

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

**SUMMARY RECORD OF THE SEVENTH (7<sup>th</sup>) MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE HELD DURING 29-31<sup>st</sup> MAY, 2019 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER THE PROVISIONS OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA) NOTIFICATION, 2006.**

The sixth meeting of the Re-Constituted Expert Appraisal Committee (EAC) for Industry-1 Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-1 Sector Projects was held during 29-31<sup>st</sup> May, 2019 in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim. The minutes of 6<sup>th</sup> meeting held during 29-30<sup>th</sup> April, 2019 were confirmed by the EAC and already uploaded on Parivesh portal. Following corrections have been made on the uploaded minutes with respect to item no. 6.15 i.e., proposal of M/s. KIC Metaliks Limited.

6.15 *Proposed expansion of Pig Iron Plant (from 0.21 MTPA to 0.587 MTPA), Integrated Steel Plant comprising of 0.387 MTPA TMT Rods, Angles and Channels and 0.20 MTPA of Pipes by M/s. **KIC Metaliks Limited** located at Raturia Industrial Area, Angadpur, Durgapur, District Pashchim Bardhaman, **West Bengal** [Proposal No. IA/WB/IND/5612/2011; MoEF&CC File No. J-11011/556/2009-LAI(I)]- **Environment Clearance** -regarding.*

**Reference: Section 6.15.7 at page 79-80 of 130 given table may read as**

Unit	Initial configuration as per ToR	Revised Configuration	Final Configuration	Capacity
MBF	245 m <sup>3</sup> MBF	--	245 m <sup>3</sup> MBF	2,35,000 TPA
Sinter Plant	2x25 m <sup>2</sup>	--	2x25 m <sup>2</sup>	3,60,000 TPA
DRI	2x350 TPD	--	2x350 TPD	2,24,000 TPA
CPP(WHRB)	14 MW	--	14 MW	14 MW
CPP(AFBC)	11 MW	--	11 MW	11 MW
CPP Gas Fired	5 MW	--	5 MW	5 MW
EAF WITH LF&VD	1x30 T	--	1x30 T	3,87,000 TPA

<b>Unit</b>	<b>Initial configuration as per ToR</b>	<b>Revised Configuration</b>	<b>Final Configuration</b>	<b>Capacity</b>
IF	4x15 T	--	4x15 T	
	2x20 T	Dropped	--	
CCM	2x600 TPD	--	2x600 TPD	3,84,000 TPA
Oxygen Plant	50 TPD (VPSA) 100 TPD (ASU)	--	50 TPD (VPSA) 100 TPD (ASU)	4,500 m <sup>3</sup> /hr
Rolling Mill	1200 TPD	--	1200 TPD	3,78,000 TPA
Nitrogen Plant	50 TPD (PSA)	--	50 TPD (PSA)	5,500 m <sup>3</sup> /hr
PCI plant	1x100 TPD	--	1 x 100 TPD	32,000 TPA
DI Pipes	2x0.11 MTPA	Dropped	--	--
Cement Grinding Unit	300 TPD	Expansion to 300 TPD Dropped	100 TPD	30,000 TPA
Ferro Alloy Plant	2x9 MVA	Dropped	Dropped	--

**29<sup>th</sup> May, 2019**

- 7.1 Establishment of Integrated Steel Plant [DRI Kilns (3,30,000 TPA), Induction Furnace with Concast (MS Billets/Hot metal for hot charging) along with 1 x 35 T Ladle Refining Furnace (LRF) & 1 x 3 Strand Billet Caster (3,56,400 TPA), Rolling Mill (3,56,400 TPA), Power Generation – 50 MW (24 MW through Waste Heat Recovery Boiler (WHRB) and 26 MW through Fluidized bed combustion (FBC) Boiler) by M/s Ankur Udyog Limited (Steel Division) located at Plot No. AL-2, Sector 23, GIDA Industrial Area, Village Sahbazganj&Domharmafi, Tehsil Sahjanwa, District Gorakhpur, Uttar Pradesh [Online proposal No. IA/UP/IND/75680/2018; MoEF&CC File No. J-11011/416/2017-IA.II(I)] – Reconsideration for grant of Environmental Clearance based on ADS reply – regarding.**

M/s. Ankur Udyog Limited (Steel Division) has made an online application vide proposal no. IA/UP/IND/75680/2018 dated 19<sup>th</sup> January, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

**Details submitted by the Project Proponent**

- 7.1.2** The proposed project of Mini Integrated Steel Plant of **M/s. Ankur Udyog Limited (Steel Division)** located at Plot No. AL-2, Sector 23, GIDA Industrial Area, Sahbazganj and Domharmafi Villages, Sahjanwa Tehsil, Gorakhpur District, Uttar Pradesh was initially received in the Ministry on 2<sup>nd</sup> July 2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised in 34<sup>th</sup> EAC (Industry-1) meeting held on 6<sup>th</sup> to 7<sup>th</sup> August 2018 for prescribing ToR to the proposed project for undertaking detailed EIA study for obtaining Environmental Clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR to the project on 20<sup>th</sup> August 2018 vide Lr. No. IA-J 11011/146/2017-IA.II(I).
- 7.1.3** The proposed Mini Integrated Steel Plant envisages manufacturing of the following units and products:

S.No.	Units	Product	Plant Configuration	Production Capacity
1.	DRI Kilns	Sponge Iron	2 x 500 TPD	3,30,000 TPA
2.	Steel Melt Shop (Induction furnace 1,080 TPD, Ladle Refining Furnace 1 x 35t & Billet Caster 1 x 3 Strand.	MS Billets / Hot metal for hot charging	1,080 TPD	3,56,400 TPA
3.	Rolling Mill	MS Re-Bars	1,080 TPD	3,56,400 TPA

S.No.	Units		Product	Plant Configuration	Production Capacity
			(TMT) & Structural Steel		
4.	Power Generation	WHRB	Electricity	2 x 50 TPH	24 MW
		CFBC Boiler	Electricity	1 x 110 TPH	26 MW

- 7.1.4 The total land earmarked for the proposed project will be 79 acres (32 Ha.) The land has been taken on lease from Gorakhpur Industrial Development Authority (GIDA). No forest land involved. No River / stream passes through the plant area. It has been reported that no natural water body / stream exists in the plant area. A drain is passing adjacent to the Project Boundary in NE direction and no modification / diversion in the existing natural drainage pattern at any stage has not been proposed.
- 7.1.5 The topography of the area is flat and reported to lies between 26.7539.22° to 26.762708° North latitude and 83.202008° to 83.207189° East longitude in Survey of India Topo sheet no. 63 N/1 at an elevation of 80 m AMSL. The ground water table reported to ranges between 1.47 to 4.49 m bgl below the land surface during the post-monsoon season and 4.38 to 7.66 mbgl below the land surface during the pre-monsoon season.
- 7.1.6 There are no notified National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ migratory routes for Birds within 10 Km. radius of the plant. There are no Schedule- I fauna exists in the study area.
- 7.1.7 Process details are provided in the EIA report and list of raw materials for the proposed project are given as below:

S.No.	Raw Material		Quantity (TPA)	Source	Mode of Transport
For DRI Kilns (Sponge Iron) – 3,30,000 TPA					
1	Iron Ore		2,37,600	Odisha, NMDC	By Rail
2	Iron Ore Pellets		2,97,000	Odisha	By Rail
3	Coal	Indian Coal	4,29,000	Jharkhand	By Rail
		Imported Coal	2,97,000	Indonesia / South Africa / Australia	Through sea route & Rail
4	Dolomite		16,500	Local Area	By road (through covered trucks)
For Steel Melting Shop (MS Billets) – 3,56,400 TPA					
1	Sponge Iron		3,30,000	Own generation	----
2	MS Scrap / Pig		1.00,000	Local Area	By road

S.No.	Raw Material		Quantity (TPA)	Source	Mode of Transport
	Iron				(through covered trucks)
3	Ferro alloys		5,300	Local Area	By road (through covered trucks)
For Rolling Mill (TMT bars & Structural Steel) – 92,400 TPA (1 x 280 TPD) (through Re-Hearing Furnace)					
1	MS Billets		66,000 34,000	Own generation & Chhattisgarh, West Bengal, Local Area	----  By Rail / Road (through covered trucks)
2	Furnace oil (OR) Pulverized Coal		4,620 18,500	Local Market Jharkhand	By road (through covered trucks) By Rail
For Rolling Mill (MS Re-Bars & Structural Steel) – 2,64,000 TPA (through hot charging) 1 x 800 TPD					
1	Hot metal		2,90,400	Own generation	Internal online charging through CCM
For CFBC Boiler - Power Generation 26 MW					
1	Dolochar		99,000	Own generation	----
2	Coal	Indian Coal	1,40,400	Jharkhand, UP, MP	By rail
		Imported Coal	90,000	Indonesia / South Africa / Australia	Through sea route & Rail
3	Rice Husk		40,000	Local Market	By road (through covered trucks)

7.1.8 The targeted production capacity of the plant is Sponge Iron of 0.33 million TPA, TMT bars / Structural Steels of 0.35 million TPA & Power Generation of 50 MW. Imported Coal would be supplied by **M/s. Kan Minerals, Visakhapatnam**. Imported Coal transportation will be done by rail from Vizag port to the site. Iron Ore, Iron Ore fines will be transported from Odisha by rail directly at the site. In the proposed project Railway siding at the site is envisaged.

7.1.9 Water requirement for the proposed project will be 1800 KLD, which will be sourced from Ground Water. Water drawl permission from CGWA is under process. Air cooled

condensers will be provided in Captive power plant to significantly reduce the water consumption.

