, gaushala construction cost & land conversion cost)	90	90	90	270
	Construction of Road from Chauki Gordhanpura to the plant site Construction of black topped Road [Length (3400m) x Width (15 m)] (Rs. 726 per m <sup>2</sup> of road)	370	-	-	370

Sector	Activity	1st Year	2nd Year	3rd Year	Total Amount (Rs. Lacs)
	The proposal already submitted to the Central govt. by the PWD Govt. of Raj. for approval. The same will be implemented within a year of approval.				
	<b>Total</b>				7.257

Note:

\* The above action plan will be implemented during project implementation phase. Zero date will start from the date of issuance of Environmental Clearance for proposed expansion project.

\*\* The activities given in the above table are excluding the Pollution control and mitigation measures, which are included in EMP cost [i.e. 33 Crores (Capital Cost: Rs. 30 Crores & Annual Recurring cost: Rs. 3 Crores/annum)]

27.3.17 The capital cost of the project is Rs. 1500 Crores and the capital cost for environmental protection measures is proposed as Rs. 30 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 3.0 Crores / annum. The employment generation from the proposed expansion project is 1050 persons.

27.3.18 The details of cost for environmental protection measures is as follows:

Particular	Capital Cost (In Rs, Crore)	Recurring Cost / annum (In Rs, Crore)
Air Pollution Control	29	2.1
Water Pollution Control and Rain Water Harvesting Measures	0.36	0.3
Environment Monitoring and management	0.21	0.4
Greenbelt Development	0.43	0.2
<b>Total</b>	<b>30</b>	<b>3</b>

27.3.19 The project proponent has reported that Greenbelt has been developed in 54.0 ha which is about 33% of the total plant area. A 30 m wide greenbelt, consisting of at least 3 tier around the plant boundary has been developed as greenbelt and green cover as per CPCB / MoEFCC, New Delhi guidelines. Local and native species has been / will be planted through gap plantation with a proposed density of 2500 trees per hectare. Total no. of 43,203 saplings will be planted and nurtured in existing greenbelt area i.e. 54.78 ha in 3 years.

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

27.3.21 Name of the EIA consultant: M/s J.M. EnviroNet Pvt. Ltd. [S.No. 39, List of ACOs with their Certificate / Extension Letter no. Rev. 05, Dec. 18, 2020].

#### **Certified compliance report from Regional Office**

27.3.22 The Status of compliance of earlier EC was obtained from Regional Office, Lucknow vide letter no. IV/ENV/R/Ind-46/380/2005/249, dated 24<sup>th</sup> May, 2019 in the name of M/s. UltraTech Cement Ltd. (Unit: Kotputli Cement Works). The response regarding the partially

complied condition was submitted to Regional officer MoEF&CC, Lucknow vide their letter no. UTCL/KCW/Plant\MoEF\2019-20 dated 17/06/2019.

Sl. No.	Observation of RO	Action taken by PP
1.	<p>It has been found that majority of tress leaves of the plants on the main plant are fully covered with dust, which may blocked the stomata and subsequently decrease the rate of photosynthesis subsequently hamper the growth &amp; survival of the plant It is therefore, requested to take suitable measures including use truck mounted dust suppression system for cleaning of the tress leaves indifferent interval for its better growth and survival.</p>	<p>As per the CPCB guideline following measures has been taken for control of fugitive Emission.</p> <ul style="list-style-type: none"> <li>- Installed bag filters (reverse air pulse jet filter type) at all the material transfer points, loading/unloading &amp; storage areas.</li> <li>- Covered conveyors belts provided for raw materials transportation.</li> <li>- Silos provided for storage of raw meal(Capacity: 35000 MT), clinker (Capacity: 1, 50000 MT), cement (Capacity 2x15000) &amp; fly ash Capacity: 5000 MT) with bag filter arrangements.</li> <li>- High Efficiency Bag house installed with raw mill &amp; kiln stack, coal mill stack and cement mills stacks. ESP's installed with clinker cooler and power plant boiler stacks. Acoustic enclosure, stack attached with D.G. Sets.</li> <li>- Provided water sprinkling system and covered dump hopper at limestone crusher along with bag house &amp; bag filters arrangements. Bag filter provided and covered shed at coal crushers.</li> <li>- Provided covered sheds for raw materials- additives storage (Area: 16318 m<sup>2</sup>); Gypsum storage (size: 50 meter x 20 meter) and coal storage (96mx300m). Automated system for coal handling &amp; stacking/reclaiming. Water sprinklers arrangement inside the shed provided due to which chances of fugitive dust emission is negligible and also helpful during fire incident in shed.</li> <li>- The pneumatic pipeline system provided for transfer of fly ash direct from Power Plant to Cement Plant fly ash storage silo within the premises. The closed bulkers are also being used for transportation of fly ash from outside sources and unloading is being done by the pneumatic system directly into the fly ash silo. It is very beneficial to transfer fly ash in safe &amp; convenient manner as well to reduce chances of fugitive emission during handling of fly ash.</li> <li>- Provided covered raw material dump hoppers for all raw materials iike Coal, Red Ochre &amp; laterite with bag filters arrangements.</li> <li>- Covered intermediate storage hopper with de-dusting arrangement provided for raw materials</li> </ul>

Sl. No.	Observation of RO	Action taken by PP
		(limestone, additives like red ochre, laterite etc.) - Water spraying arrangements & tarpaulin covering facility also provided at raw material storage yard to control fugitive dust emission during loading & unloading. Provided the concrete boundary wall all around raw material storage yard for better earmarking of raw material storage yard. This will help in systematic storage/handling of raw materials & control of fugitive emission. - Vehicle speed in Raw material storage area limited up to Max. 10 km/hr. - The dust collected from the pollution control equipment is being recycled back into the process. - The regular maintenance of all the pollution control equipment is being done for effective working & control of emissions. - Greenbelt development inside & along the boundary of Plant and Colony premises to control the ambient air pollution.
2.	It has been found that significant quantity of the cement dust are found in the packing plant area, it may be due to improper functioning of the bag filters or its capacity/ number, it is therefore, requested to re-examining the working efficiency of the installed bag filters based on the cement dust emission toad in packing area.	Following measures has been taken for fugitive Emission control in Packing Area. - The bag filters with dust extraction system provided for the entire packing machine for capturing of dust during cement bags packing work. - The adequate ventilation provided at packing hall by provided exhaust fans/ ventilation. The breathing mask provided to all packer operators for control inhalation of fine dust. The bag filters provided for arrest & recycle of cement dust from packing machines. - The spillage of cement from packing plant floor is being cleaned by vacuum sweeping machines daily. - Maintenance Team taking care regular maintenance of ail the pollution control equipment for effective working & control of emissions.  All the care is being taken to control the emissions from the various sources & conforming the prescribed emission standards/ guideline.
3.	It has been found that submitted third party ground water analysis reports depicted that the	Mineral springs contain water with high levels of dissolved solids, because the water has flowed through a region where the rocks have a high salt content. The water in the Prairie Provinces tends to

Sl. No.	Observation of RO	Action taken by PP
	values of TDS found high as per desirable limits, in almost all location. It is therefore, requested to PAs to submit corrective measures taken.	have high levels of dissolved solids, because of high amounts of calcium and magnesium in the ground  In view of high TDS, PP has constructed Water Tank and supplying Drinking water to nearby villages by Tankers and also installed a water ATM with RO Water in Village Bhaislana.

**Written submissions during the course of meeting**

27.3.23 PP has written clarifications on the following points during the course of meeting.

- i. Proposal for Better Emission norms to be followed for the proposed Line II of Cement Plant
- ii. Greenbelt Plan to achieve Plantation density of 2500 trees/ha
- iii. Medical camps at designated places

**Observations of the Committee**

27.3.24 The Committee noted the following:

- i. The Committee noted that the EIA/EMP was in order reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee noted that the baseline data reported and incremental GLC due to the proposed project are within NAAQ standards.
- ii. The Committee found that the compliance status of the existing EC conditions based on the RO report and action taken report submitted by the project proponent were satisfactory.
- iii. The Committee has also deliberated on the public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.
- iv. Written response submitted during the course of meeting by the project proponent is found to be addressing the concerns of the Committee.

**Recommendations of the Committee**

27.3.25 In view of the foregoing and after deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and general conditions as per the Ministry’s Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to integrated cement plants based on project specific requirements.

**A. Specific conditions:**

- i. The project proponent shall obtain the necessary permission from the competent authority concerned for drawl of groundwater before commencement of work.
- ii. Dioxin/furan to be monitored by NABL accredited laboratory half yearly basis and report shall be furnished to the RO.

- iii. Stack emissions (PM) from all kilns shall not exceed 25 mg/Nm<sup>3</sup> as committed by the project proponent.
- iv. Alternate fuel shall be used to the extent of 1 % of coal equivalent.
- v. Rainwater Harvesting shall be done to recharge 100 % of annual ground water consumption.
- vi. Green belt shall be developed in an area of 54 ha of the total plant area with native tree species in accordance with CPCB guidelines. The greenbelt shall *inter alia* cover the entire periphery of the plant with a density of 2500 trees per hectare.
- vii. All roads in the plant shall be paved and industrial vacuum cleaners shall be used regularly to clean roads to reduce fugitive emissions.
- viii. Project proponent shall use ultralow NO<sub>x</sub> burner with three stage combustion, flue gas recirculation and auto combustion control system.
- ix. Public Health Centers shall be established in the surrounding villages for treatment of silicosis.

**B. General conditions:**

**I. Statutory compliance:**

- i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

**II. Air quality monitoring and preservation**

- i. The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems 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 fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
- iii. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- iv. Ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;
- v. Provide wind shelter fence and chemical spraying on the raw material stock piles; and
- vi. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport
- vii. Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, cement bagging plants.



**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 vide G.S.R. No. 612 (E) dated 25<sup>th</sup> August, 2014 (Cement) and subsequent amendment dated 9<sup>th</sup> May, 2016 (Cement) and 10<sup>th</sup> May, 2016 (in case of Co-processing Cement) 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 regularly monitor ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Adhere to 'Zero Liquid Discharge'.
- iv. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- vi. Water meters shall be provided at the inlet to all unit processes in the cement plant.
- vii. The project proponent shall make efforts to minimise water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

**IV. Noise monitoring and prevention**

- i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation And Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

**V. Energy Conservation measures**

- i. Waste heat recovery system shall be provided for kiln and cooler.
- ii. The project proponent make efforts to achieve power consumption less than 65 units/tonne for Portland Pozzolona Cement (PPC) and 85 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
- iv. Provide the project proponent for LED lights in their offices and residential areas.
- v. Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards.
- vi. Maximize utilization of alternate fuels and Co-processing to achieve best practice norms.

**VI. Waste management**

- i. Used refractories shall be recycled as far as possible.
- ii. Kitchen waste shall be composted or converted to biogas for further use.

**VII. Green Belt**

- i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees in the plant premises.

**VIII. Public hearing and Human health issues**

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

**IX. Corporate Environment Responsibility**

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

**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 environmental 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; PM10, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project 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.
- ix. 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).
- x. 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.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. 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.
- 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.