- 7.1.10 Total power required for the proposed plant operations will be 50 MW which will be sourced from the captive power plant of 50 MW. Power during construction and back up load of ~ 10 MW will be procured from state grid i.e. Purvanchal Vidyut Vitran Nigam Limited (PuVVNL).
- 7.1.11 Baseline Environmental Studies were conducted during winter season i.e. From 1<sup>st</sup> March to 31<sup>st</sup> May 2018. Ambient air quality monitoring has been carried out at eight (8) locations and the data submitted indicated: PM<sub>2.5</sub> (25.2 to 48.9 µg/m<sup>3</sup>), PM<sub>10</sub> (44.5 to 82.7 µg/m<sup>3</sup>), SO<sub>2</sub> (7.4 to 14.8 µg/m<sup>3</sup>), NO<sub>x</sub> (8.1 to 24.8 µg/m<sup>3</sup>) & CO (394 to 1350 µg/m<sup>3</sup>). The results of the modeling study indicates that the maximum increase of GLC due to the operation of proposed units & Vehicular emissions will be 3.1 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, 14.5 µg/m<sup>3</sup> with respect to SO<sub>2</sub>, 14 µg/m<sup>3</sup> with respect to NO<sub>x</sub> & 2.3 µg/m<sup>3</sup> with respect to CO.
- 7.1.12 Ground water quality has been monitored at eight (8) locations in the study area are analysed. The data submitted indicated pH: 7.2 to 8.1, Total Hardness: 211 to 283 mg/l, Chlorides: 158 to 206 mg/l, Fluoride: 0.75 to 1.1 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from four (4) locations in the study area and analysed. The data submitted indicated pH: 7.3 to 7.8 and DO: 3.2 to 4.2 mg/l.
- 7.1.13 Noise levels are in the range of 44.40 dBA to 65.45 dBA during 1<sup>st</sup> March to 31<sup>st</sup> May 2018.
- 7.1.14 It has been reported that there are no people residing in the project site. The project is situated in Gorakhpur Industrial Development Area (GIDA). No R&R is involved.
- 7.1.15 It has been reported that the following Solid wastes will be generated from the project which will be stored in storage yard above the ground level. Fly ash will be stored in Silo.

S.No.	Waste	Quantity (TPA)	Proposed method of disposal
1	Ash from DRI	59,400	Will be given to Cement Plants & Brick manufacturers.
2	Dolochar	99,000	Will be used in CFBC Boiler as fuel.
3	Kiln Accretion Slag	2,970	Will be used in road construction & given to brick manufacturers.
4	Wet scrapper sludge	15,180	Will be used in road construction & given to brick manufacturer.

S.No.	Waste	Quantity (TPA)	Proposed method of disposal
5	SMS Slag	35,640	Slag from SMS will be crushed and iron will be recovered & then remaining non -magnetic material being inert by nature will be used as sub base material in road construction.
6	End Cuttings from Rolling Mill	10,692	Will be reused in the SMS
7	Mill scales from Rolling Mill	7,128	Mill scales will be given to nearby Ferro alloys manufacturing units / casting units.
8	Ash from Power Plant (with Indian Coal + dolochar)	1,00,305	Ash generated is being given to Cement Plants / Brick Manufacturers.
9	Ash from Power Plant (with imported Coal + dolochar)	66,381	Ash generated is being given to Cement Plants / Brick Manufacturers.

7.1.16 It has been reported that an area of **10.9 ha** will be developed as green belt out of total plant area **32 ha** to attenuate the noise levels and trap the dust generated due to the project development activities.

7.1.17 Public Hearing of the project was held on 09-10-2018 at project site under the chairmanship of Shri. VijendraPandiyani (District Magistrate, Gorakhpur) for production of 0.33 million TPA of Sponge Iron, 0.35 million TPA of MS Billets, 0.35 million TPA of MS Re-Bars (TMT) / Structural Steels & Power Generation of 50 MW. The issues raised during public hearing are related to crop damage, control of Air pollution, Water Pollution, Plantation, Employment, CER etc. The statement of main issues raised by the public and response of the project proponent with action plan is furnished as below.

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
1	Land which has been allotted by GIDA to the proposed industry, that land was acquired from farmers, regarding which, no	Land has been taken on lease from Gorakhpur Industrial Development Authority (GIDA). Entire payment has been made by the company to GIDA for the entire land. Copy of the lease deed has	----	----	----

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
	compensation has been received till date.	been enclosed in the EIA report. Entire payment as per norms has been made by Gorakhpur Industrial Development Authority (GIDA) to all concerned farmers pertaining to the land on which the project is proposed.			
2	Due to installing deep tube wells by the Industries for use of underground water, the underground water level is going down, due to which, the hand pumps of villagers are getting waterless.	The plant area is categorized as SAFE zone. The Average Annual rainfall in the area is 1221 mm. An application has been submitted to CGWA for drawl of ground water. Groundwater permission from the concern Authority for drawl of water will be obtained prior to commissioning of the proposed project. Rainwater harvesting measures proposed will help in augmentation of ground water table.	Within 3 months of commissioning of plant	Rs.15 Lakhs	---
3	The nearby villagers are also not being employed in the industries. Therefore, all of us oppose the same.	Top priority will be given to local people in providing employment.	---	---	---
4	Even though management is giving undertaking for controlling the same before setting up of industry, but, after the set up, same are not complied and nearby people get affected by the pollution.	In the proposed project all required air emission control systems such as ESP, Bag filters, dust suppression system, covered conveyers, pucca internal roads, Dust extraction system with bag filters will be installed and operated to comply with the SPCB norms. Interlocking system will be provided to ESP and whenever ESP fails, the raw	Implemented parallel with implementation of the proposed project	Rs 28 Crores is earmarked for Environmental Protection Measures	Rs. 185 Lakhs / Annum



S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
		<p>material feed to the unit will be stopped and after rectification of the ESP only production in that unit will commence. Net Resultant Ground Level Concentrations are within the National Ambient Air Quality standards. Pucca internal roads will be laid to prevent fugitive dust emanation. Greenbelt development in 1/3rd of the total land area also reduces the emissions further.</p> <p>The wastewater generated from the Rolling Mill will be sent to settling tank and will be recycled back to the process. Closed loop cooling system will be adopted in DRI &amp; SMS units. Effluent from power plant will be treated and after ensuring compliance with SPCB norms, it will be utilized for dust suppression, ash conditioning and for greenbelt development. Sanitary wastewater will be treated in septic tank followed by sub-surface dispersion.</p> <p>Solid wastes such will be stored in designated storage yard. Ash generated will be stored in silos only. There will not be any open storage of fly ash. Fly ash utilization will be in accordance with MOEF&amp;CC notification. It is assured that all</p>			

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
		required Environmental protection measures will be implemented and operated to ensure compliance with the norms. Health check up will be carried out in the villages periodically. Hence There will not be any adverse impact on health of the people in the area.			
5	M/s. Gallant Ispat Ltd. is established and is in operation, which is situated adjacent to the proposed Industry in the western side. From the huge air pollution being generated from M/s. Gallant Ispat Ltd., the nearby people are being affected badly. A huge amount of ash is poured down on the terrace and residential premises of the villagers, due to which, people are getting suffered from diseases like Asthema and T.B.	The issue is not related to the present proposal. However in the proposed project all required air emission control systems such as ESP, Bag filters (PTFE/glass fiber type), dust suppression system, covered conveyers, pucca internal roads, and Dust extraction system with bag filters will be installed and operated to comply with the SPCB norms. Interlocking system will be provided to ESP and whenever ESP fails, the raw material feed to the unit will be stopped and after rectification of the ESP only production in that unit will commence. Bag houses will be designed for 50% excess volumetric flow rate. Net Resultant Ground Level Concentrations are within the National Ambient Air Quality standards. Pucca internal roads will be laid to prevent fugitive dust emanation. Greenbelt development in 1/3rd of the total land area also	Implemented parallel with implementation of the project	In the proposed project Rs. 28 Crores is earmarked for Environmental Protection Measures	Rs.185 Lakhs / Annum

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
		<p>reduces the emissions further.</p> <p>Ash generated will be stored in silos only. There will not be any open storage of fly ash. Fly ash utilization will be in accordance with MOEF&amp;CC notification.</p> <p>It is assured that all required Environmental protection measures will be implemented and operated to ensure compliance with the norms.</p> <p>Health check up will be carried out in the villages periodically. Hence There will not be any adverse impact on health of the people in the area due to the proposed project.</p>			
6	All of us villagers are suffering from the water/air/noise pollution generated by Gallant Ispat Ltd.	<p>Not related to this proposal. However, in the proposed project all required air emission control systems such as ESP, Bag filters (PTFE/glass fibre type), dust suppression system, covered conveyers, pucca internal roads, and Dust extraction system with bag filters will be installed and operated to comply with the SPCB norms. Interlocking system will be provided to ESP and whenever ESP fails, the raw material feed to the unit will be stopped and after rectification of the ESP only production in that unit will commence. Net Resultant Ground Level</p>	Implemented parallel with implementation of the project	<p>In the proposed project Rs. 28 Crores is earmarked for Environmental Protection Measures</p>	Rs. 185 Lakhs / Annum

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
		<p>Concentrations are within the National Ambient Air Quality standards. Pucca internal roads will be laid to prevent fugitive dust emanation.</p> <p>Acoustic enclosures will be provided STG and the ambient noise levels will be within the stipulated standards.</p> <p>Greenbelt development in 1/3rd of the total land area also reduces the air emissions further. It is proposed to develop more Greenbelt in the North East, East Directions.</p> <p>Health check up will be carried out in the villages periodically. Hence There will not be any adverse impact on health of the people in the area due to the proposed project.</p>			
7	PA's have not given the details of ETP/STP/WTP. ETP etc. in the EIA report. If these facilities not installed by the Industries, due to which the ground water is getting polluted.	<p>The wastewater generated from the Rolling Mill will be sent to settling tank and will be recycled. There will be no Effluent discharge from DRI &amp; SMS units as closed loop cooling system is proposed to be adopted. Effluent from power plant will be treated and after ensuring compliance with SPCB norms, it will be utilized for dust suppression, ash conditioning and for greenbelt development. Sanitary wastewater will be treated in septic tank followed by sub-surface</p>	Implemented parallel with implementation of the project	In the proposed project Rs 2.25 Crores is earmarked for Wastewater Management	Rs.14 Lakhs / Annum

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
		dispersion. ETP details are shown in chapter-10 of EIA report. Zero Liquid effluent discharge will be maintained in the proposed plant. No effluent will be discharged outside the plant premises. Ground water quality will be monitored every month and reports will be submitted to MOEF&CC, UPPCB.			
8	Due to the outflow of excessive quantity of polluted water by the M/s. Gallant Ispat Ltd. through the drain flowing adjacent to it, the water quality of Aami River is also getting affected and aforesaid drain have been made very congested by the proposed Industry and M/s. Gallant Ispat Ltd. This drain was natural drain, which has been diverted and industry has been set up in it's place.	A drain passes just outside the plant premises. No encroachment of drain by our company.  As per the directions of the District Magistrate, the management has agreed to strengthen the drain that is passing adjacent to the proposed project site.  Ground water quality has been monitored in Aami River and the water quality is in accordance with the norms.	1 <sup>st</sup> year of operation	Rs 10 lakhs	---
9	Steel Industries are being established at the proposed place, whereas, earlier, this rumor was spread by the Govt. that textile industry would be established in this area belongs to Gorakhpur Industrial Area.	The company has been allotted the land in the State Govt. notified Industrial Area of Gorakhpur, by the Gorakhpur Industrial Development Authority (GIDA) in the year 2010 for setting up an Integrated Steel Plant and Textile industry. Copy of the lease deed	---	---	---

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
		has been enclosed in the EIA report. The land is being utilized for establishment of a mini integrated steel plant.			

7.1.18 An amount of Rs.5.45 Crores(As per Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018) has been earmarked for Corporate Environment Responsibility (CER) based on public hearing issues. The details of CER proposed are as follows:

S.No.	Major Activity Heads	Years (Rs. in Crores)			Total Expenditure (Rs.in Crores)
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	
<b>A</b>	<b>Based on Social Impact Assessment (SIA)</b>				
1	Community & Infrastructure Development Programs (construction of 10 nos. of toilets in 5 nos. of schools in Sahjanwa Town, Jigna, Ujkar&Domhar villages under Swachh Bharat (10 nos. @ Rs 2 lakhs/toilet), renovation of 3 nos. of school buildings (Rs. 10 Lakhs), drainage facilities in Sahjanwa Town (20 lakhs), Maintenance & repairs of roads (Rs.50 Lakhs), Community Hall in Sahjanwa Town (Rs. 50 Lakhs).	0.5	0.5	0.5	1.5
2	for Health & Hygiene of the community (Medical Camps, Mineral Water plants, construction toilets in villages, PHC, Ambulance facility, Distribution of Medicines etc.)	0.3	0.3	0.3	0.9
3	A Community Centre will be established in the village which will consist of the following:				
i.	Vocational Training Institute with latest tools, machinery &softwares etc. for making them Industry ready.	0.15	0.15	0.1	0.4
ii.	Workshop centre with latest tailoring machines for training women (like tailoring, stitching etc.)	0.2	0.1	0.1	0.4
iii.	Skill development / Computer / IT Training Centre for improving computer knowledge and making Industry ready.	0.1	0.1	0.1	0.3
4	for Education & Sports (Merit Scholarships (for ), construction of class rooms in schools, providing computers in class	0.1	0.1	0.1	0.3

S.No.	Major Activity Heads	Years (Rs. in Crores)			Total Expenditure (Rs.in Crores)
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	
	rooms, development of library facility)				
5	Bore wells / RWH pits in nearby villages	0.05	0.05	0.05	0.15
6	Other Need based activities	0.5	0.5	0.3	1.3
	<b>Sub Total – A</b>	<b>1.90</b>	<b>1.80</b>	<b>1.55</b>	<b>5.25</b>
<b>B</b>	<b>Based on Public Consultation</b>				
1	Greenbelt development outside the Plant Boundary & in Village (4000 nos. will be planted and maintained)	0.05	0.03	0.02	0.1
2	Strengthening of Drain passing through adjacent to the Boundary	0.1	0.0	0.0	0.1
	<b>Sub Total (B)</b>	<b>0.09</b>	<b>0.06</b>	<b>0.05</b>	<b>0.2</b>
	<b>Total (A+B)</b>	<b>1.99</b>	<b>1.86</b>	<b>1.6</b>	<b>0.3</b>

7.1.19 The capital cost of the project is Rs.330 Crores and the capital cost forenvironmental protection measures is proposed as Rs. 28 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 185 Lakhs /annum. The employment generation is 500 people during operation of the proposed project and 1000 people during construction of the proposed units.

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

S.No	Item	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Lacs)
1.	<b>Air Emission Management</b>		
	ESPs	8.0	60
	Fume extraction systems with Bag filters	5.5	15
	Dust Extraction systems with Bag filters	1.0	5
	Chimneys	3.0	2
	CAAQS	1.2	1
	CEMS	1.5	1
	Water Sprinklers	0.2	1.5
	Environment Monitoring	0.5	12.5
	<b>Total (A)</b>	<b>20.9</b>	<b>98</b>
2.	<b>Wastewater Management</b>		
	ETP	1.85	10
	Settling ponds	0.1	1
	Garland drains	0.05	1
	Monitoring	0.1	2
	<b>Total (B)</b>	<b>2.25</b>	<b>14</b>

S.No	Item	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Lacs)
3.	<b>Solid waste Management</b>		
	Ash handling system	3.0	40
	Construction of Pucca Platform for storage	0.5	2
	Hazardous & Municipal solid waste storage	0.1	1
	<b>Total (C)</b>	<b>3.6</b>	<b>43</b>
4.	Greenbelt development, Land scaping Noise Management	0.25	10
5.	Rainwater Harvesting	0.15	--
5.	Occupational Health & Safety	1.0	20
	<b>TOTAL</b>	<b>28.0</b>	<b>185</b>

- 7.1.21 Greenbelt will be developed in 10.9 Ha. (27 Acres) which is about 33% of the total land area proposed for the project. Greenbelt width varying from 10 to 130 m will be developed all around the plant consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB guidelines. Total of 17,000 nos. of saplings will be planted and nurtured in 10.9 hectares during the 1<sup>st</sup> monsoon soon after commencement of operation.
- 7.1.22 The proponent has mentioned that no litigation is pending against the project as on date. Writ petitions were filed before the Hon'ble High Court of Allahabad (Writ C no. 1110/2011 & 4513/2011) against land allotment by GIDA to ANKUR UDYOG LIMITED. The Hon'ble High Court of Allahabad after hearing the matter was pleased to dismiss the Writ petitions, vide its order dated 02-07-2018. After that TOR has been granted by the Ministry. Final EIA has been submitted online on 13<sup>th</sup> October, 2018. Subsequently Special Leave Petitions were filed before the Hon'ble Supreme Court of India (SLP (C) No. 27615/2018 & 30927/2018). The Hon'ble Supreme Court of India after hearing the matter was pleased to dismiss the petitions, vide its order dated 16-01-2019 stating that "We see no reason to interfere with the well reasoned judgement of the High Court of Allahabad". Consequent to the above order of the Hon'ble Supreme Court of India no litigation is pending against the project / land on which the project is proposed as on date.
- 7.1.23 Name of the consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd, Hyderabad [S.No. 117, List of QCI Accredited Consultant Organizations (Alphabetically) Rev. 73, February 08, 2019].
- 7.1.24 The proposal was placed before 4<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held during 20-22<sup>nd</sup> Feb, 2019. The Committee noted that the details regarding transportation of raw materials, CER action plan, hydrogeology of the area etc., have not been adequately covered in the EIA/EMP report. Further, the approval from Competent Authority for the ground water drawl was yet to be obtained.



7.1.25 After detailed deliberations, the Committee sought the following additional information for further re-consideration of the proposal.

- i. Confirmation regarding the transportation of iron ore, fluxes and coal only by Rail by providing dedicated railway siding to the plant site.
- ii. Explore the possibility of use of river water/ water from the other industries located in the Gorakhpur industrial area in order to reduce the ground water drawl.
- iii. Scheme for ground water recharge more than the amount extracted from the ground shall be submitted. The recharge can be done within the factory premises and outside the factory premises also.
- iv. Particulate matter emissions from the process stacks shall be less than 30 mg/Nm<sup>3</sup>.
- v. Point wise issues raised during the public hearing in verbatim shall be prepared along with time bound action plan with fund allocation for the implementation of the issues raised in public hearing.
- vi. Scheme for achieving zero liquid discharge shall be submitted.
- vii. CER action plan shall be reworked and submitted. This should include skill developmental program to ensure 70% employment of local inhabitants.
- viii. Confirmation regarding use of FO only in reheating furnace.
- ix. Study on hydrogeology of the area shall be submitted.
- x. Permission for withdrawal of ground water shall be submitted.

7.1.26 Project Proponent replied online to the additional details sought vide letter dated 07.03.2019.

<i>Point No. 1</i>	Confirmation regarding the transportation of iron ore, fluxes and coal only by Rail by providing dedicated railway siding to the plant site.
Reply No. 1	<p>We do hereby confirm that we have proposed a dedicated Railway siding for transportation of iron ore &amp; coal up to the plant site. These materials will be brought to the plant site through railways only.</p> <p>Application has been submitted to North Eastern Railways for approval of railway siding.</p> <p>Accordingly in-Principle Approval (IPA) has been received from N. E. Railways (NER) for construction of Private / Dedicated Rail Siding for the project and a copy of the same is shown in Subsequent slide.</p>
<i>Point No. 2</i>	<i>Explore the possibility of use of river water/ water from the other industries located in the Gorakhpur industrial area in order to reduce the ground water drawl.</i>
Reply No. 2	<p>We would like to bring to your kind notice that Rapti river is situated beyond Sahjanwa town. It is also to be noted that the project site is locked by Rail Line on the North, NH #28 on the South, Another running Industry on the West and Rural settlement on the East, Hence laying a dedicated pipeline may not be feasible.</p>

	<p>We definitely explore the possibility of using other industrial treated effluent (condensate) provided it meets the quality requirement.</p> <p>We also would like to bring to your kind notice that we have received NOC No. CGWA/NOC/IND/ORIG/2019/4878 dated 12<sup>th</sup> March 2019 from CGWA for extraction of 1800 KLD (6,21,875 Cum/year) of Groundwater.</p> <p>We have also proposed ground water recharge for 1916 KLD which more than the industry consumption.</p>								
Point No. 3	<i>Scheme for ground water recharge more than the amount extracted from the ground shall be submitted. The recharge can be done within the factory premises and outside the factory premises also.</i>								
Reply No. 3	<p>The total water requirement for the plant operations will be 1800 KLD (5,94,000 KL/annum)</p> <p>As per the recommendation of Expert Appraisal Committee of MOEF&amp;CC, we propose to artificially recharge more than the consumption. Hence it is proposed to harvest around 1,916 KLD or 6,32,262 KL /Annum.</p> <p>The potential rain water that can be recharged / collected will be 165827 m<sup>3</sup>/year i.e. 500 KLD within the factory premises.</p> <p>Additional 1416 KLD of water will be recharged by providing Recharge pits outside the premises i.e. in nearby villages.</p> <p>Industry will develop the artificial recharge system and has preliminary identified ponds of 5 no. of villages (Sihapaar, Domharmafi, Bangava, Deipaar, Jagdishpur) of sahjanwa block.</p> <p>The detailed Scheme for ground water recharge is submitted.</p>								
Point No. 4	<i>Particulate matter emissions from the process stacks shall be less than 30 mg/Nm<sup>3</sup>.</i>								
Reply No. 4	<p>We do hereby confirm that we will provide all air emission control systems with an outlet particulate emission of less than 30 mg/Nm<sup>3</sup>.</p> <p>The following air emission control systems proposed in the project</p> <table><tr><th>S.No.</th><th>Source</th><th>Control Equipment</th><th>Emission at the outlet</th></tr><tr><td>1</td><td>DRI kilns with WHRBs</td><td>Electro Static Precipitators (ESP) – 2 nos.</td><td>PM ≤ 30 mg/Nm<sup>3</sup></td></tr></table>	S.No.	Source	Control Equipment	Emission at the outlet	1	DRI kilns with WHRBs	Electro Static Precipitators (ESP) – 2 nos.	PM ≤ 30 mg/Nm <sup>3</sup>
S.No.	Source	Control Equipment	Emission at the outlet						
1	DRI kilns with WHRBs	Electro Static Precipitators (ESP) – 2 nos.	PM ≤ 30 mg/Nm <sup>3</sup>						