27.4 Proposed Zinc Smelter Complex (1x0.35 MTPA Zinc Smelter along with Fumer Plant), 2x90 MW Captive Power Plant and 35 MW WHRB by **M/s. Hindustan Zinc Limited** located at GIDC Doswada, Taluka Songadh, **District-Tapi, Gujarat** [Online Proposal No. IA/GJ/IND/176971/2020, File No. J-11011/288/2020-IA.II(I)] – **Prescribing of Terms of Reference** – regarding

27.4.1 **M/s. Hindustan Zinc Limited** has made application vide online proposal no. IA/GJ/IND/176971/2020 dated 14/12/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and is being appraised at Central Level.

**Details submitted by the project proponent**

27.4.2 M/s. Hindustan Zinc Limited proposes to install a new Zinc Smelting Plant with proposed capacity of 1x0.35 MPTA of Zinc Smelter along with Fumer Plant, 2X90 MW of captive power plant and 35 MW WHRB at Gujarat Industrial Development Corporation (GIDC) Doswada, Taluka Songadh, District Tapi, Gujarat. It is proposed to adopt hydro-metallurgical smelting process, which is a Roast, Leach and Electro-winning process technology.

27.4.3 The proposed unit will be located at GIDC Doswada, Taluka Songadh, District Tapi, Gujarat.

27.4.4 The land acquired for the proposed plant is 165.60 ha and which falls under GIDC industrial area and is under the possession of HZL. No agriculture and forest land involved.

27.4.5 The targeted production capacity of the proposed smelter project will be 0.35 MTPA of Zinc, 2x90 MW (180 MW) of CPP and 35 MW of WHRB:

Name of Unit	No of unit	Capacity of each Unit	Production Capacity
Zinc Smelter	1	0.35 MTPA	0.35 MTPA
Captive Power Plant (CPP)	2	90 MW	180 MW
Waste heat Recovery Boiler (WHRB)	3	35 MW	35 MW

27.4.6 PP has reported that no national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. within 10 km radius of study area. Further, there is no forest land in the proposed project site. Purna wildlife Sanctuary ESZ is located at distance of 10.7 km, S.

27.4.7 Total project cost is about Rs. 5000 Crores. The expected employment generation from proposed project will be about 3100 persons and 1900 persons during construction and operation phase respectively.

27.4.8 The proposed raw material and fuel requirement, source and transportation details are as given below:

Item	Total Quantity/ Year (Tonnes)	Source of Supply		Probable Transportation	
		Imported%	Indigenous%	Imported	India
Zinc Concentrate	7,00,000	100%	-	ship	Rail/Road
Zinc Secondaries (Dross/ Ash/ Other Zinc bearing wastes)	50,000	-	100%	-	Road
Aluminium Metal	1000	-	100 %	-	Road
Coal for Power Plant	15,00,000	70 %	30%	ship	Rail/Road
Coal for Fumer Plant	1,96,000	70 %	30%	ship	Rail/Road

The end products and by-products details are as given below:

PRODUCTS	UOM	QUANTITY
SHG Zinc Cathode/Ingot (Special High Grade)	TPA	3,50,000
Zinc (Continuous Galvanizing Grade)/ Zinc Alloys/ Zinc Compounds (out of 3,50,000 TPA)	TPA	1,00,000
Power (Thermal)	MW	2X90
Power (WHRB)	MW	35

PRODUCTS	UOM	QUANTITY
DG Sets (Emergency)	MW	20
<b>BY-PRODUCTS (TPA)</b>		
Sulphuric Acid	TPA	6,64,000
Zinc Oxide Compound	TPA	80,500
Copper as Copper Sulphate/ Chloride/ Matte/ Compound (equivalent metal)	TPA	1,000
Granulated Fumer Slag	TPA	2,10,000
Cadmium Metal / Sponge (equivalent metal)	TPA	1200
Bottom Ash/Fly Ash	TPA	5,10,000
Cobalt as Cobalt oxide/compound (equivalent metal)	TPA	50
Nickel	TPA	30
Germanium	TPA	25
Lead – Silver Compound	TPA	18,900
Calomel	TPA	44
Sodium Sulphate	TPA	3,000
Sodium Chloride	TPA	750

- 27.4.9 Out of 165.60 ha, 55 ha (33%) will be used for greenbelt/green cover development.
- 27.4.10 Water demand for the proposed project will be 46,070 KLD (fresh water is 35,000 KLD + recycled water is 11,070 KLD) and wastewater generated will be 12,300 KLD. The 90 KLD treated domestic wastewater will be used for Horticulture and 10,980 treated industrial wastewater will be reused in the process. The fresh water requirement for the proposed Zinc Smelter Complex is estimated as 35,000 KLD and will be supplied by Gujarat Water Supply and Sewerage Board from Ukai dam through a pipeline. Zero effluent discharge will be maintained, and treated effluent shall also be utilized in the process.
- 27.4.11 The total power requirement for the Smelter Complex is 215 MW, which will be sourced from 2x90 MW coal based Captive Power Plant/GUVNL (GUJARAT UrjaVikas Nigam Limited) and 35 MW Waste Heat Recovery Plant. Further, DG Sets of 20 MW are proposed for emergency back-up power.
- 27.4.12 The solid waste generation from ETP, purification cake, cooler cake, anode mud, cobalt cake, used oils, waste oils etc. will be stored in designated area for further disposal for alternative uses/landfill site. The fly ash generated from the power plant will be supplied for cement manufacturing. Bottom ash will be supplied to bricks manufacturers. Surplus quantity of bottom ash, if any, shall be disposed in the ash pond:
- 27.4.13 The effluents generated from Gas Cleaning Plant, Sulphuric Acid Plant, Anode and Cathode washing, Fumer Plant and Minor Metal Complex, DM plant, Cooling Towers and Power Plant will be treated to neutralize the acidity and to precipitate and remove metallic elements. Treated water will be reused/ recycled in processes and Zero Effluent Discharge during operation phase of the plant will be maintained. Hence there will not be any discharge of effluent to water body or to the land. Sewage collected from the plant operations will be will be treated in Sewage Treatment Plant (STP).
- 27.4.14 The project proponent has reported that there will be no rehabilitation and resettlement related to project.
- 27.4.15 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

- 27.4.16 Name of the EIA consultant: M/s. Vimta Labs Limited [S.No. 135, List of ACOs with their Certificate / Extension Letter no. Rev. 05, Dec. 18, 2020].
- 27.4.17 The aforesaid proposal was accorded standard ToR on 22/12/2020 and the proposal was placed before the EAC for prescribing of specific ToR.
- 27.4.18 The project proponent made a presentation before the Committee.

### Recommendations of the Committee

- 27.4.19 After deliberations, the Committee prescribed the following specific ToR in addition to the standard ToR issued by the Ministry.
- i. Environment control systems shall be designed to achieve following objectives;
    - a. SO<sub>2</sub> emissions from sulfuric acid plant shall not exceed 0.7 kg/t of acid produced.
    - b. Acid mist release concentration shall not exceed 30 mg/Nm<sup>3</sup>.
    - c. PM emission from stacks shall not exceed 30 mg/Nm<sup>3</sup>.
  - ii. Treated effluent from the plant shall be reused and recycled.
  - iii. 20 m wide green belt around the periphery shall maintained covering 33 % of plant area.
  - iv. A plan for maximizing the generation of Solar energy shall be developed and incorporated in the EMP.
  - v. RWH and Recharge details shall be furnished in EIA report.
  - vi. EMP for social and infrastructure development shall be based on the inputs from SIA and PH proceedings.
  - vii. Railway siding shall be provided in the plant for movement of materials.
  - viii. Action plan for 100% solid waste utilization shall be submitted.
  - ix. All plant roads shall be paved and industrial vacuum cleaners shall be used to clean the roads regularly to keep fugitive emission under control.
  - x. Fugitive emission control plan during construction shall be submitted.
  - xi. PP shall use ultralow NO<sub>x</sub> burner with three stage combustion, flue gas recirculation and auto combustion control system.
  - xii. The plant shall not be situated on the flood plain of Madav River Dam. Proof of HFL of Madav River Dam shall be provided from irrigation department of the State Government.
  - xiii. Detailed Engineering layout drawing shall be furnished.
- 27.5 Renaming of Environment Clearance accorded units' - Sponge Iron Plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive Power Plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW) as M/s Orissa Metaliks Private Limited (Unit-I) keeping rest of the unit Mini Blast furnace (1 x 320 m<sup>3</sup>)-3,90,000 TPA with 200 TPD oxygen plant as M/s Orissa Metaliks Private Limited by **M/s Orissa Metaliks Private Limited** at Village-Gokulpur, P.O-Shyamraipur, P.S-Kharagpur (L), **Dist. Paschim Medinipur, West Bengal**. [Online Proposal No. IA/WB/IND/188930/2020; File No. J-11011/229/2007-IA-II(I)] – **Amendment and part transfer of Environment Clearance** – regarding
- 27.5.1 **M/s Orissa Metaliks Private Limited** has made an online application vide proposal no. IA/WB/IND/188930/2020 dated 19/12/2020 along with Form 4 and sought for amendment in the Environmental Clearance accorded by the Ministry vide letter no. J-11011/227/2008-I

A.II(I) dated 12/06/2008, 10/12/2008, 06/01/2017, 30/08/2018 and 26/12/2019.

**Details submitted by the project proponent**

27.5.2 Chronology of details of EC granted to the project proponent:

Sl. No.	Description (Environmental Clearance)	Date								
1	<b>Environmental Clearance</b> accorded for Steel Plant (5,00,000 TPA MBF & SMS) at village-Gokulpur, P.O.-Shyamraipur, P.S.-Kharagpur (L), Dist. Paschim Medinipur, West Bengal at Shyamraipur, Gokulpur, Khargapur, District Paschim Medinipur, West Bengal in favour of M/s Rashmi Metaliks Pvt. Ltd.	Issued by MoEF&CC File No- J-11011 /227/2007-IA- II (I), dated 12.06.2008.								
2	<b>Change of location</b> of Sponge Iron plant at Mouja-Mathurakismat, at Village Gokulpur, Kharagpur, District Paschim Medinipur, West Bengal.	Issued by MoEF&CC vide File No- J-11011 /365/2007-IA- II (I), dated 10.12.2008.								
3	<p><b>Transfer of Environmental Clearance:</b> By virtue of order of Hon'ble Calcutta High Court for demerge, EC got transferred in favour of M/s Orissa Metaliks Private Limited.</p> <table border="1"> <tr> <td colspan="2"><b>Units under the company Name Orissa Metaliks Private limited</b></td> </tr> <tr> <td>DRI (10 X100 TPD; 3 X350 TPD) WITH WHRB based CPP</td> <td></td> </tr> <tr> <td>MINI BLAST FURNACE ( 1 x 320 m<sup>3</sup>)</td> <td></td> </tr> <tr> <td>FBC BASED CPP</td> <td></td> </tr> </table>	<b>Units under the company Name Orissa Metaliks Private limited</b>		DRI (10 X100 TPD; 3 X350 TPD) WITH WHRB based CPP		MINI BLAST FURNACE ( 1 x 320 m <sup>3</sup> )		FBC BASED CPP		Issued by MoEF&CC vide F. No.J-11011/227/2007-IA II (I) on dated 06/01/2017.
<b>Units under the company Name Orissa Metaliks Private limited</b>										
DRI (10 X100 TPD; 3 X350 TPD) WITH WHRB based CPP										
MINI BLAST FURNACE ( 1 x 320 m <sup>3</sup> )										
FBC BASED CPP										
4	<b>Environmental Clearance- Change in configuration</b> for Sponge Iron Plant to (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD) at Mouja- Mathurakismat & Amba, Village-Gokulpur, P.O.-Shyamraipur, P.S.-Kharagpur (L), Dist. Paschim Medinipur, West Bengal under clause 7(ii) of EIA Notification, 2006.	Issued by MoEF&CC vide F. No.J-11011/227/2007-IA II (I) on dated 30.08.2018.								
5	<b>Environmental Clearance- Expansion</b> in Sponge Iron plant (6,00,000 TPA to 7,80,000 TPA) & Mini Blast Furnace with oxygen Plant (3,00,000 TPA to 3,90,000 TPA) by process optimization and increasing no of working days/annum, at Village-Gokulpur, P.O.-Shyamraipur, District-Paschim Midnapore (W.B.) under clause 7(ii) of EIA Notification, 2006.	Issued by MoEF&CC vide F. No.J-11011/227/2007-IA II (I) on dated 26.12.2019.								