	2	Induction Furnaces with CCM	Fume Extraction system with bag filters with each furnace.	PM $\leq$ 30 mg/Nm <sup>3</sup>
	3	Rolling Mill	Stacks of Adequate height	----
	4	CFBC Boiler	Electro Static Precipitator	PM $\leq$ 30 mg/Nm <sup>3</sup>
Point No. 5	Point wise issues raised during the public hearing in verbatim shall be prepared along with time bound action plan with fund allocation for the implementation of the issues raised in public hearing			
Reply No. 5	<p>Public Consultation for Proposed project of M/s. Ankur Udyog Limited has been conducted by Uttar Pradesh Pollution Control Board (UPPCB) under the chairmanship of District Magistrate on 09-10-2018 in the Site premises at Sector 23, GIDA, Gorakhpur (D), U.P.</p> <p>Point wise issues raised during the public hearing along with time bound action plan with fund allocation for the implementation of the issues raised in public hearing is shown in subsequent slides.</p>			

Point wise issues raised during the public hearing along with time bound action plan with fund allocation for the implementation of the issues raised in public hearing is shown in subsequent slides.

S. No	Name of the Person	Issue raised	Management Response	Time schedule	Budgetary allocation	Recurring cost
1	Sri. Vijay Kumar, Village-Sahabganj	(i) Land which has been allotted by GIDA to the proposed industry, that land was acquired from farmers, regarding which, no compensation has been received till date.	Land has been taken on lease from Gorakhpur Industrial Development Authority (GIDA). Entire payment has been made by the company to GIDA for the entire land. Copy of the lease deed has been enclosed in the EIA report. A copy of the letter issued by GIDA confirming the receipt of total payment from the company is shown in next page. Entire payment as per norms has been made by Gorakhpur Industrial Development Authority (GIDA) to all concerned farmers pertaining to the land on which the project is proposed.	----	----	----
		(ii) Due to	Central Ground Water	Within 1	Rs.30	---

	installing deep tube wells by the Industries for use of underground water, the underground water level is going down, due to which, the hand pumps of villagers are getting waterless.	<p>Authority (CGWA) has accorded NOC for Groundwater drawl of 1800 KLD (6,21,875 Cum/year) vide no. CGWA/NOC/IND/ORIG/2019/4878 dated 12<sup>th</sup> March 2019.</p> <p>The plant area is categorized as SAFE zone. The Average Annual rainfall in the area is 1221 mm.</p> <p>As per As per State Ground Water Board, Govt. of Uttar Pradesh, the depth of ground water table from the years 2008 to 2017 @ shajanwa is varying from 3.15 mbgl to 4.25 mbgl during Pre-monsoon &amp; 1.93 mbgl to 3.8 mbgl during Post-monsoon.</p> <p>Ground water recharging has been proposed for quantity more than that of drawl quantity.</p> <p>Ground water table will be monitored periodically and the data will be submitted to MOEF&amp;CC, SPCB periodically.</p>	year of commissioning of plant	Lakhs	
	(iii) The nearby villagers are also not being employed in the industries. Therefore, all of us oppose the same.	Top priority will be given to local people in providing employment.	---	---	---

Contd.. Sri. Vijay Kumar, Village- Sahabgan j	(iv) Even though management is giving undertaking for controlling the same before setting up of industry, but, after the set up, same are not complied and nearby people get affected by the pollution.	In the proposed project all required air emission control systems such as ESP, Bagfilters, dust suppression system, covered conveyers, pucca internal roads, Dust extraction system with bag filters will be installed and operated to comply with the SPCB norms. Interlocking system will be provided to ESP and whenever ESP fails, the raw material feed to the unit will be stopped and after rectification of the ESP only production in that unit will commence. Net Resultant Ground Level Concentrations are within the National Ambient Air Quality standards. Pucca internal roads will be laid to prevent fugitive dust emanation. Greenbelt development in 1/3rd of the total land area also reduces the emissions further. The wastewater generated from the Rolling Mill will be sent to settling tank and will be recycled back to the process. Closed loop cooling system will be adopted in DRI & SMS units. Effluent from power plant will be treated and after ensuring compliance with SPCB norms, it will be utilized for dust suppression, ash conditioning and for greenbelt development. Sanitary wastewater will be treated in STP and treated sewage will be utilised for greenbelt development	Implemented parallel with implementation of the proposed project	Rs. 28.4 Crores is earmarked for Environmental Protection Measures	Rs. 186 Lakhs / Annum
--	---	--	--	--	-----------------------

			<p>Solid wastes such will be stored in designated storage yard. Ash generated will be stored in silos only. There will not be any open storage of fly ash. Fly ash utilization will be in accordance with MOEF&amp;CC notification .</p> <p>It is assured that all required Environmental protection measures will be implemented and operated to ensure compliance with the norms.</p> <p>Health check up will be carried out in the villages periodically. Hence There will not be any adverse impact on health of the people in the area.</p>			
Contd.. Sri. Vijay Kumar, Village- Sahabganj	(v) M/s. GallentIspat Ltd. is established and is in operation, which is situated adjacent to the proposed Industry in the western side. From the huge air pollution being generated from M/s. Gallant Ispat Ltd., the nearby people are being affected badly. A	<p>The issue is not related to the present proposal. However in the proposed project all required air emission control systems such as ESP, Bagfilters (PTFE/glass fiber type) , dust suppression system, covered conveyers, pucca internal roads, Dust extraction system with bag filters will be installed and operated to comply with the SPCB norms. Interlocking system will be provided to ESP and whenever ESP fails, the raw material feed to the unit will be stopped and after rectification of the ESP only production in that unit will commence. Bag houses will be designed for 50% excess volumetric flow rate.</p> <p>Net Resultant Ground Level Concentrations are within</p>	Implemente d parallel with implementa tion of the project	In the proposed project Rs. 28.4 Crores is earmarked for Environme ntal Protection Measures	Rs.186 Lakhs / Annum	

		huge amount of ash is poured down on the terrace and residential premises of the villagers, due to which, people are getting suffered from diseases like Asthema and T.B.	the National Ambient Air Quality standards. Pucca internal roads will be laid to prevent fugitive dust emanation. Greenbelt development in 1/3rd of the total land area also reduces the emissions further. Ash generated will be stored in silos only. There will not be any open storage of fly ash. Fly ash utilization will be in accordance with MOEF&CC notification. It is assured that all required Environmental protection measures will be implemented and operated to ensure compliance with the norms. Health check up will be carried out in the villages periodically. Hence There will not be any adverse impact on health of the people in the area due to the proposed project.			
Contd.. Sri. Vijay Kumar, Village-Sahabganj	(vi) All of us villagers are suffering from the water/air/noise pollution generated by Gallant Ispat Ltd.	Not related to this proposal. However in the proposed project all required air emission control systems such as ESP, Bagfilters (PTFE/glass fibre type), dust suppression system, covered conveyers, pucca internal roads, Dust extraction system with bag filters will be installed and operated to comply with the SPCB norms. Interlocking system will be provided to ESP and whenever ESP fails, the raw material feed to the unit will be stopped and after rectification of the ESP only production in that	Implemented parallel with implementation of the project	In the proposed project Rs. 28.4 Crores is earmarked for Environmental Protection Measures	Rs. 186 Lakhs / Annum	

			<p>unit will commence. Net Resultant Ground Level Concentrations are within the National Ambient Air Quality standards. Pucca internal roads will be laid to prevent fugitive dust emanation.</p> <p>Acoustic enclosures will be provided STG and the ambient noise levels will be with in the stipulated standards.</p> <p>Greenbelt development in 1/3rd of the total land area also reduces the air emissions further. It is proposed to develop more Greenbelt in the North East, East Directions.</p> <p>Health check up will be carried out in the villages periodically. Hence There will not be any adverse impact on health of the people in the area due to the proposed project.</p>			
2	Sri. Yogendra Tiwari	(i)PA's have not given the details of ETP/STP/ WTP. ETP etc. in the EIA report. If these facilities not installed by the Industries, due to which the ground water is getting polluted.	<p>Closed loop cooling water system will be adopted in DRI, SMS, and Rolling Mill units. The effluent generated from Rolling Mill will be sent to settling tank &amp; clear water will be recycled through closed circuit cooling system.</p> <p>Effluent from power plant will be treated in ETP and after ensuring compliance with SPCB norms, it will be utilized for dust suppression, ash conditioning and for greenbelt development.</p> <p>Sanitary wastewater will be treated in Sewage Treatment</p>	Implemented parallel with implementation of the project	In the proposed project Rs 2.5 Crores is earmarked for Wastewater Management	Rs.15 Lakhs / Annum



			<p>Plant (STP) of 20 KLD capacity and treated sewage will be utilised for greenbelt development.</p> <p>No effluent will be discharged outside the plant premises. ZLD will be implemented.</p> <p>ETP details are shown in Chapter-10 of EIA report.</p> <p>The Total quantity of Effluent generation – 247 KLD</p> <p>ETP of Suitable capacity will be installed and treated water will be used for –</p> <p>for ash conditioning : 80 KLD</p> <p>for dust suppression in CHP: 67 KLD</p> <p>for Greenbelt development : 100 KLD</p> <p>Ground water quality will be monitored every month and reports will be submitted to MOEF&amp;CC , UPPCB.</p>			
	Contd.. Sri. Yogendra Tiwari	(ii)Construction of labour hutment and toilets	During construction, labour hutment and toilets will be provided in the plant area.	---	---	---
	Contd.. Sri. Yogendra Tiwari	(iii) Industries do not develop Green belt as promised	Greenbelt will be developed in 1/3rd of the total land area as per CPCB guidelines @ 1500 nos/ha.	During the 1 <sup>st</sup> monsoon after commencement of production	In the proposed project Rs 25 Lakhs is earmarked for Greenbelt development	Rs.10 Lakhs / Annum
	Contd.. Sri. Yogendra	(iv) Village road is occupied by	We are proposing a dedicated railway siding through which major raw	---	---	---