27.5.3 The project proponent reported that Monitoring authority of MoEF&CC (Ro\_MoEFCC, Bhubaneswar) vide report dated 29/09/2020 raised issue to reorganize the EC's held by OMPL/ OMPL- Unit-I for ease of compliance and also for monitoring by concerned authorities. Hence for ease of compliance, to reorganize the product sale for which EC accorded and to facilitate the monitoring condition stipulated by ministry time to time, it has been proposed to rename the project 'Sponge Iron Plant ( 6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive Power Plant (WHRB-52 MW + AFBC-

6 MW + CFBC-25 MW)' as M/s Orissa Metaliks Private Limited (Unit-I)(hence referred as OMPL-I) keeping rest of the unit 'Mini Blast furnace (1 x 320 m<sup>3</sup>)-3,90,000 TPA with 200 TPD oxygen plant' as M/s Orissa Metaliks Private Limited.

27.5.4 Following is the Configuration & capacity change granted in EC and the amendment desired in the EC:

Name of the Units	As Per EC					Amendment Desired (Rename Unit Name)
	Configuration	Production	Product	Location Detail	Unit Name	
Sponge Iron Plant (DRI Kiln)	(6 x 100 + 1 x 350 + 1 x 600 + 1 x 500)	7,80,000 TPA	Sponge Iron	Mouja-Mathurakismat (J.L. No.-114) & Amba (J.L. No.-115), Village-Gokulpur, P.O-Shyamraipur, P.S-Kharagpur (L), Dist. Paschim Medinipur, West Bengal	Orissa Metaliks Private Limited	Orissa Metaliks Private Limited Unit-I
WHRB Based CPP	52 MW	52 MW	Power			
AFBC Based CPP	6 MW	6 MW				
CFBC Based CPP	25 MW	25 MW				
Mini Blast Furnace with 200 TPD Oxygen plant & PCM	1 x 320 m <sup>3</sup>	3,90,000 TPA	Hot Molten Liquid/ Pig Iron	Mouja-Khidirpur(J.L. No.-140) Village-Gokulpur, P.O-Shyamraipur, P.S-Kharagpur (L), Dist. Paschim Medinipur, West Bengal		Orissa Metaliks Private Limited

27.5.5 The project proponent has submitted that there is no change in configuration and production capacity from EC sanction capacity. The proposal is to rename the project 'Sponge Iron Plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive Power Plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW)' as M/s Orissa Metaliks Private Limited (Unit-I)(hence referred as OMPL-I) keeping rest of the unit 'Mini Blast furnace (1 x 320 m<sup>3</sup>)-3,90,000 TPA with 200 TPD oxygen plant' as M/s Orissa Metaliks Private Limited.

27.5.6 The Status of Implementation of the earlier EC facilities is as follows:



Name of the Units	Permission as Per EC	Size of Units under operation	Production Capacity as per Valid CFO	Name of Product
Sponge Iron Plant (DRI Kiln)	(6 x 100 + 1 x 350 + 1 x 600 + 1 x 500) TPD	(6 x 100 + 1 x 350 + 1 x 600 + 1 x 500) TPD	7,80,000 TPA	Sponge Iron
WHRB Based CPP	52 MW	(6 X 10 + 1 X39 TPH+2 X60) TPH	52 MW	Power
AFBC Based CPP	6 MW	6 MW	6 MW	Power
CFBC Based CPP	25 MW	25 MW	25 MW	Power
Mini Blast Furnace with 200 TPD Oxygen plant & PCM	1 x 320 m <sup>3</sup> (3,90,000 TPA)	1 x 320 m <sup>3</sup>	3,90,000 TPA	Pig Iron/ Molten Metal

27.5.7 In this regard, following documents have been submitted by the project proponent:

- i. Original affidavit “NOC” from M/s Orissa Metaliks Private Limited {Stating for renaming the project Sponge Iron Plant along with Captive Power as M/s Orissa Metaliks Private Limited (Unit-I)}.
- ii. Original affidavit “Undertaking” from M/s Orissa Metaliks Private Limited (Unit-I) made by M/s Orissa Metaliks Private Limited (Unit-I) to MoEF&CC for confirming and undertaking that all the terms and conditions stipulated in Environment Clearance issued vide File No- J-11011 /227 /2007-IA- II (I), dated 12.06.2008, 10.12.2008, 12.02.2015, 06.01.2017, 30.08.2018 & 26.12.2019 for the unit Sponge Iron Plant along with Captive Power Plant will be complied by OMPL-I.
- iii. Board Resolution by OMPL.
- iv. Revised Environment management plan by OMPL and OMPL-I
- v. Revised Plant Layout with area and green belt detail by OMPL and OMPL-I.
- vi. EC condition compliance Responsibility Matrix between M/s Orissa Metaliks Private Limited and M/s Orissa Metaliks Private Limited Unit-I.

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

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

27.5.9 In view of the foregoing and after deliberations, the committee formed a sub-committee comprising of the following to examine the documents submitted by the project proponent and furnish a report to the EAC prior to the next EAC meeting for taking appropriate view in the matter.

- i. Shri. R.P.Sharma, EAC Member,
- ii. Shri. J.S. Kamyotra, EAC Member,

For the above purpose, Shri. Sundar Ramanathan, Scientist ‘E’, MoEF&CC would be co-opted as a member of the above subcommittee.

27.6 Revised configuration of Modernization-cum-expansion (3.5 MTPA to 2.7 MTPA Gross Hot Metal) by **M/s. Steel Authority of India Limited (SAIL), Durgapur Steel Plant** located at **Durgapur, West Bengal** [Online Proposal No. IA/WB/IND/187345/2020, File No. J-11011/492/2007-IA-II(I)] – **Amendment in Terms of Reference** – regarding

27.6.1 **M/s. Steel Authority of India Limited (SAIL), Durgapur Steel Plant** has made an online application vide proposal no. IA/WB/IND/187345/2020 dated 12/12/2020 along with Form 3 and sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. J-11011/492/2007-IA-II(I) dated 23/09/2020. The proposed project activity is listed at 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**

27.6.2 The ToR for the Revised Configuration of Modernization-cum-expansion (3.5 MTPA to 2.7 MTPA Gross Hot Metal) by M/s Steel Authority of India Limited (SAIL), Durgapur Steel Plant located at Durgapur, West Bengal was accorded by MoEF&CC vide letter no. J-11011/492/2007-IA-II(I) dated 23.09.2020.

27.6.3 The project proponent has applied for the following amendment in ToR along-with justification as follows:

S.N.	ToR Details	ToR Point	ToR Amendment requested	Reason / Justification
1.	Sp. ToR Pt. No. iii.	Action plan for CER shall be submitted as per the MoEF&CC O.M. dated 1/05/2018 and 31/10/2019.	Action plan to address the issues raised during public consultation as per the MoEF&CC O.M. No. 22-65/2017-IA.III dated 30/09/2020 shall be submitted.	In view of MoEF&CC O.M. No. 22-65/2017-IA.III dated 30/09/2020.
2.	Sp. ToR Pt. No. iv.	PM emissions shall be less than 30 mg/Nm <sup>3</sup> for entire plant operations	PM emissions shall be less than 30 mg/Nm <sup>3</sup> for all the new units. For the existing units, PM emission shall be as per the prevailing emission standards, issued vide Gazette notification dated 31/03/2012 and 7/12/2015 (power plant) and subsequent amendments as notified, from time-to-time.	All existing stacks will require major technological up-gradation/retrofitting, which is very challenging in the existing set-up/logistics.
3.	Sp. ToR Pt. No. xi.	Sinter cooler waste heat recovery system shall be incorporated.	Sinter cooler waste heat recovery system shall be incorporated in all new installations.	Installation of waste Heat recovery system in old plant is difficult due to

S.N.	ToR Details	ToR Point	ToR Amendment requested	Reason / Justification
				technical and logistic issue.
4.	Sp. ToR Pt. No. xii.	Stove gas waste heat recovery system and TRT shall be provided in all working blast furnaces.	Stove gas waste heat recovery system and TRT shall be provided in all new blast furnaces.	In existing smaller BFs, less top pressure is present therefore installation of TRT is technically not feasible.
5.	Oxygen Plant Configuration/ Capacity	Capacity/ Configuration (as per ToR) <ul style="list-style-type: none"> <li>Oxygen Plant: 2 x 350 TPD</li> <li>Oxygen Plant (BOO Basis): 1 x 700 TPD</li> </ul>	Capacity/ Configuration (amend. in ToR) <ul style="list-style-type: none"> <li>Oxygen Plant: 1 x 350 TPD</li> <li>Oxygen Plant (BOO Basis): 1 x 1250 TPD</li> </ul>	Phasing out existing (1 x 350 TPD) & (1 x 700 TPD) Oxygen plant with installation of a new (1 x 1250 TPD) Oxygen Plant.

27.6.4 Following is the Configuration & capacity change granted in ToR vis-a-vis with the proposed changes in configuration & capacity of units:

SN	Unit	Configuration as per ToR dtd. 23.09.2020.	Proposed ToR Amendment	Final Configuration
1.	Oxygen Plant			
	• Captive	2 x 350 TPD	Phasing out: 1 x 350 TPD	1 x 350 TPD (Existing)
	• BOO Basis	1 x 700 TPD	Phasing out: 1 x 700 TPD New: 1 x 1250 TPD	1 x 1250 TPD (New)

27.6.5 With respect to the Status of Implementation of said ToR, the project proponent has submitted that the draft EIA/EMP report is under preparation. After the grant of amendment in ToR, the draft EIA/EMP report complying to the amended ToR will be submitted to SPCB for conducting public hearing.

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

27.6.7 The proposal is considered by the EAC (Industry 1) in its 27th meeting of the Re-constituted EAC (Industry-I) held during 30-31<sup>st</sup> December, 2020. The observations and recommendations of EAC is given as below:

**Observations of the Committee**

27.6.8 The Committee observed that the PP wants several amendments on the ground that DSP is an old plant and modifications to meet TOR terms shall not be commercially viable.

### Recommendations of the Committee

- 27.6.9 In view of the foregoing and after deliberations, the committee agreed to a few changes proposed by the proponent which would reduce pollution further to maintain the current level of pollution after expansion. However, PP sought for additional time to prepare revised proposal and requested to return the same. Accordingly, the Committee recommended to return the proposal in present form.

#### 31<sup>st</sup> December, 2020

- 27.7 Enhancement of production capacity of various Forged, Machined & Finished products from 80,000 TPA to 130,000 TPA by addition of forging Press Lines 1 x 2000T, 1 x 2500T, 1 x 6300T and Hollow Spindle Line along with installation of matching Machining and Finishing facilities by **M/s. Ramkrishna Forgings Limited (Plant V)** located at Village: Bholadih, P.O: Kolabira, **Dist: Saraikela-Kharsawan, Jharkhand**. [Online Proposal No. IA/JH/IND/183069/2014; File No. J-11011/4/2020-IA.II(I)] – **Environment Clearance** – regarding.

- 27.7.1 **M/s. Ramkrishna Forgings Limited** has made online application vide proposal no. IA/JH/IND/183069/2014 dated 14/12/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “B1” of the schedule of the EIA Notification, 2006. The project is located within 5 km distance from the Severely Polluted Area Saraikela Jharkhand and therefore being appraised at Central Level (*As per MoEF&CC office memorandum dated 31.10.2019 any project or activity specified in Category# B1 will be appraised at central level if located in whole or part within 5 km from Severely Polluted area*).

#### Details submitted by the project proponent

- 27.7.2 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
31/12/2019	15 <sup>th</sup> meeting held on 16 <sup>th</sup> –17 <sup>th</sup> of January, 2020	Terms of Reference	24/01/2020
07/06/2020	20 <sup>th</sup> meeting held on 25 <sup>th</sup> –26 <sup>th</sup> of June, 2020	Amendment in ToR	14/07/2020

- 27.7.3 The project of M/s Ramkrishna Forgings Limited (Plant V) located in village: Bholadih, Tehsil: Kolabira, District: Saraikela-Kharsawan, Jharkhand is for enhancement of production of various Forged, Machined & Finished products from 0.08 million TPA to 0.13 million TPA by addition of forging Press Lines 1 x 2000T, 1 x 2500T, 1 x 6300T and Hollow Spindle Line along with improvement in operational parameters.

- 27.7.4 The existing project was accorded environmental clearance vide Ir. No. EC/SEIAA/2014-15/516/2014/1929 dated on 23.11.2015. It has been reported that the Consent to Operate from the Jharkhand State Pollution Control Board is obtained vide Lr. No. JSPCB/HO/RNC/CTO-1031235/2017/382 dated on 11.04.2017 and consent is valid up to 30.09.2021.

27.7.5 The following are the existing and proposed plant configuration and production capacity:

Units	Existing Units		Proposed Units		Final Configuration	
	Unit	Production TPA	Unit	Production TPA	Unit	Production TPA
<b>Various Forged, Machined &amp; Finished Components</b>						
Press Line	1x12500 T 1x4500 T 1x3150 T 1x6300 T	80,000 (Various Forged, Machined & Finished Product)	1x2000T 1x2500T 1x6300T	50,000 Various Forged, Machined & Finished Product	1x12500 T 1x4500 T 1x3150 T 1x2000T 1x2500T 2x6300T	130,000 (Various Forged, Machined & Finished Product)
Hollow Spindle Line	-	-	1x800T & 1x1250T		1x800T & 1x1250T	
<ul style="list-style-type: none"> <li>• Machining and finishing facilities (Phosphating &amp; Painting) will be expanded to match with additional production</li> <li>• Existing Shot Blasting &amp; Heat Treatment facilities will be augmented, if required, for the enhance production</li> </ul>						

27.7.6 The project will be installed in the existing plant area of 10.02 ha. Project does not envisage additional land for the project. No forest land is involved. The entire land (10.02 ha) is already under possession of project proponent. No river passes through the project area. It has been reported that no water body exists around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

27.7.7 The topography of the area is flat and reported to lies between 22°47'44.1"N to 22°47'58.4"N Latitude and 86°1'28.5"E to 86°1'42.4"E Longitude in Survey of India topo sheet No. 73 J/1, 73 J/2, 73 F/13 & 73 F/14, at an elevation of 160 m AMSL. The groundwater table reported to ranges between 12.20 mbgl to 5.23 mbgl during pre-monsoon season and 0.89 to 5.60 mbgl during post-monsoon season.

27.7.8 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 have corridor for Schedule-I fauna. The authenticated list of Flora and Fauna provided through the DFO Saraikela district reported no schedule-I Fauna in the study area.

27.7.9 The major raw material required for the project is as follows:

S. No.	Raw Material	Quantity required per annum			Source	Mode of Transportation
		Existing	Expansion	Total		
<b>Press Lines</b>						
1.	Steel billets / rounds / various	109,824 Tons	68,176 Tons	178,000 Tons	Tata Steel/JSW /SAIL	Road
<b>Consumable</b>						
1.	Propane Gas	2,750 kl	2,450 kl	5,200 kl	-	-

S. No.	Raw Material	Quantity required per annum			Source	Mode of Transportation
		Existing	Expansion	Total		
2.	Oil for Quenching	125 kl	75 kl	200 kl	-	-
3.	Polymer for	250 kl	150 kl	400 kl	-	-

27.7.10 The targeted production capacity after expansion will be 0.13 MTPA. The steel billets/ blooms/ rounds used as raw material for the plant would be procured from the Tata Steel/JSW/SAIL. The transportation of the billets to the plant will be done through the road.

27.7.11 The water requirement of the project is estimated as 492.8 m<sup>3</sup>/day. Water requirement will be fulfilled from groundwater through 5 number of Bore wells. Permission for withdrawal of 495 KLD of groundwater is obtained from CGWA vide NOC No. CGWA/NOC/IND/REN/1/2019/5564 (valid up to 25/11/2020). Application for renewal of NOC is submitted to CGWA on 30.10.2020 which is under process.

27.7.12 The power requirement of the project is estimated as 20 MW. Power shall be taken from JUSCO. Company has the permission for 15.5 MW, necessary permission for the additional 4.5 MW shall be obtained for JUSCO.

27.7.13 Baseline Environmental Studies

Period	1 <sup>st</sup> December to 29 <sup>th</sup> February, 2020
AAQ parameters at eight locations	PM <sub>2.5</sub> = 20.4 to 54.0 µg/m <sup>3</sup> PM <sub>10</sub> = 51.0 to 86.2 µg/m <sup>3</sup> SO <sub>2</sub> = 7.8 to 23.4 µg/m <sup>3</sup> NO <sub>x</sub> = 11.4 to 36.5 µg/m <sup>3</sup>
AAQ modelling	PM <sub>10</sub> = 0.5855 µg/m <sup>3</sup> SO <sub>2</sub> = 0.8347 µg/m <sup>3</sup> NO <sub>x</sub> = 0.6973 µg/m <sup>3</sup>
Ground water quality at eight locations	pH: 7.25 to 7.58, Total Hardness: 234.12 to 285.10 mg/l, Chlorides: 57.15 to 121.42 mg/l, Fluoride: 0.64 to 1.31mg/l. Heavy Metals are within the limit.
Surface water quality at eight locations	pH: 7.24 to 7.74, DO: 4.1 to 5.8 mg/L and BOD: 8.0 to 14.25 mg/L, COD: 28.0 to 51.10 mg/l.
Noise levels	54.5 to 69.5 dB(A) for the day time and 49.2 to 61.5 dB(A) for the Night time.

27.7.14 It has been reported that no R&R is involved in the project as the expansion is to be done within the existing plant premises.

27.7.15 It has been reported that a total of 63,683 TPA of solid waste and 35 kl/year of waste quenching oil will be generated due to the project, out of which 63,000 TPA of solid waste will be given to Steel Industries, 500TPA will be given to Ferrous Sulphate Plants and 183TPA of Sludge and 35kl of Waste Quenching oil will be given to the Cement company for co-processing in Cement kiln. It has been envisaged that an area of 3.30 ha will be developed as greenbelt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

Sl. No.	Type of Waste	Generation in Tons per year	Management
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		Existing	Total after Expansion	
1.	Sludge from Phosphating Process	15	90	Will be dried in sludge bed and packed in HDPE bags. Will be given to the <u>ACC Cement Plant, Chaibasa Cement Works</u> for co-processing in their kiln
2.	Sludge from Spray Painting Booth	60		
3.	ETP Sludge	65	93	
4.	Quenching Sludge	20	35	
5.	Used Oil	2 kl	3.5 kl	Will disposed through registered recyclers

27.7.16 The Public Hearing for the aforesaid project was held on 12/10/2020 at Birbans Panchayat Bhawan, Village: Birbans, Tehsil: Kolabira, Distt: Saraikela-Kharsawan, Jharkhand under the chairmanship of Deputy Development Commissioner. The issues raised during public hearing are the Employment for Locals, Construction of a School, Staircase at the pond, separate Toilet for male & Female and boundary wall of the existing school in Baliguma village. An amount of Rs. 851.41 lakhs (1.44% of the Project Cost) has been embarked to address the issues raised during public consultation.

S. No.	Name & Village of Participant	Issues Raised	Action Plan		
			Commitment	Time Frame	Proposed Budget
1.	1. Smt. Panno Devi, Bholadih 2. Shri Ganesh Tudu, Gram Pradhan, Bholadih 3. Shri Mukesh Verma, Bholadih	To Open a school in the village.	<ul style="list-style-type: none"> <li>School will be constructed in Gopidih village</li> <li>Boundary wall of the existing school will be constructed</li> </ul>	24 months	<b><u>Budget of Rs. 704.13</u></b> lakhs are kept for the construction of new school in the village.
		To construct boundary wall of the existing school in village			<b><u>Rs. 16.75 lakhs</u></b> shall be allocated for the <b><u>Boundary Wall construction</u></b>
2.	1. Shri Raghunath, Hembhram Chaura 2. Shri Mukesh Verma, Bholadih	To construct Separate toilet for male and female in the School.	<ul style="list-style-type: none"> <li>Separate toilets for male and female will be constructed in the village school</li> <li>Stair construction at two different locations will be done at the village pond</li> </ul>	10 months	Budget of Rs. 4.46 lakhs will be allocated for the <b><u>construction. Of Toilets</u></b>
		To construct Stairs at the nearby pond for bathing purpose			<b><u>Stair construction</u></b> at the pond will be done spending Rs. 1.07 lakhs.
3.	1. Smt, Vishakha Devi, Bholadih 2. Shri Ganesh Tudu, Gram Pradhan, Bholadih	To construct a Hospitals and enhance the existing medical facility in the village Bholadih	<ul style="list-style-type: none"> <li>Construction of hospital will be done in Baliguma village</li> </ul>	18 months	Budget of Rs 125 lakhs shall be spent on the <b><u>construction of Hospital.</u></b>

27.7.17 The capital cost of the project is Rs. 591.18 crores and the capital cost for the environmental protection measures is proposed as Rs. 345.6 lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 41.4 lakhs. The employment generation from the proposed expansion is 302.