	Tiwari	several trucks	materials will be transported upto the plant site. We will not be using the village road as our approach is directly from NH.			
	Contd.. Sri. Yogendra Tiwari	(v) Fly ash management	Ash generated will be stored in silos only. There will not be any open storage of fly ash. Fly ash will be given to cement plants. Fly ash utilization will be in accordance with MOEF&CC notification	Implemented parallel with implementation of the project	In the proposed project Rs. 3.6 Crores is earmarked for Solid waste Management	Rs.43 Lakhs / Annum
3	Sri. Yogendra Tiwari  &  Sri. Yashpal Rao	Steel Industries are being established at the proposed place, whereas, earlier, this rumor was spread by the Govt. that textile industry would be established in this area belongs to Gorakhpur Industrial Area.	In the lease deed between the company and M/s. GIDA in the year 2010 it has been mentioned that Integrated steel plant and Textile industry will be established in the land. Subsequently the company has now proposed to establish mini integrated steel plant in the said land.	---	---	---
	Contd.. Sri. Yashpal Rao	Due to air pollution pets and cattle are also being affected	The issue is not related to the present proposal. However in the proposed project all required air emission control systems such as ESP, Bagfilters (PTFE/glass fiber type) , dust suppression system, covered conveyers, pucca internal roads, Dust	Implemented parallel with implementation of the project	In the proposed project Rs. 20.9 Crores is earmarked for Air emission Management	Rs.98 Lakhs / Annum

			<p>extraction system with bag filters will be installed and operated to comply with the SPCB norms. Interlocking system will be provided to ESP and whenever ESP fails, the raw material feed to the unit will be stopped and after rectification of the ESP only production in that unit will commence. Bag houses will be designed for 50% excess volumetric flow rate.</p> <p>Net Resultant Ground Level Concentrations are within the National Ambient Air Quality standards. Pucca internal roads will be laid to prevent fugitive dust emanation. Greenbelt development in 1/3rd of the total land area also reduces the emissions further.</p> <p>Ash generated will be stored in silos only. There will not be any open storage of fly ash. Fly ash utilization will be in accordance with MOEF&amp;CC notification.</p> <p>It is assured that all required Environmental protection measures will be implemented and operated to ensure compliance with the norms.</p> <p>Hence there will not be any impact on pets, cattle due to our project.</p>			
4	Contd.. Sri. Yashpal Rao & Sri. Pramod	Location of Plant near population Norms regarding siting of steel	Proposed industry is in Industrial Area. Siting guidelines are not applicable.	---	---	---

	Singh Gram Pradhan Domhar mafi	industry near population				
	Contd.. Sri. Pramod Singh Gram Pradhan Domhar mafi	(i) Due to the outflow of excessive quantity of polluted water by the M/s. Gallant Ispat Ltd. through the drain flowing adjacent to it, the water quality of Aami River is also getting affected and aforesaid drain have been made very congested by the proposed Industry and M/s. Gallant Ispat Ltd. This drain was natural drain, which has been diverted and industry has been set up in it's place.	A drain passes just outside the plant premises. No encroachment of drain by our company.  As per the directions of the Hon'ble District Magistrate, management has agreed to strengthen the drain that is passing adjacent to the proposed project site .  In our plant ZLD system will be followed and there will not be any effluent discharge outside the premises. Hence no impact on Aami river due to the proposed project.	1 <sup>st</sup> year of operation	Rs 10 lakhs	---
7	District Magistrat	What is the plan to	Closed loop cooling water system will be adopted in	Implemente d parallel	In the proposed	Rs.15 Lakhs /

e	ensure water treatment and zero discharge	<p>DRI, SMS and Rolling Mill units. The effluent generated from Rolling Mill will be sent to settling tank &amp; clear water will be recycled through closed circuit cooling system.</p> <p>Effluent from power plant will be treated in ETP and after ensuring compliance with SPCB norms, it will be utilized for dust suppression, ash conditioning and for greenbelt development.</p> <p>Sanitary wastewater will be treated in Sewage Treatment Plant (STP) of 20 KLD capacity and treated sewage will be utilised for greenbelt development.</p> <p>No effluent will be discharged outside the plant premises.</p> <p>Zero Liquid Discharge will be ensured in the project.</p> <p>The Total quantity of Effluent generation – 247 KLD</p> <p>ETP of Suitable capacity will be installed and treated water will be used for –</p> <p>for ash conditioning: 80 KLD</p> <p>for dust suppression in CHP: 67 KLD</p> <p>for Greenbelt development : 100 KLD</p> <p>Ground water quality will be monitored every month and reports will be submitted to MOEF&amp;CC , UPPCB.</p>	with implementation of the project	project Rs 2.5 Crores is earmarked for Wastewater Management	Annum
Contd.. District	Does the management	During construction, labour hutment and toilets will be	---	---	---

Magistrate	t has any plan for labour housing for construction workers. Accordingly DM has directed to PAs to provide labour hutment and toilets for construction workers in the plant area.	provided in the plant area.			
Contd.. District Magistrate	What is the green belt area and how many plants will be planted	10.9 Ha. (27 Acres) of greenbelt will be developed out of total 32 Ha. (79 Acres) within the plant premises. Total 17,000 nos. of saplings will be planted in consultation with local DFO. Width greenbelt ranges from 10 m to 130 m. More greenbelt width is proposed in North, NE & Eastern side of the project site towards Villages.	Implemented parallel with implementation of the project	In the proposed project Rs 25 Lakhs is earmarked for Greenbelt development	Rs.10 Lakhs / Annum

Point no. 6	Scheme for achieving zero liquid discharge shall be submitted.
Reply No. 6	In the proposed project Closed loop cooling water system will be adopted in DRI, SMS, and Rolling Mill units. The effluent generated from Rolling Mill will be sent to settling tank & clear water will be recycled through closed circuit cooling system. Effluent from power plant will be treated in ETP and after ensuring compliance with SPCB norms, it will be utilized for dust suppression, ash conditioning and for greenbelt development. There will not be any effluent discharge outside the premises. Sanitary wastewater will be treated in Sewage Treatment Plant (STP)

	<p>of 20 KLD capacity and treated sewage will be utilised for greenbelt development. No effluent will be discharged outside the plant premises.</p> <p><u>EFFLUENT GENERATION &amp; ITS DISPOSAL</u> Total effluent generation from proposed project : 227 m<sup>3</sup>/day Sanitary wastewater : 20 m<sup>3</sup>/day Total effluent : 247 m<sup>3</sup>/day <u>Utilization of treated effluent :</u> Effluent quantity to be used for ash conditioning : 80 m<sup>3</sup>/day Effluent to be used for dust suppression in CHP : 67 m<sup>3</sup>/day Balance effluent to be used for Greenbelt development : 100 m<sup>3</sup>/day A Budget of Rs. 2.25 Crores and recurring cost 14 lakhs per Annum will be allocated for Waste Water Management. Greenbelt will be developed in 33% plant area i.e. 10.9 Hectares (27 Acres) within the plant premises by using the treated effluent. A dedicated pipe distribution network will be provided for using the treated effluent for greenbelt development in the plant premises. No effluent will be discharged. It is a ZLD plant.</p>																					
Point No. 7	<p>CER action plan shall be reworked and submitted. This should include skill developmental program to ensure 70% employment of local inhabitants.</p>																					
Reply No. 7	<p>Ankur Udyog Limited will actively contribute to improve the Socio economic conditions of the area by providing assistance for local persons preferable from the nearby villages. ₹ 5.45 Crores will be spent on CER activities based on need base assessment.</p> <p><i>Budget earmarked towards CER as per Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018.</i></p> <p>Details of expenditure for CER activities Total cost of the proposed project : Rs 330 Crores Work out to : Rs 5.45 Crores Spent over in no. of years : 3 years</p> <table><tr><th rowspan="2">S.No.</th><th rowspan="2">Major Activity Heads</th><th colspan="3">Years (Rs. in Crores)</th><th rowspan="2">Total Expenditure (Rs.in Crores)</th></tr><tr><th>1<sup>st</sup></th><th>2<sup>nd</sup></th><th>3<sup>rd</sup></th></tr><tr><td>A</td><td>Based on Social Impact Assessment (SIA)</td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>Community &amp; Infrastructure Development Programs (construction of 10 nos.</td><td>0.5</td><td>0.5</td><td>0.5</td><td>1.5</td></tr></table>	S.No.	Major Activity Heads	Years (Rs. in Crores)			Total Expenditure (Rs.in Crores)	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	A	Based on Social Impact Assessment (SIA)					1	Community & Infrastructure Development Programs (construction of 10 nos.	0.5	0.5	0.5	1.5
S.No.	Major Activity Heads			Years (Rs. in Crores)				Total Expenditure (Rs.in Crores)														
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>																		
A	Based on Social Impact Assessment (SIA)																					
1	Community & Infrastructure Development Programs (construction of 10 nos.	0.5	0.5	0.5	1.5																	

		of toilets in 5 nos. of schools in Sahjanwa Town, Jigna, Ujkar&Domhar villages under Swachh Bharat (10 nos. @ Rs 2 lakhs/toilet), renovation of 3 nos. of school buildings (Rs. 10 Lakhs), drainage facilities in Sahjanwa Town (20 lakhs), Maintenance& repairs of roads (Rs.50 Lakhs), Community Hall in Sahjanwa Town (Rs. 50 Lakhs).				
	2	for Health & Hygiene of the community (Mineral Water plants, construction toilets in villages, PHC, Ambulance facility, Distribution of Medicines etc.)	0.3	0.3	0.3	0.9
	3	Skill Development A Community Centre will be established in the village which will consist of the following:				
	i.	Vocational Training Institute with latest tools, machinery &softwares etc. for making them Industry ready.	0.15	0.15	0.1	0.4
	ii.	Workshop centre with latest tailoring machines for training women (like tailoring, stitching etc.)	0.2	0.1	0.1	0.4
	iii.	Skill development / Computer / IT Training Centre for improving computer knowledge and making Industry ready.	0.1	0.1	0.1	0.3
		Total Budget for skill development				1.1



	4	for Education & Sports (Merit Scholarships (for ), construction of class rooms in schools, providing computers in class rooms, development of library facility)	0.1	0.1	0.1	0.3
	5	Other Need based activities	0.45	0.45	0.25	1.15
		Sub Total (A)	1.80	1.70	1.45	4.95
	B	Based on Public Consultation				
	1	Rain water harvesting in nearby villages Pond deepening Recharge Structures	0.10	0.10	0.10	0.30
	2	Greenbelt development outside the Plant Boundary & in Village (4000 nos. will be planted and maintained)	0.05	0.03	0.02	0.10
	3	Strengthening of Drain passing through adjacent to the Boundary	0.10	0.0	0.0	0.10
		Sub Total (B)	0.25	0.13	0.12	0.50
		Total (A+B)	2.05	1.83	1.57	5.45
We do hereby confirm that local people will be given first priority in employment.						
Point No. 8	Confirmation regarding use of FO only in reheating furnace.					
Reply No. 8	We do here by confirm that we will use Furnace Oil (FO) /Pulverised coal in reheating furnace.					
Point No. 9	Study on hydrogeology of the area shall be submitted.					
Reply No. 9	Hydrogeology report is submitted.					
Point No. 10	Permission for withdrawal of ground water shall be submitted.					
Reply No. 10	Water drawl permission for 1800 KLD of water is approved by CGWA vide NOC no. CGWA/NOC/IND/ORIG/2019/4878 dated 12 <sup>th</sup> March 2019. A copy of NOC issued by CGWA is submitted.					