27.7.18 The details of cost for environmental protection measures is as follows:

Sl. No.	Environmental Protection Measures	Capital Cost Rs. In Lakhs	Recurring Cost Rs. In Lakhs/Yr.
1.	Air Pollution Control Measures	50.0	5.0
2.	Water Pollution Control Measures and Rainwater Harvesting	205.0	10.0
3.	Solid Waste / Hazardous Waste Management	35.0	14.0
4.	Greenbelt Development	30.6	2.4
5.	Firefighting & Safety Measures	25.0	10.0
<b>TOTAL</b>		<b>345.6</b>	<b>41.4</b>
<b>Budget for implementation of commitments made to address the issues raised during the public hearing</b>		<b>851.41</b>	
<b>TOTAL EMP BUDGET</b>		<b>1197.01</b>	

27.7.19 As per the specific TOR point (vii) in additional TOR granted by MoEF&CC on 14.07.2020, greenbelt development plan covering 40% of the total area to be furnished. Accordingly, 4.01 ha area has to be covered under greenbelt out of 10.02 ha total plant area. Out of this 4.01ha of area, 3.30 ha is available and is already developed as greenbelt within the plant premises. M/s Ramkrishna Forgings Limited has done agreement for purchase of an additional land of 1.169 ha (2.89 Acres) area located at Mouza: Domjuria, P.S.: Saraikela, District: Saraikela-Kharsawan, Jharkhand for greenbelt development. This patch of land is located at the distance of approx. 4km in WSW direction from the plant site. A total budget of Rs. 30.60 lakhs is allocated for the development of greenbelt by planting 3200 number of plants in the total area of 4.469 ha (3.30 ha within the plant premises and 1.169 ha near to plant area).

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

27.7.21 Name of the EIA consultant: M/s Vardan Environet [S.No. 39, List of ACOs with their Certificate / Extension Letter no. Rev. 05, Dec. 18, 2020].

**Certified compliance report from Regional Office**

27.7.22 The status of compliance of earlier EC was obtained from Regional Office, Ranchi vide Lr. No.111-04/ROR-2020 dated 20.04.2020. Closure report for the partial/non compliances was obtained from Regional Office, Ranchi vide letter dated 03.12.2020. The observations made by the RO in the report are summarized as below:

- i. Continuous stack monitoring is not provided in all the stacks.
- ii. Electricity based Induction Billet Heater are used instead of Propane Gas based furnace as proposed.
- iii. Regular Monitoring of AAQ and treated Waste water quality for trace metals has to be carried out with a proper schedule.



- iv. Green Belt as per the CPCB guidelines has not been raised all along the boundary.

### **Observations of the Committee**

27.7.23 The Committee noted the following:

- i. The Committee noted that the EIA/EMP report was in order reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has also found that the baseline data reported and incremental GLC due to the proposed project are within NAAQ standards.
- ii. The Committee satisfied with the compliance status of the existing EC conditions as reported by the RO except green belt development.
- iii. The Committee also deliberated on the public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.

### **Recommendations of the Committee**

27.7.24 In view of the foregoing and after deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 based on project specific requirements.

#### **A. Specific conditions**

- i. All roads shall be made Pucca and a vacuum cleaner shall be used to clean the roads.
- ii. Propane gas shall be used for heat treatment
- iii. Particulate Matter emissions from the stacks shall be less than 30mg/Nm<sup>3</sup>.
- iv. Existing ETP shall be upgraded to treat the additional effluent from expansion
- v. Rainwater Harvesting shall be done to recharge 100 % of annual water consumption.
- vi. Treated effluent from the plant shall be reused and recycled.
- vii. Since the project falls within 5 kms of Severely Polluted Area, green belt shall be planted in 40 % of the total plant area with a density of 2500 trees per ha of land. Further, as proposed by the PP, 1.169 ha of land outside project boundary which has been acquired by the PP shall be used only for the plantation purpose.

#### **B. General conditions**

##### **I. Statutory compliance:**

- i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

##### **II. Air quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality

Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems 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 fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- v. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
- vi. The project proponent shall provide primary and secondary fume extraction system at all heat treatment furnaces.
- vii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- viii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

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

- i. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- ii. Adhere to 'Zero Liquid Discharge'.
- iii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

### **IV. Noise monitoring and prevention**

- i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

**V. Energy Conservation measures**

- ii. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

**VI. Waste management**

- i. Used refractories shall be recycled as far as possible.
- ii. Kitchen waste shall be composted or converted to biogas for further use

**VII. Green Belt**

- i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same and also estimate carbon sequestration by the plantations.

**VIII. Public hearing and Human health issues**

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

**IX. Corporate Environment Responsibility**

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

**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.
- viii. 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.
- ix. 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).
- x. 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.

- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. 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.
- 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.

27.8 Expansion of Steel Manufacturing Unit by addition of one Induction Furnace, a Concast Machine and a Rolling Mill with a capacity enhancement of Steel Ingots/ Billets- from 92,000 TPA to 3, 08,000 TPA and TMT bars, Rounds, Angles, Channels from 40,000 TPA to 2, 82,000 TPA by **M/s Prime Steel Industries (P) Ltd.** located at Village- Bated, Barotiwala, Tehsil- Baddi, **District- Solan, Himachal Pradesh.** [Online Proposal No. IA/HP/IND/186921/2019; File No. IA-J-11011/208/2019-IA-II(I)] – **Environment Clearance** – regarding.

27.8.1 **M/s Prime Steel Industries (P) Ltd.** has made online application vide proposal no. IA/HP/IND/186921/2019 dated 18/12/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “B” of the schedule of the EIA Notification, 2006. However, due to the applicability of general condition i.e., existence of inter-state boundaries within 5km radius of the project site the project is being appraised at Central Level as Category ‘A’.

**Details submitted by the project proponent**

27.8.2 The detail of the ToR is furnished as below:

<b>Date of application</b>	<b>Consideration</b>	<b>Details</b>	<b>Date of accord</b>
03/06/2019	8 <sup>th</sup> meeting held on 26 <sup>th</sup> June, 2019	Terms of Reference	07/08/2019

27.8.3 The project of M/s Prime Steels Industries (P) Ltd located in Bated, Barotiwala Village, Baddi Tehsil, Solan District, Himachal Pradesh State is for setting up of a expansion of production from 92000 TPA Steels and 40000 TPA TMT Bars, Rounds, Angles, Channels to 3,08,000 TPA steels to 2,82,000 TPA.

27.8.4 It has been reported that the Consent to Operate from the HP State Pollution Control Board obtained vide Consent No. CTO/BOTH/RENEW/RO/2019/23876 Valid from 01.04.2009 to 31.03.2020. Renewal of CTO is applied and its under process. Certified compliance report

from HPSPCB complying all conditions of existing CTO is obtained vide letter no.-PCB/SEE/RO Baddi/Prime Steel Pvt. Limited/2020-2438 dated 15.12.2020.

27.8.5 The following are the existing and proposed plant configuration and production capacity:

S.No.	Unit (Product)	Existing (TPA)	Proposed (TPA)	Total (TPA)
1.	Steel Billets/Ingots	92000	2,16,000	3,08,000
2.	TMT Bars, Rounds, Angles, Channels	40000	2,42,000	2,82,000

S.No.	Description	Existing	Proposed	After Expansion
1.	Induction Furnace	1X30 TPH	Modification of existing 1X30 TPH and 1X40 TPH	1X30 TPH (Modified) 1X40 TPH
2.	Concast Machine	1 No.	Modification (up-gradation)	1 No.
3.	Rolling Mill	1 No.	1 No.	2 No.
4.	D.G. Set	1 No. (500KVA)	Nil	1 No. (500 KVA)
5.	EOT Crane	02	02	04

27.8.6 The total land required for the project is 49,210 m<sup>2</sup>. No forestland is involved. The entire land has been acquired for the project. The Project site is located near Sirsa River (2.5 Km SW). 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.

27.8.7 The topography of the area is flat and reported to lies between 30°54'36.03"N, 30°54'40.62"N" to 30°54'37.72"N, 30°54'33.52"N Latitude 76°49'48.27"E, 76°49'55.90"E, to 76°49'57.14"E, 76°49'50.27"E Longitude in Survey of India topo sheets No H43K9, H43K13, H43E16 at an elevation of 440 m AMSL. The ground water table reported to ranges between 3.02-27.57m bgl.

27.8.8 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.

27.8.9 The raw materials and finished goods will be transported through trucks. The project is connected to MDR-7 via Baddi- Jhar-Majri Road which in turn is connected to SH-9. No additional road infrastructure will be required for transportation. The number of truck trips per day for raw material and finished product transportation will be approx. 102 trucks trips. The raw material source will be standard manufacturer or supplier. The raw material details are given as under:

S. No.	Raw Material	Existing	Proposed	Total	Source & Mode of transport
1.	MS Scrap (TPA)	96,840	2,27,360	3,24,200	From Domestic & as

S. No.	Raw Material	Existing	Proposed	Total	Source & Mode of transport
2.	Ferro Alloys (TPA)	2,040	4,790	6,830	well as International Markets transported through covered trucks.

27.8.10 The targeted production capacity of the Steel Billets/Ingots and TMT Bars, Rounds, Angles, Channels is 3,08,000 TPA and 2,82,000 TPA respectively. The raw material for the plant would be procured from local and international market. The raw material will be transported through Roads in covered trucks.

27.8.11 The water requirement of the project is estimated at 29.4 m<sup>3</sup> /day. The daily requirement of water will be met through the Ground Water and I&PH supply. HPGWA application has been filed for existing Bore well and I&PH permission is obtained vide Lr. No. PSIL/20-21/1052 dated 14/10/2020.

27.8.12 The power requirement of the project is estimated as 22,991 KW, which will be sourced HPSEBL.

27.8.13 Baseline Environmental Studies

Period	October to December, 2019
AAQ parameters at 8 locations	PM <sub>2.5</sub> = 28.2 to 43.8 µg/m <sup>3</sup> PM <sub>10</sub> = 66.3 to 89.2 µg/m <sup>3</sup> SO <sub>2</sub> = 6.2 to 15.9 µg/m <sup>3</sup> NO <sub>x</sub> = 11.2 to 25.8µg/m <sup>3</sup>
AAQ modelling	PM <sub>10</sub> = 2.48 µg/m <sup>3</sup>
Ground water quality at 8 locations	pH 7.39 to 7.81, Total Hardness: 230 to 240 mg/l, Chlorides: 24.0 to 40.1 mg/l, Fluoride: 0.10 to 0.24 mg/l. Heavy metals are within the limits.
Surface water quality at one location	pH: 7.79 to 7.82.; DO: 4.4 to 4.6 mg/l and BOD: 20 to 26.2 mg/l. COD from 110 to 120 mg/l.
Noise levels	46.1 dB (A) to 65.0 dB (A) dBA for daytime and 44.3 dB (A) to 54.0 dB (A) dBA for nighttime.

27.8.14 It has been reported that there is no R & R involved.

27.8.15 It has been reported that with the proposed implementation there will be 02 no. furnaces 1X30 TPH & 1X40 TPH. The H.W. in the form of gas cleaning residue will be 0.09 TPD. The same shall be collected in HDPE bags, stored & disposed of to M/s Shivalik Solid Waste Management Limited, Solan. About 48.6 TPD of slag which is not a H.W will be generated and the same after recovering of iron will be supplied to M/s Modern Tiles Co. (manufacturers of tiles) under proper agreement. 0.05KL/annum of used oil from D.G. sets will be collected.

Waste	Source	Quantity	Potential Impact	Management
APCD Dust	Induction Furnace	0.09 TPD	Health Implication	Dust from bag filters shall be stored in a dumping pit of R.C.C. and disposed to designated TSDF site.
Sludge from Domestic Waste Water	STP	0.009 TPD @40gm per capita per day	No adverse environmental impact except	The sludge from waste water treatment systems shall be composted and

Waste	Source	Quantity	Potential Impact	Management
Treatment			little odor nuisance.	used as manure in horticulture.
Runner/Riser	From Rolling Mill	92.0 TPD	No Impact, It is a saleable material.	
Furnace Slag	Induction Furnace	48.6 TPD	No adverse impact. It will be used in road making and land filling.	Slag produced from manufacturing process as by-product will be periodically tapped and left to solidify. The slag will be then crushed and iron particles are taken out through the process of magnetic separation. Mill scales are either sold in the market or used back in I.F.
Used Oil	DG sets	0.05 Kl/A	possibility of soil and water contamination due to spillage	
MSW from every day & Domestic	Employees	0.09 TPD @400gm per capita per day	Hazardous Gas Emission. Natural Habitat Degradation	Municipal solid waste due to everyday sweeping and domestic activities will be collected in bins.

27.8.16 The Public hearing of the project was held on 29/07/2020 in Industry premises under the chairmanship of Additional Deputy Commissioner cum Chairman for production of 3,08,000 TPA of steels Billets/Ingots and 2,82,000 TPA of TMT Bars, Rounds, Angles, Channels. The issues raised during public hearing are Employment and air pollution. An amount of 25 Lakh has been earmarked for Enterprise Social Commitment based on Public hearing issues.

S. No	Activity	Environmental Aspects	Capital Cost (Rs. Lacs)	Recurring Cost (Rs. Lacs)	Timeline	
					Start	End
1.	Pakki Galliyan at Village Bated	Infrastructure	6.0	0.50	April 2021	March 2022
2.	Rain Shelter (New) at Barotiwala near Panchayat office/ Patwarkhana.	Resource Conservation	2.5	0.10	June 2021	--
3.	Benches outside gram Panchayat	Infrastructure	0.50	0.05	December 2021	--



S. No.	Activity	Environment al Aspects	Capita l Cost (Rs. Lacs)	Recurri ng Cost (Rs. Lacs)	Timeline	
					Start	End
	office					
4.	Upgradation of Crematorium 1- Gate/Flooring/ Tiles work Crematorium 2 - Gate/Flooring/Til es work	Infrastructure	5.0	0.50	April 2022	October 2022
5.	Water cooler in GramPanchayat Bhawan	Infrastructure	0.50	0.05	May 2022	--
6.	Sewing Machines and Dona pattal making machines to self help groups	Sustainable Livelihood	0.75	0.10	August 2023	--
7.	Repair & tiles work in boys and girls toilets in Govt. Model Sen. Sec. School (GMSSS) Barotiwala District-Solan	Infrastructure	2.0	0.20	May 2022	July 2022
8.	Interlocking tiles in front of the boys and girls toilets in GMSSS, Barotiwala	Infrastructure	2.0	0.20	July 2022	Septemb er 2022
9.	60 chairs for students for the smart class room	Infrastructure	3.0	0.20	April 2023	Septemb er 2023
10.	2 water RO with water cooler	Hygiene & Infrastructure	2.0	0.10	October 2023	Decemb er 2023
11.	Principal office Table and chair	Infrastructure	0.50	0.05	March 2022	--
12.	10 fans for class rooms	Infrastructure	0.25	0.01	May 2023	--
<b>Total</b>			<b>25.0</b>	<b>1.96</b>		

27.8.17 The capital cost of the project is Rs 65 Crores and the capital cost for environmental protection measures is proposed as Rs. 151 Lakh. The annual recurring cost towards the environmental protection measures is proposed as Rs 11.6 Lakh. The estimated manpower requirement after the expansion shall be 248 Nos.

27.8.18 The details of capital cost for environmental protection measures and annual recurring cost towards:

Sl. No.	Description of Item	Capital Cost] (Rs. In Lacs)	Recurring Cost (Rs. In Lacs)
1.	Pollution Control during construction stage	5.0	---
2.	Air Pollution Control (Installation of APCD)	95.0	5.0
3.	Water Pollution Control/ STP Upgradation	15.0	1.5
4.	Green Belt Development	10.0	3.0
5.	Noise Pollution Control	1.0	0.1
6.	Solid Waste Management	5.0	0.5
7.	Environment Monitoring and Management	5.0	0.5
8.	Occupational Health & Safety and Risk Management	5.0	0.5
9.	RWH	5.0	0.5
10.	Miscellaneous	5.0	---
<b>Total</b>		<b>151.0</b>	<b>11.6</b>

27.8.19 Greenbelt will be developed in 17250.0 m<sup>2</sup> which is about 35.05% 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 hectare. Total no. of 2586 saplings will be planted and nurtured in 17250.0 m<sup>2</sup> in three years.

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

**Certified compliance report from Regional Office**

27.8.21 The project proponent has reported that the Status of compliance of earlier EC is not applicable as the existing project is not covered under the EIA Notification 1994 & 2006 as it is not covered under the 1994 Notification and is in operation before advent of EIA Notification 2006. Certified compliance report from HPSPCB complying all conditions of existing CTO is obtained vide letter no.- PCB/SEE/RO Baddi/Prime Steel Pvt. Limited/2020-2438 dated 15.12.2020.

27.8.22 The project proponent had earlier applied for EC vide proposal no. IA/HP/IND/107048/2019 dated 20/10/2020. The proposal was considered during 24<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held during 27-29<sup>th</sup> October, 2020. The deliberations made are as follows:

**Observations of the Committee**

The Committee noted the following:

- i. There is no valid CTO available with PP.
- ii. Area for green belt is not enough as per layout. The layout also does not permit green belt all around the plant boundary.
- iii. Certified compliance status of existing CTO conditions from the Himachal Pradesh Pollution Control Board has not been furnished.

- iv. TOR #9 i.e., Corporate Environment Policy has not addressed in EIA Report.
- v. Plant layout is congested. Total land is 4.921 ha. All the envisaged units maintaining safety norms i.e., IF, LF, CC, RM of Channels and Angles and also wire rod mill in the instant proposal under consideration.
- vi. EIA report does not address the methodology adopted for sample collection location selection criteria, data interpretation and impact assessment.

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

In view of the above, the Committee, after detailed deliberations, recommended to return the proposal in its present form.

27.8.23 The project proponent has resubmitted the proposal vide proposal no. IA/HP/IND/186921/2019 dated 18/12/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC). The proposal is considered during 27<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held during 30-31<sup>st</sup> December, 2020.

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

27.8.24 The Committee noted the following:

- i. The Committee noted that the EIA/EMP report is found to be in order reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data reported and incremental GLC due to the proposed project are within NAAQ standards.
- ii. The Committee was satisfied with the compliance status of the existing CTO conditions as reported by the RO, HPPCB.
- iii. The Committee has also deliberated on the public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.

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

27.8.25 In view of the foregoing and after deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to Induction Furnace and Rolling Mills based on project specific requirements.

##### **A. Specific conditions**

- i. PM level from stacks shall not exceed 30 mg/Nm<sup>3</sup>.
- ii. Treated effluent from the plant shall be reused and recycled.
- iii. Green belt with 2500 trees per ha would be planted.
- iv. PP currently uses ground water. PP Shall completely switch over to surface water in next three years.
- v. Rain water harvesting shall be done to recharge 100 % of annually water consumption.
- vi. Roads shall be concreted and industrial vacuum cleaners shall be used to clean the roads regularly to reduce fugitive emissions.
- vii. At least 85% of hot charging of billets shall be done and balance can be processed through RHF using LDO. No coal firing of RHF will be permitted.

- viii. No pickling shall be carried out without obtaining prior approval from appropriate authority.
- ix. Adequate Parking space shall be provided to avoid parking on the roads.

**B. General conditions**

**I. Statutory compliance:**

- i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

**II. Air quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems 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 fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- v. 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.
- vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
- vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- viii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- ix. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

### **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 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31<sup>st</sup> March 2012 (applicable to IF/EAF) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Adhere to 'Zero Liquid Discharge'.
- iv. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

### **IV. Noise monitoring and prevention**

- i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

### **V. Energy Conservation measures**

- i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

### **VI. Waste management**

- i. Used refractories shall be recycled as far as possible.
- ii. Kitchen waste shall be composted or converted to biogas for further use.
- iii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces
- iv. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

### **VII. Green Belt**

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

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

#### **VIII. Public hearing and Human health issues**

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

#### **IX. Corporate Environment Responsibility**

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
- ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

#### **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.
- viii. 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.
- ix. 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).
- x. 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.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. 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.
- 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.

27.9 Expansion of existing Integrated steel plant to final capacity of Sponge Iron – 2,054,000 TPA, Billets (Mild & Alloy Steel)- 23,73,566 TPA, Rolled Products – 15,60,000 TPA, Captive

Power – 308 MW, Pellets – 30,00,000 TPA, Producer Gas Plant-96,450 Nm<sup>3</sup>/Hr, Sinter Plant- 5,90,625 TPA, Blast Furnace- 3,93,750 TPA by **M/s. Shyam Metals and Energy Limited** located at Village –Pandloi, Block-Lapanga, **District- Sambalpur, Odisha**. [Online Proposal No. IA/OR/IND/187952/2020; File No. J- 11011/495/2006-IA.II(I)] – **Prescribing of Terms of Reference** – regarding.

27.9.1 **M/s. Shyam Metals and Energy Limited** has made application vide online proposal no. IA/OR/IND/187952/2020 dated 14/12/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

**Details submitted by the project proponent**

27.9.2 M/s Shyam Metals and Energy Limited proposes to expand its existing Integrated steel Plant to final capacity of Sponge Iron– 2,054,000 TPA, Billets (Mild & Alloy Steel)- 23,73,566 TPA, Rolled Products – 15,60,000 TPA, Captive Power– 308 MW, Pellets – 30,00,000 TPA, Producer Gas Plant-96,450 Nm<sup>3</sup>/Hr, Sinter Plant- 5,90,625 TPA, Blast Furnace- 3,93,750 TPA.