7.1.27 The proposal was placed before EAC meeting held during 27<sup>th</sup> -29<sup>th</sup> March 2019. The committee noted that in-principle approval for private railway siding at Sahjanwa station in Lucknow division was accorded for the project vide letter No.T/555/216/AULSD/SWA dated 11.03.2019 by NE Railway, Gorakhpur. In the in-principle approval, it was advised to the project proponent to contact the concerned officials of Lucknow division North Eastern Railway submit the Detailed Project Report

(DPR) and get the detailed plan & Estimate prepared & approved /sanctioned. The money for execution of deposit work may also be get deposited with the Railways as applicable within the specified time limit and acknowledge receipt of the letter. Detailed action plan for rainwater harvesting and ground water recharge has not been furnished.

7.1.28 After detailed deliberations, the committee advised the PP to submit DPR to the railways as desired in the in-principal approval and submit the information to the Ministry for further consideration. Detailed action plan for ground water recharge and rainwater storage shall be furnished in the current financial year alongwith time schedule for implementation of action plan within three (3) years. The proponent shall explore the feasibility of using available space in the Transport Nagar for parking of trucks. The proposal was deferred for the above additional information.

7.1.29 The Project Proponent submitted the reply to additional information sought by Ministry online on 15<sup>th</sup> April, 2019

<i>Point No. 1</i>	Confirmation regarding the transportation of iron ore, fluxes and coal only by Rail by providing dedicated railway siding to the plant site.
Reply No. 1	The DPR has been submitted to the North Eastern Railways (NER) on 15-04-2019. A copy of the DPR submitted to the North Eastern Railways is submitted to the honourable Ministry along with reply to the ADS. A copy of Acknowledgement on submission of DPR to North Eastern Railways is submitted.
<i>Point No. 2</i>	Scheme for ground water recharge more than the amount extracted from the ground shall be submitted. The recharge can be done within the factory premises and outside the factory premises also.
Reply No. 2	<p>The total water requirement for the plant operations will be 1800 KLD (5,94,000 KL/annum).</p> <p>As per the recommendation of Expert Appraisal Committee of MOEF&amp;CC, we propose to artificially recharge more than the consumption. Hence it is proposed to harvest around 1,916 KLD or 6,32,262 KL /Annum.</p> <p>The potential rain water that can be recharged / collected will be 165827 m<sup>3</sup>/year i.e. 500 KLD within the factory premises. Additional 1416 KLD of water will be recharged by providing Recharge pits outside the premises i.e. in nearby villages. Industry will develop the artificial recharge system and has preliminary identified ponds of 5 no. of villages (Sihapaar, Domharmafi, Bangava, Deipaar, Jagdishpur) of sahjanwa block.</p> <p>Cost for artificial recharge will be Rs. 91.25 Lakhs. Annual Recurring cost of recharge pond and structure after the completion of construction work will be approximately is Rs. 5.5 Lakhs /Annum.</p> <p>Rainwater harvesting recharge plan will be implemented in 3 yrs along with project completion.</p> <p>The detailed Scheme for ground water recharge is submitted.</p>

7.1.30 Revised CER after considering the Cost for artificial recharging i.e. Rs. 91.25 Lakhs

S.No.	Major Activity Heads	Years (Rs. in Lakhs)			Total Expenditure (Rs.in Lakhs)
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	
A	Based on Social Impact Assessment (SIA)				
1	Community & Infrastructure Development Programs (construction of 10 nos. of toilets in 5 nos. of schools in Sahjanwa Town, Jigna, Ujkar&Domhar villages under Swachh Bharat (10 nos. @ Rs 2 lakhs/toilet), renovation of 3 nos. of school buildings (Rs. 10 Lakhs), drainage facilities in Sahjanwa Town (20 lakhs), Maintenance& repairs of roads (Rs.50 Lakhs), Community Hall in Sahjanwa Town (Rs. 50 Lakhs).	50	50	50	150
2	for Health & Hygiene of the community (Mineral Water plants, construction toilets in villages, PHC, Ambulance facility, Distribution of Medicines etc.)	30	30	30	90
3	Skill Development A Community Centre will be established in the village which will consist of the following:				
i.	Vocational Training Institute with latest tools, machinery &softwares etc. for making them Industry ready.	15	15	10	40
ii.	Workshop centre with latest tailoring machines for training women (like tailoring, stitching etc.)	20	10	10	40
iii.	Skill development / Computer / IT Training Centre for improving computer knowledge and making Industry ready.	10	10	10	30
	Total Budget for skill development				110
4	for Education & Sports (Merit Scholarships (for ), construction of class rooms in schools, providing computers in class rooms, development of library facility)	10	10	10	30
5	Other Need based activities	18	18	17.75	53.75
	Sub Total (A)	153	143	137.75	433.75
B	Based on Public Consultation				
1	Rain water harvesting in nearby villages Pond deepening Recharge Structures	22	22	47.25	91.25
2	Greenbelt development outside the Plant Boundary & in Village (4000 nos. will be planted and maintained)	5	3	2	10
3	Strengthening of Drain passing through adjacent to the Boundary	10	0	0	10
	Sub Total (B)	37	25	49.25	111.25
	Total (A+B)	190	168	187	545

7.1.31 The proposal was reconsidered in the Reconstituted Expert Appraisal Committee (REAC) held during 29<sup>th</sup> -31<sup>st</sup> May 2019. Compliance were placed to the complaints received which has been seen by the Committee and satisfied with the project proponent response.

7.1.32 After detailed deliberations, the committee recommended the proposals with the following specific and sector specific general conditions.

**A. SPECIFIC CONDITIONS:**

- i. Railway siding shall be completed in a time frame of five years or before commissioning of the project at full capacity, whichever is earlier.
- ii. PP shall adopt 100 % hot charging and the coal gasifier shall not be installed.
- iii. Air cooled condenser shall be used in the power plant.
- iv. Rain water harvesting and recharge shall be more than the water consumption. In case, adequate area within the premises is not available, the PP may go for rain water harvesting/recharging outside the factory premises.
- v. Monitoring of rain water harvesting/recharging shall be done as per the monitoring schedule submitted to the Ministry vide letter dated 29.5.2019.
- vi. Bi-flue stack of 114 m height shall be provided, common for both the DRI kilns.

**B. GENERAL CONDITIONS:**

**I. Statutory compliance:**

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (incase of the presence of Schedule-I species in the study area).
- iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

- v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- vi. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time

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

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 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 recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions. (case to case basis small plants: Manual; Large plants: Continuous)
- iv. 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.
- v. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- vi. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- vii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- viii. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.

- ix. Secondary emission control system shall be provided at SMS Converters.
- x. Pollution control system in the steel plant shall be provided as per the CREP Guidelines of CPCB.
- xi. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- xii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- xiii. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- xiv. 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).
- xv. Land-based APC system shall be installed to control coke pushing emissions.
- xvi. 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.
- xvii. Vapour absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.
- xviii. 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.
- xix. The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.
- xx. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xxi. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.
- xxii. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter. *(to be decided on case to case basis depending on type and size of plant)*
- xxiii. 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 recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. (case to case basis small plants: Manual; Large plants: Continuous)
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. The project proponent shall provide the ETP 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;
- v. Adhere to 'Zero Liquid Discharge'
- vi. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- viii. Tyre washing facilities shall be provided at the entrance of the plant gates.
- ix. 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.
- x. The project proponent shall practice rainwater harvesting to maximum possible extent.
- xi. Treated water from ETP of COBP shall not be used for coke quenching.

- xii. Water meters shall be provided at the inlet to all unit processes in the steel plants.
- xiii. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

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

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

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

- i. The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.
- ii. Coke Dry Quenching (CDQ) shall be provided for coke quenching for both recovery and non-recovery type coke ovens;
- 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. In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery.
- iii. Tar Sludge and waste oil shall be blended with coal charged in coke ovens (applicable only to recovery type coke ovens).
- iv. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
- v. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.
- vi. Used refractories shall be recycled as far as possible.
- vii. 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.
- viii. 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.
- ix. 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.
- x. The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens.
- xi. Kitchen waste shall be composted or converted to biogas for further use.

## **VII. Green Belt**

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

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

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

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

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or 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.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.

## **X. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- vii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- 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.
- viii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- ix. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

- x. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xi. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

**7.2 Proposed enhancement of Clinker Production from 3.043 to 3.5 MTPA by optimizing process operation in the existing units by M/s. My Home Industries Private Limited located at Village & Mandal Mellaacheruvu, District Suryapet, Telangana. [Online Proposal No. IA/TG/IND/102408/2019, MoEF&CC File No. J-11011/205/2013-IAII(I)] – Environment Clearance Under para 7(ii) of the EIA Notification, 2006 - regarding.**

M/s. My Home Industries Private Limited has made an online application vide proposal no. IA/TG/IND/102408/2019 dated 16th April, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent:

**7.2.2 M/s My Home Industries Private Limited (MHIPL) is operating integrated Cement Plant with three manufacturing units i.e., Unit-I, Unit-II and Unit-III located at Mellacheruvu Village & Mandal, Suryapet District, Telangana State.**

MHIPL has initially commissioned the cement plant with clinker production capacity of 0.495 MTPA and gradually increase the capacity of the cement plant to the present level of 3.043 MTPA by obtaining clearances from time to time as per the below table.