27.9.3 The existing project was accorded environmental clearance vide letter no. J-11011/495/2006-IA-II (I) dated 10.12.2008. Consent to Operate was accorded by State Pollution Control Board vide letter no. 3544/IND-I-CON- 5335 validity of CTO is up to 31.03.2021.

27.9.4 The proposed unit will be located at Village: Pandloi, Taluka: Rengali, District: Sambalpur, State: Odisha.

27.9.5 The total land requirement is 347.058 ha. (857.6 Acres) in which 135.57 ha (335 Acres) land will be used for greenbelt development. Out of the total land, 166.269 ha (410.86 Acres) has already been acquired and remaining 180.791 ha (446.745 Acres) acquisition under process.

27.9.6 The targeted production capacity of the proposed project will be as follows:

Units	Product	Existing Production Detail	In Expansion	Total (Final Production)	End use TPA
Pelletization unit	Pellet	12,00,000 TPA (2x0.6 MTPA)	18,00,000 TPA	Pellets 30,00,000 TPA	Use in DRI and MBF Balance sale-105830
DRI Kiln	Sponge iron	8,00,000 TPA (2x350 TPD, 2x100 TPD, 4x500 TPD)	12,54,000 TPA (4x600 TPD, 7x200)	Sponge Iron 20,54,000 TPA	Use in IF
Sinter Plant	Sinter	-	5,90,625 TPA (1x65)	5,90,625 TPA	Use in MBF



Units	Product	Existing Production Detail	In Expansion	Total (Final Production)	End use TPA
Blast Furnace	Hot metal/pig iron	-	3,93,750 TPA (1x450)	3,93,750 TPA	Use in EAF and IF
SMS (EAF & IF with matching LRF & CCM)	Billet	14,44,286 TPA (1x80T & 15x18T, 4x12T,4x8T)	9,29,280 TPA (16x20T, 4x8T)	Billets (Mild & Alloy Steel) 23,73,566 TPA	Use in rolling mill Balance billet sale- 783566
TMT	TMT	1,70,000 TPA	-	rolled Products 5,60,000 TPA	Rolled product Sale 1560000
Structure	Structural	60,000 TPA	-		
Wire Rod	Wire rod	4,00,000 TPA	-		
Pipe Mill	Pipe	30,000 TPA	-		
Other long Products	Long products	-	9,00,000 TPA		
CPP (WHRB)	Power	158 MW	70 MW (1x70)	308 MW	Use
CPP (CFBC)	Power		80 MW (2x40)		Use
Producer Gas Plant (PGP)	Producer gas	48,450 Nm <sup>3</sup> /hr	48,000 Nm <sup>3</sup> /hr	96,450 Nm <sup>3</sup> /hr	Use in palletization unit
Coal Washery	Washed coal	10,00,000 TPA	-	10,00,000 TPA	Use in various
Ferro Alloy	Ferroalloys	2,50,000 TPA (2x6 MVA, 2x9 MVA, 4x11 MVA)	-	2,50,000 TPA	Use in Steel melting shop

- 27.9.7 PP has reported that no National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger / Elephant Reserve, Wildlife Corridor etc. falls within 10 km radius of the plant site. The area also does not report to form corridor for Schedule-I fauna.
- 27.9.8 Total project cost is approx Rs. 2,759 Crore rupees. Proposed employment generation from proposed project will be 6,798 direct and indirect employment.
- 27.9.9 The proposed raw material and fuel requirement, source and transportation details are as given below:

Raw Material Required	Quantity in Tons per Annum	Source	Distance from site (Kms)	Mode of Transportation
Iron Ore Fines	36,00,000	Kandahar mines and gandhamardan mines	112.6 km & 153.20 km	Rail
Coal	12,21,800	Talcher	147 km	Rail
Coke	1,60,200	Talcher	147 km	Rail
Haematite Ore	6,00,000	Talcher	105 km	Rail
Bentonite	12,000	Local Market	105 km	Rail/Road
Dolomite Fines	18,000	Local Market	105 km	Rail/Road
Lime	18,000	Local Market	105 km	Rail/Road
Chromite Ore	6,00,000	Local Market	105 km	Rail/Road
Quartzite	50,000	Local Market	105 km	Rail/Road

27.9.10 A greenbelt development plan will be prepared and implemented along with the project. Total green belt area shall be 39.06 % (335 Acres) of total area (i.e.857.60 Acres). The main objective of the greenbelt is to provide a barrier between the plant and the surrounding areas. Comprehensive greenbelt/plantation program will be undertaken in and around the project

27.9.11 Water Consumption after expansion will be 28,623 m<sup>3</sup>/day (Source: Hirakud Reservoir) and waste water generation will be 2,955 m<sup>3</sup>/day. Domestic sewage is treated in Sewage Treatment Plant (STP). Industrial effluent/waste water is treated in Waste Water Treatment Plant (WWTP) of capacity 3000 KLD. Part of the treated waste water is recycled back as cooling tower make-up after treating through a 50m<sup>3</sup>/hr Reverse Osmosis (RO) Plant. Remaining part of the treated waste water along with treated sewage is used for Ash Handling system, Coal Handling System, Dust Suppression, Slag quenching, plantation & gardening & peripheral road and sprinkling etc.

27.9.12 The total power requirement is 353.92 MW per hour. From existing plant 308 MW will be available and the remaining 45.92 MW will be procured from State Grid. 3 nos. of 600 KVA D.G. Sets installed in existing Plant.

27.9.13 The solid waste generation and management will be as follows:

Facility	Waste	Quantity(TPA)	Remark
Coal Washery	Middling & Rejects	4,20,000	FBC fuel
DRI Kilns	Ash and Accretion	27,74,200	Brick Manufacturing
	Dolchar	2,59,180	FBC Boiler fuel

Facility	Waste	Quantity(TPA)	Remark
Pellet Plant	Dedusting dust	2,07,000	Reused in Pellet Plant
Sinter Plant	Return Sinter Fines	88,590	
Blast Furnace	BF slag	1,18,965	Used in PSC manufacturing  Reused in Sinter plant
	BF sludge and dust	1,90,000	
PGP Plant	Tar & Tar oil	7,875	Reused in Pellet Plant Kiln
S M S	Slag	3,36,450	Road making & land filling
	Dust	51,740	Recycled in IF
FBC Boiler	Fly ash	3,00,950	Reused in Brick Industry
Ferro alloy plant	Bag House Dust	35,000	Fe-Mn slag is to be recycled Si-Mn slag is to be used in landfilling Fe-Cr slag will be used as aggregate in concrete works
	Slag	2,25,000	

27.9.14 The project proponent has reported that there are no displaced habitants in the identified land. There will be no R & R plan for the project.

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

27.9.16 Name of the EIA consultant: M/s. Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar [S.No. 90, List of ACOs with their Certificate / Extension Letter no. Rev. 05, Dec. 18, 2020].

#### Observations of the Committee

27.9.17 The Committee noted the following:

- i. This is an expansion proposal. EC was awarded in Dec 2008 and the CTO is valid till 31.3.2021.
- ii. Total land area is 857.6 Acres.
- iii. Water 28623 KLD shall be drawn from Hirakud Reservoir. Permission is available.
- iv. Fe-Cr shall also be manufactured.
- v. No R&R is involved.
- vi. Layout provided is not to scale and it is not an engineering drawing.
- vii. Land has been allotted to the PP and process of taking possession is under progress.

### Recommendations of the Committee

- 27.9.18 After 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. PM emissions from stacks shall be less than 30 mg/Nm<sup>3</sup>.
  - ii. Coal washery tailings shall be dewatered in filters and no tailing pond is permitted.
  - iii. Area allocation to Fly ash pond shall be as per the requirement of Fly Ash notification 1999 and its subsequent amendments.
  - iv. Relocate the ash pond to higher elevation and use the area allocated at present for green belt development.
  - v. Briquetting and Jigging plant shall be installed to reuse fines and recover metallics.
  - vi. TCLP test shall be conducted on slag to decide the end disposal of Cr slag.
  - vii. Blast Furnace shall be equipped with TRT, Dry Gas Cleaning Plant, Stove waster heat recovery system and cast house ventilation system.
  - viii. Air cooled condensers shall be used in the power plant.
  - ix. PGP shall be closed circuit type and phenolic water shall be treated.
  - x. 4<sup>th</sup> hole extraction system for EAF shall be provided.
  - xi. Action plan to develop green belt, as per CPCB guidelines, along the periphery of the plant and towards the Hirakud reservoir shall be submitted.
  - xii. 50 m green belt shall be planted towards Hirakud Reservoir
  - xiii. Treated effluent from the plant shall be reused and recycled.
  - xiv. Engineering Drawing to the scale shall be prepared for plant layout.
- 27.10 Expansion of Cement Plant capacity from 3.3 Lakhs TPA to 6.6 Lakhs TPA and clinker production from 3.135 Lakh TPA to 6.27 Lakh TPA by **M/s Trumboo Industries Pvt. Ltd. (TIPL)** located at Village- Khrew, Tehsil- Pampore, **District- Pulwama, Jammu & Kashmir** [Online Proposal No. IA/JK/IND/188134/2020, File No. J- 11011/204/2016-IA.II(I)] – **Prescribing of Terms of Reference** – regarding.
- 27.10.1 M/s. Trumboo Industries Private Limited (TIPL) has made application vide online proposal no. IA/JK/IND/188134/2020 dated 15/12/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(b) Cement plants under Category “B” of the schedule of the EIA Notification, 2006 and attract general condition as the project site falls within 5km of Dachigam National Park. In view of this, project is appraised at the central level.
- Details submitted by the project proponent**
- 27.10.2 M/s. Trumboo Industries Pvt. Ltd. proposes expansion of existing cement manufacturing unit from 3.3 Lakhs TPA to 6.6 Lakhs TPA with clinker production from 3.135 Lakhs TPA to 6.27 Lakh TPA. It is proposed to expand the plant for producing OPC based on Dry process utilizing the pre-calciner technology.
- 27.10.3 The existing project was accorded Consent to Operate by Jammu & Kashmir State Pollution Control Board vide letter no. SPCB/digital/1806470858 of 2018 dated 09.07.2018. Valid of CTO is up to April 2021.

- 27.10.4 The proposed unit is located at Latitude: 34°3'11.81"N to 34°3'25.86"N, Longitude: 75°0'50.54"E to 75°1'4.47"E, Village: Khrew, Tehsil: Pampore District: Pulwama, State: Jammu & Kashmir.
- 27.10.5 The land area of 12.38 ha acquired for the existing plant will also be utilized for the proposed expansion. There will be no need for additional land. The entire land is private land. No forest land is involved.
- 27.10.6 The targeted production capacity of the plant is from 3.135 Lakh TPA to 6.27 Lakh TPA clinker and 3.3 Lakh TPA to 6.6 Lakh TPA of cement. The majority of limestone for the plant would be procured from the own mine located at 1.5 km from the plant site and some limestone may be sourced from other mines. The Ore transportation will be done through the road. The proposed capacity for different products for new site is as below:

Name of Product	No. of units	Capacity of each unit	Production Capacity
Ordinary Portland Cement (OPC)	2 (Existing-1; Proposed-1)	3.3 Lakhs TPA each	3.3 Lakhs TPA to 6.6 Lakhs TPA cement & 3.135 Lakhs TPA to 6.27 Lakh TPA of clinker

- 27.10.7 PP has reported that Dachigam National Park is located at a distance of 3.12 Km N direction (distance is from boundary of National Park). 8 Schedule I species are known to be present in the Study area for which conservation plan has been prepared. NBWL Clearance is applicable to the project and the application for the same has been made online.
- 27.10.8 Total project cost is approx 165 Crores rupees. Proposed employment generation from the proposed project will be 550 persons (Existing- 350; Additional during expansion- 200) direct employment and indirect employment in the field of transportation, ancillary industries, security etc. Priority in employment will be given to local people as per their skills.
- 27.10.9 The proposed raw material and fuel requirement, source and transportation details are as given below:

SI No	Name of Raw Material	Before Expansion (TPD)	After Expansion (TPD)	Source	Mode of Transportation
1.	Limestone	1100	2200	Captive Mine	Road
2.	Iron Ore	25	50	Punjab	Road
3.	Gypsum	50	100	Uri	Road
4.	Coal	250	500	Import from S. Africa & part of Jammu	
5	Clay/Silica	225	450	Local	Road

27.10.10 Thirty-three percent of the total area has been planned as green belt by TIPL after expansion of plant to 6.6 Lakhs TPA as per the guidelines of CPCB. Local species will be planted in consultation with DFO for green belt development.

27.10.11 After Expansion total water Consumption (fresh+ recycled) for the proposed project plant will be 623 KLD and domestic waste water generation will be 40 KLD. Domestic waste water 40 KLD will be treated in a STP and industrial waste water generated of 385 KLD will be filtered and recycled. Domestic treated water of 38 KLD will be utilized for dust suppression & green belt development.

27.10.12 Power requirement for the existing cement plant operating at 3.3 Lakhs TPA capacity is 9 MW which will go up to 18 MW after the expansion of cement plant. The required power is being drawn from the power grid of J&K Government power department.

27.10.13 The solid waste generation and management will be as follows:

S. No.	Particulars	Quantity generated (Kg/day)	Mode of Disposal
<b>Municipal Solid Waste</b>			
1	Biodegradable	33	The generated waste will be handed over to 2 Non authorized vendor
2	Non-Biodegradable	49.5	
	Total Municipal waste in a day	82.5	
<b>Non-Hazardous Waste</b>			
	STP Sludge	3	Used as manure for plantation

27.10.14 The project proponent has reported that since no additional land will be required for the expansion of cement plant capacity to 6.6 lakhs TPA thus no rehabilitation & resettlement is applicable to this project.

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

27.10.16 Name of the EIA consultant: M/s. Perfact Enviro Solutions (P) Ltd. New Delhi [S.No. 9, List of ACOs with their Certificate / Extension Letter no. Rev. 05, Dec. 18, 2020].

27.10.17 The proposal is considered by the EAC (Industry 1) in its 27<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held during 30-31<sup>st</sup> December, 2020. The observations and recommendations of EAC is given as below:

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

27.10.18 The Committee noted the following:

- i. It is a Cat B project. Due proximity of site to Dachigam National Park within 5 km the projects has come up for appraisal to Centre.
- ii. TOR was granted earlier in 2016. EIA process could not be completed in past four years hence this request for fresh TOR.

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

27.10.19 After 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. At the time of submission of final EIA report, the baseline data should not be older than three years as per the MoEF&CC Office Memorandum dated 29/08/2017.
- ii. Green belt shall be developed in an area equal to 33% of the plant area with native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
- iii. STP for domestic waste water treatment shall be provided.
- iv. Treated effluent from the plant shall be reused and recycled.
- v. PM level from Stacks shall be less than 30mg/Nm<sup>3</sup>.
- vi. PP shall submit action plan for complete shift to surface water use in next three years.

27.11 Expansion of hot metal from 0.5 to 0.75 MTPA, Ductile Iron pipe from 0.30 to 0.50 MTPA and 0.1 MTPA castings and fittings by **M/s. Tata Metaliks Private Limited** at village Gokulpur, **Paschim Medinipur District, West Bengal**. [Online Proposal No. IA/WB/IND/187029/2020; File No. J-11011/377/2013-IA-II(I)] – **Amendment in Environment Clearance with respect to extension of time for implementation of CER related activities** – regarding.

27.11.1 M/s. Tata Metaliks Private Limited has made an online application vide proposal no. IA/WB/IND/187029/2020 dated 19/12/2020 along with Form 4 and sought for amendment in the Environmental Clearance accorded by the Ministry vide letter no. J-11011/377/2013-I A.II(I) dated 28/01/2019.

**Details submitted by the project proponent**

27.11.2 EC was accorded to M/s Tata Metaliks Ltd. (TML) vide letter No. J-11011/377/2013-IA-II(I) dtd. 28/01/2019 with a name correction letter dtd. 10/07/2019 for Expansion of hot metal from 0.5 to 0.75 MTPA, Ductile Iron pipe from 0.30 to 0.50MTPA and 0.1 MTPA castings and fittings at village Gokulpur, Paschim Medinipur District, West Bengal.

27.11.3 The project proponent has submitted that Amendment in the aforesaid EC is sought for CER (Corporate Environment Responsibility) implementation timeframe and some modification in CER activity.

Sl. No.	Reference of Approved EC	Description as per Approved EC	Description as per Proposal.	Remarks
1	Point no. 18 of EC	An amount of Rs. 555 lakhs has been earmarked for CER to be completed by December 2020.	It is requested to consider the extension of CER	CER Expenditure phasing: • Till FY'20 -Rs 186.04 lakhs.

27.11.4 With the spread of Covid-19 pandemic in March'20 and subsequent lockdown announced by GOI, plant operations and project activities had to be suspended due to health & safety of employees as also due to lack of permission for most of these activities by the Local Govt administration. TML's project activity remained fully suspended from the latter part of March 2020 over the next few months. Even though some limited project work got started, TML got hamstrung with lack of sufficient labour as also the continued weekly lockdowns in West Bengal that have impacted economic activities. Also, in view of the global economic

slowdown, considering the current market condition, the project activity is currently at halt. In view of expansion project getting delayed and due to the fact that the uncertainty still remains about when the normalcy will be restored, continuation of any major social welfare activity in the nearby villages has become extremely difficult. Hence it is requested to modify the CER implementation timeline in accordance and also the expenditure spread over the revised proposed time frame & some activity. In some of the activity items, it was also found that, there are Govt. scheme in place to address the issue, hence after discussion with the concerned stakeholder some alternate activities are being identified & proposed which are given as below:

Item No.	Public Hearing ref.	As per EC accorded				Amendment requested		
		Issue	Activity	Timeline for Completion	Fund allocation (Lakh)	Activity	Proposed Time line for Completion	Proposed fund allocation (Lakh)
1	S.N.8	Strengthening of drinking water projects	One Toilet block & one drinking water project in Samraipur Village	2019 December	65.0	Solar powered water projects, construction of internal road, drain & waste water management system & renovation of school at Samraipur village.	2021 December	100.00
2	S.N.9	Beds in local primary health centre	Providing 10 beds in in local primary health centre	2019 July	5.0	There is no requirement as communicated by Govt. authorities. Item to be deleted.	NA	NA
3	S.N.11	Improvement of village road	Providing road at Maheshpur Village	2020 July	100.0	Completed.	Completed	95.00
4	S.N.13	Street light from TML to Saha Chawk	Providing solar street light on road from TML to Saha Chawk	2020 December	25.0	Technically not feasible, to be deleted.	NA	NA



Item No.	Social Impact Assessment ref.	As per EC accorded				Amendment requested		
		Issue	Activity	Timeline for Completion	Fund allocation (Lakh)	Activity	Proposed Time line for Completion	Proposed fund allocation (Lakh)
1	S.N.1	Drainage & sanitation facility improvement	Construction of Drain & Toilet block in Mollachak, Sadatpur & Keshupal villages	2020 December	150.0	Construction of drain, toilet blocks, internal road & waste water management system in Mollachak, Sadatpur & Keshupal villages	2022 December	170.0
2	S.N.1	Approach road	Laying of approach road in Latibpur & Kenduapal. Laying of approach road in Prithimpur, Walipur & Keshpur	2019 December	150.0	Approach road made by Govt. Hence proposed to provide toilet blocks, bathroom and drainage work at Keshupal / Risha/ Prithimpur / adjacent village and revival of drinking water project at Kenduapal	2022 December	150.0
3	S.N.2	Vocational training centre for women	Construction of Training Centre in Latibpur for Tailoring, Spoken English & Computer	2019 December	35.0	Completed	2019 December	35.0

Item No.	Social Impact Assessment ref.	As per EC accorded				Amendment requested		
		Issue	Activity	Timeline for Completion	Fund allocation (Lakh)	Activity	Proposed Time line for Completion	Proposed fund allocation (Lakh)
4	S.N.3	Repair of school in Tentuliya	Repairing of Primary School building at Tentuliya	2019 October	5.0	Renovation of schools in nearby village	2022 December	5.0
5	S.N.5	Potable water	Construction of Borewell in Kendupal, Gholagharia & Latibpur	2019 December	20.0	Included in item no. 2	NA	NA
			<b>Total</b>		<b>555.00</b>			<b>555.00</b>

27.11.5 The project proponent has reported that there is no change in project configuration & capacity granted in EC vide File No. J-11011/377/2013-IA-II(I) dated 28/01/2019.

27.11.6 The project proponent has submitted that Consent to Establish (CTE) has been obtained for the entire project expansion. Expansion activity for Captive Power Plant & Ductile Iron Pipe plant is in progress. Captive Power Plant is in advanced stage of construction & will be commissioned by FY'21. Major portion of the Ductile Iron Pipe expansion project is expected to be completed by FY'22, subject to return of economic normalcy. This will be followed by expansion of other facilities (MBF proper & other) to be completed by FY'23.

27.11.7 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**

27.11.8 The Committee noted that due to Covid 19 the execution schedule got disturbed for CER. The PP has requested to permit a revised schedule to be approved and EC amended.

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

27.11.9 In view of the foregoing and after deliberations, the committee recommended for amendment in the EC by incorporating the table mentioned at paragraph no.27.11.4 at paragraph 18 of the EC dated 28/01/2019. All other terms and conditions stated in the said EC shall remain unchanged.

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**ANNEXURE –1**

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

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

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

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

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

**6. Environmental Status**

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQPM 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. To address the Public Hearing issues, provisions contained under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 30/09/2020 shall be complied.
  - 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 summarized 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.

**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 base bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills. Plan for reduction of water consumption.

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

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

**ADDITIONAL ToRs FOR COKE OVEN PLANT**

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

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

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

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

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

## **Executive Summary**

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

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

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