S. No	Particulars	Order Details	Date
<b>1</b>	<b>Cement Plant – 600 TPD</b>	<b>J-11012/5/96-IA II (I)</b>	<b>07.10.1996</b>
<b>2</b>	Cement Plant expansion - 0.495 MTPA to 1.09 MTPA <b>Addition of Unit-II</b>	<b>J-11011/19/2001-IA II (I)</b>	<b>13.09.2001</b>
<b>3</b>	Expansion -Clinker 1.58 MTPA to 2.48 MTPA and Cement 1.90 MTPA to 3.30 MTPA <b>Addition of Unit-III</b>	<b>J-11011/76/2006-IA II (I)</b>	<b>25.05.2006</b>
<b>4</b>	Expansion -Clinker 2.48 MTPA to 2.78 MTPA and Cement 3.30 MTPA to 3.90 MTPA <b>Expansion in Unit-III</b>	<b>J-11011/1014/2007-IA II (I)</b>	<b>11.06.2008</b>
<b>5</b>	Expansion -Clinker 2.78 MTPA to 3.043 MTPA <b>Expansion in Unit-II</b>	<b>J-11011/172/2012-IA II (I)</b>	<b>15.12.2014</b>

7.2.3 MHIPL has also obtained Environmental Clearance from MoEFCC for setting up of Unit – IV of 1.75 MTPA Clinker production capacity vide J-11011/215/2013-IA II (I) 14.09.2015 which is valid upto 14.09.2022. Unit – IV is yet to be implemented as on date.

7.2.4 The additional emission from the proposed enhancement is mainly due to:

- increase in flows resulting increase in particulate emission load
- increase in Coal/Pet coke consumption in the kiln resulting in increase of particulate, SO<sub>2</sub> and NO<sub>x</sub> emissions (*Sulphur will be absorbed by clinker*)

7.2.5 In order to estimate the increase of emission, the present levels of emissions have been studied and incremental emission due to the proposed expansion of cement plant have been worked out.

The details of emission rate of Particulate Matter (PM<sub>10</sub>), SO<sub>2</sub> and NO<sub>x</sub> concentrations before and after increase of clinker production are given below.

7.2.6 **EMISSION DETAILS (PRESENT)** (Clinker capacity: 3.043 MTPA & Cement production capacity: 3.9 MTPA)

Source	Type	Velocity	Dia	Temp	Stack Ht	Conc.	Emission rate (g/sec)		
		M/sec	M	Deg K	M	mg/Nm³	PM	SO <sub>2</sub>	NO <sub>x</sub>
UNIT – I									
Kiln – I	RABH	12.08	3	376	51	30	2.03	6.77	54.15
Coal Mill - I	BF	10.38	1.1	349	35	30	0.25	-	-
Cooler – I	ESP	12.67	3	378	40	30	2.12	-	-
LS Crusher (Unit-I	BF	6.99	1.45	317	33	30	0.33	-	-

Source	Type	Velocity	Dia	Temp	Stack Ht	Conc.	Emission rate (g/sec)		
		M/sec	M	Deg K	M	mg/Nm <sup>3</sup>	PM	SO <sub>2</sub>	NO <sub>x</sub>
&II)									
UNIT – II									
Kiln - II	RABH	13.82	3	371	124	30	2.35	7.85	62.78
Coal Mill - II	BF	10.48	1.8	350	45	30	0.68	-	-
Cooler - II	ESP	9.89	2.65	383	40	30	1.27	-	-
UNIT – III									
Kiln - III	RABH	13.72	3.5	380	134.2	30	3.10	10.35	82.82
Coal mill - III	BF	10.62	1.8	344	55	30	0.70	-	-
Cooler - III	ESP	13.2	3.5	369	40	30	3.08	-	-
LS Crusher (Unit-III)	BF	8.21	1.45	313	30	30	0.39	-	-
Total						g/sec			
Total						Kg/hr			
Cement Mill – 1	BF	10.14	0.85	74	32.5	30	0.70	-	-
Cement Mill – 2	BF	9.91	1.8	81	44	30	2.78	-	-
Cement Mill – 1A	BF	10.0	1.1	74	31	30	1.15	-	-
Cement Mill – 4	BF	9.9	1.4	80	46	30	1.70	-	-
Cement Mill – 5	BF	9.5	1.4	79	46	30	1.66	-	-

**7.2.7 EMISSION DETAILS for proposed** Clinker capacity : 3.50 MTPA & Cement production capacity : 3.9 MTPA)

Source	Type	Velocity	Dia	Temp	Stack Ht	Conc.	Emission rate (g/sec)		
		M/sec	M	Deg K	M	mg/Nm <sup>3</sup>	PM	SO <sub>2</sub>	NO <sub>x</sub>
UNIT – I									
Kiln - I	RABH	13.89	3	376	51	30	2.33	7.78	62.26
Coal Mill - I	BF	11.94	1.1	349	35	30	0.29	-	-
Cooler - I	ESP	14.57	3	378	40	30	2.43	-	-
LS Crusher (Unit– I &II)	BF	8.03	1.45	317	33	30	0.37	-	-

<b>UNIT – II</b>									
Kiln - II	RABH	15.89	3	371	124	30	2.71	<b>9.02</b>	<b>72.18</b>
Coal Mill - II	BF	12.05	1.8	350	45	30	0.78	-	-
Cooler - II	ESP	11.37	2.65	383	40	30	1.46	-	-
<b>UNIT – III</b>									
Kiln - III	RABH	15.77	3.5	380	134.2	30	3.57	<b>11.9</b>	<b>95.20</b>
Coal mill - III	BF	12.21	1.8	344	55	30	0.81	-	-
Cooler - III	ESP	15.18	3.5	369	40	30	3.54	-	-
LS Crusher(U nit– III)	BF	9.44	1.45	313	30	30	0.45	-	-
<b>Total</b>						<b>g/sec</b>			
<b>Total</b>						<b>Kg/hr</b>			
Cement Mill – 1	BF	10.14	0.85	74	32.5	30	0.70		
Cement Mill – 2	BF	9.91	1.8	81	44	30	2.78		
Cement Mill – 1A	BF	10.0	1.1	74	31	30	1.15		
Cement Mill – 4	BF	9.9	1.4	80	46	30	1.70		
Cement Mill – 5	BF	9.5	1.4	79	46	30	1.66		

All Air Pollution Control Equipment in Cement plant are already upgraded and complying with new emission standards of PM, SO<sub>2</sub> & NO<sub>x</sub>.

## 7.2.8 GROUNDLEVEL CONCENTRATION

The incremental ground level concentration due to increase of Clinker production capacity from 3.043 to 3.50 MTPA computed using AERMOD model (EPA recommended model) is given below:

		$\mu\text{g}/\text{m}^3$ (max)
Particulate Matter – PM <sub>10</sub>	Baseline	58.1
	Incremental	0.40
	<b>Overall Scenario</b>	<b>58.5 (NAAQ Standard – 100)</b>
Sulphur dioxide	Baseline	11.8
	Incremental	0.60
	<b>Overall Scenario</b>	<b>12.4 (NAAQ Standard – 80)</b>
Oxides of Nitrogen	Baseline	15.6
	Incremental	4.5
	<b>Overall Scenario</b>	<b>20.1 (NAAQ Standard – 80)</b>

#### 7.2.9 AIR POLLUTION CONTROL MEASURES – CEMENT PLANT

**MHIPL** has spent about Rs. 200 Crores towards various environment protection measures in the existing cement plant. High efficient Bag Houses / Electro Static Precipitators have been installed in the plant to control the emissions from the stacks and also to meet the emission norms. The emissions from all the stacks are maintained well within the prescribed norms of TSPCB.

All the flue gas outlets are provided with state of art air pollution control equipment with control efficiency of 99.8-99.9 % to maintain the particulate emission level below 30 mg/Nm<sup>3</sup>. The dust collected in the pollution control devices is 100% recycled back to the process.

- 7.2.10 **MHIPL** is continuously monitoring the status of various pollution control systems and upgrading them from time to time. **MHIPL** has installed Online continuous Emission monitoring system (OCEMS) to all major stacks. Kiln RABH stacks are provided with PM, SO<sub>2</sub> & NO<sub>x</sub> analyzers and Coal mills, Clinker Coolers & Cement Mills stacks are provided with PM analyzers. Real-time data of OCEMS is connected to CPCB and TSPCB servers.

SL. NO.	PROCESS STACK	PARAMETERS		
		Particulate Matter	SO <sub>2</sub>	NO <sub>x</sub>
1	KILN-Raw Mill-1 RABH	Y	Y	Y
2	KILN-Raw Mill-2 RABH	Y	Y	Y
3	KILN-Raw Mill-3 RABH	Y	Y	Y
4	Coal Mill-1 Baghouse	Y	NA	NA
5	Coal Mill-2 Baghouse	Y	NA	NA
6	Coal Mill-3 Baghouse	Y	NA	NA
7	Clinker Cooler-1 ESP	Y	NA	NA
8	Clinker Cooler-2 ESP	Y	NA	NA
9	Clinker Cooler-3 ESP	Y	NA	NA
10	Cement Mill-1 Baghouse	Y	NA	NA
11	Cement Mill-2 Baghouse	Y	NA	NA
12	Cement Mill-1A Baghouse	Y	NA	NA
13	Cement Mill-4 Baghouse	Y	NA	NA
14	Cement Mill-5 Baghouse	Y	NA	NA

- 7.2.11 All the pollution control equipment in the cement plant are in place for various units as per requirement.

- 7.2.12 The increase in capacity of various units under the up gradation and modernization will result in increase of volumetric flow rates. As a result of increase in flow rates, the emission loads on the pollution control equipment are likely to increase. Keeping in view of this, **MHIPL** has conducted a detailed technical assessment of the pollution control



equipment of the main units to find out the adequacy. Details of the same are given below.

Unit	APCE	Design Capacity (m <sup>3</sup> /hr)	GAS VOLUME (m <sup>3</sup> /hr.)		Modification Proposed for expansion	REMARKS
			Present	After proposed Expansion		
Unit –I&II	L/s crusher baghouse	77000	45252	45252	Capacity available and modification not required	All Pollution Control Equipment in Cement plant are already upgraded and complying with new emission standards of PM, SO <sub>2</sub> & NO <sub>x</sub> .
Unit-I	RABH	510000	379461	459907		
	ESP	270000	184397	223489		
	Coal mill - Baghouse	37500	36423	36423		
Unit-II	RABH	586800	487987	536323		
	ESP	350000	300707	330492		
	Coal mill - Baghouse	67000	57380	57380		
Unit-III	L/s crusher baghouse	77000	47512	47512		
	RABH	620000	535892	606236		
	ESP	500000	341044	397885		
	Coal mill Baghouse	100000	93635	93635		

The proposal will result in increase of Flue Gas Flows. It can be seen from the above table that there will be increase in flow due to increase in capacity. Adequate capacities of air pollution control equipment are available to handle increased flows rate. MHIPL will ensure that the particulate concentration at outlet of pollution control equipment is less than 30 mg/Nm<sup>3</sup>. MHIPL has installed air pollution control equipment and carrying regular monitoring to check the emission level at outlet of stack. The measures have resulted in maintaining the Ambient Air Quality within the NAAQ standards.

#### NOISE ENVIRONMENT

The major noise generating sources are coal mill, Kiln/Raw mill, packers of cement plant and compressors. These sources are located far off from each other. Under any circumstances the noise level at plant boundary will not exceed 65 dB(A) at day time and 60 dB(A) at night time.

The noise levels are being monitored and efforts are being made to maintain the noise levels within the prescribed limits. Silencers/acoustic enclosures are provided to the coal mills to maintain the noise level well within the prescribed limits. Photographs showing installed silencers are shown below

Noise levels generated in the cement plant are confined within the boundary and with attenuation after greenbelt and construction of boundary wall, the impact of noise levels on surroundings is negligible.

#### **WATER ENVIRONMENT:**

The present water consumption of the plant including colony is about 1260 m<sup>3</sup>/day. Water for the plant is sourced from Borewells No Additional water is required.

MHIPL has obtained necessary permission from Ground Water Department for water drawl at the rate of 1500 m<sup>3</sup>/day. Rainwater harvesting is being done within the plant premises. A rainwater storage pond has been created at NE corner of cement plant premises. No industrial wastewater will be generated in the Cement Plant. Domestic wastewater generated from Cement Plant is being treated in the STP. The treated wastewater is 100% reused for greenbelt development.

#### **7.2.13 Wastewater generation and disposal**

No wastewater is generated from cement plant process. The wastewater generation from the cement plant is mainly from domestic consumption. At present 260 m<sup>3</sup>/day of wastewater is generated from the colony. A full-fledged sewage treatment plant (STP) is in operation to treat the domestic wastewater. The STP is designed for a maximum load of 400 m<sup>3</sup>/day with an average BOD of 150 - 200 mg/L for raw sewage and after treatment less than 20 mg/L.

<b>Source of generation</b>	<b>Quantity (m<sup>3</sup>/day)</b>	<b>End usage</b>	<b>Remarks</b>
Domestic wastewater Colony	260	Treated in sewage treatment plant and 100% reused for greenbelt development	No change

#### **7.2.14 Rain water harvesting**

- Rain water harvesting structure with a capacity of about 65,000 m<sup>3</sup> is created at NE corner of cement plant. Rain water is collected in the pond during monsoon and same water is utilized for greenbelt and cement plant.
- Roof Water harvesting system was constructed at residential colony. Rain water from 8 quarters rooftop is routed to ground water recharge pit.
- About 30 Nos of rain water recharge pits constructed in cement plant, CPPs & Residential colony area. These pits are constructed with dimensions of 2m depth, 1m meter diameter.
- Separate storm water drains, contour bunds, kerb walls established for routing the rain water from roads and asphalted areas.

#### 7.2.15 Land Environment

The dust collected in the air pollution control equipment in the cement plant is 100% recycled back to the process. No solid waste generation from the process except dust collected in the pollution control equipment which is recycled back to the process

#### 7.2.16 Green belt development

The cement plant is located in an area of 160 Ha. The required greenbelt as per norms is 33 % of the plant area which is about 52.8 Ha. MHIPL has developed 50.5 % of the plant area under greenbelt which is covering about 80.8 Ha which includes 7 Ha of greenbelt developed in colony.

Details of greenbelt development carried out since inception of the plant is given below:

Greenbelt developed	:	80.8 ha
No's of saplings	:	88714 no's
Density	:	1110 saplings/ha

#### 7.2.17 Project cost

The Project cost for enhancement of clinker production is estimated to be about Rs. 5.0 Crores.

The change in pollution load of various environmental components due increase of clinker capacity of the cement plant detailed below:

		EC Granted	EC Requested	Remarks
Cost of the Project, Rs. crores		Rs.50 crores	Rs.5 crores	Process optimization
<b>Capacities (in MTPA)</b>	Clinker production	3.043	3.50	Enhancement of clinker production by 15 % by process optimization  Additional clinker produced under this expansion will be transported to MHIPL Grinding Units by Rail.
	Cement production	3.9	3.9	No change
<b>RAW MATERIAL REQUIREMENT (in MTPA)</b>	Limestone	4.28	4.92	Additional consumption EC obtained
	Laterite	0.17	0.20	Additional consumption
	Shale	0.01	0.01	No change
	Slag	0.01	0.01	No change
	Fly Ash	0.04	0.04	No change
	Gypsum	0.16	0.16	No change
	Fly ash for PPC	0.40	0.40	No change
<b>FUEL (in MTPA)</b>	Coal for Clinker (Max)	0.43	0.51	Increase in coal consumption by 18%

	EC Granted	EC Requested	Remarks
POLLUTION LOAD (Kg/Hr)			
AIR EMISSIONS			
Particulate Matter	87.44	96.23	Increase by 10 %⬆
Sulphur Dioxide	89.89	103.32	Increase by 15 %⬆
Oxides of Nitrogen	719.1	826.70	Increase by 15 %⬆
INCREMENTAL GROUND LEVEL CONCENTRATIONS (ug/m <sup>3</sup> )			
Particulate Matter – PM <sub>10</sub>	Baseline		58.1
	Incremental		0.40
	Overall Scenario		58.5 NAAQ Standard - 100
Sulphur dioxide	Baseline		11.8
	Incremental		0.60
	Overall Scenario		12.4 NAAQ Standard – 80
Oxides of Nitrogen	Baseline		15.6
	Incremental		4.5
	Overall Scenario		20.1 NAAQ Standard - 80
WATER ENVIRONMENT			
Water Requirement, m <sup>3</sup> /day	1260	1260	No Change
LAND ENVIRONMENT			
Landuse breakup, Ha	160	160	No Change. No additional land requirement

MHIPL proposes to obtain EC for enhancement of clinker production capacity from 3.043 to 3.50 MTPA without any increase in Pollution load as shown in the below table

Unit	Present MoEF approved Clinker capacity (in MTPA)	Proposed Clinker Production Enhancement (in MTPA)	Total Clinker Production after proposed Enhancement (in MTPA)
Unit-1	0.66	0.14	0.80
Unit-2	1.183	0.117	1.30
Unit-3	1.20	0.20	1.40
<b>Total</b>	<b>3.043</b>	<b>0.457 (15 % )</b>	<b>3.50</b>

#### Observations of the Committee:

The proposal is for enhancement of clinker production from 3.043 MTPA to 3.5 MTPA which is 15% increment in clinker production without increase in cement.

#### Recommendation of the Committee:

After detailed deliberations, the committee recommended the proposal for enhancement of clinker production from 3.043 MTPA to 3.5 MTPA with the following specific conditions along with sector specific general conditions.

**A. SPECIFIC CONDITIONS:**

- i. Stack emissions shall be maintained below 30 mg/Nm<sup>3</sup>.
- ii. The unit shall comply with all the revised norms of stack emissions.
- iii. Rain water harvesting and recharge shall be more than the water consumption.

**B. GENERAL CONDITIONS:**

**I. Statutory compliance:**

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (incase of the presence of Schedule-I species in the study area)
- iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- i. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

**II. Air quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (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 (Co-processing Cement); 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 recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system carryout to Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions. (case to case basis small plants: Manual; Large plants: Continuous)
- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.
- viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- ix. Recycle and reuse lime fines, coal fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after agglomeration.
- x. 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;
- xi. Provide wind shelter fence and chemical spraying on the raw material stock piles; and
- xii. Provide Low NO<sub>x</sub> burners as primary measures and SCR /NSCR technologies as secondary measure to control NO<sub>x</sub> emissions. Have separate truck parking area and monitor vehicular emissions at regular interval.
- xiii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport
- xiv. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, cement bagging plants.

### **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 recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. (case to case basis small plants: Manual; Large plants: Continuous)
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. Adhere to 'Zero Liquid Discharge'.
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- vii. The project proponent shall practice rainwater harvesting to maximum possible extent.
- viii. Water meters shall be provided at the inlet to all unit processes in the cement plant.
- ix. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

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

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

**V. Energy Conservation measures**

- i. 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. The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
- iii. Kitchen waste shall be composted or converted to biogas for further use.

**VII. Green Belt**

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

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

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The PP shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile



STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

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

#### **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 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or 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.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.

#### **X. Miscellaneous**

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

offices of the Government who in turn has to display the same for 30 days from the date of receipt.

- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- ix. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- x. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- viii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- ix. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- x. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xi. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

- xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

**7.3 Proposed Steel Plant [(800TPD Pellet Plant; 600 TPD DRI; 1000 TPD Induction Furnace; Rolling Mill 975 TPD; 12 MW (7 MW (WHRB) and 5 MW (FBC))] by M/s. Genext Steels Pvt. Ltd located at Survey No. 661,662,664,665,1822 & 1823 Village Bagodara, Tehsil Bavla, District Ahmedabad, Gujarat. [Online Proposal No. IA/GJ/IND/70023/2017, MoEF&CC File No. J-11011/501/2017-IAII(I)] – Environment Clearance - regarding.**

M/s. Genext Steels Pvt Limited (Steel Division) has made an online application vide proposal no. IA/GJ/IND/70023/2017 dated 17<sup>th</sup> April, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

- 7.3.1 Integrated Steel Plant [800 TPD Pellet Plant; 600 TPD DRI; 1000 TPD Induction Furnace; Rolling Mill 1000 TPD (975 TPD TMT bars + 25 TPD Mill scale); 12 MW [7 MW (WHRB) and 5 MW (FBC)] of M/s Genext Steels Pvt. Ltd. located Survey Nos. 661, 662, 664, 665, 1822 & 1823, Village: Bagodara, Tehsil: Bavla, District: Ahmedabad (Gujarat) was initially received in the Ministry on 30/09/2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 24<sup>th</sup> meeting held on 14/11/2017 and further project proponent has made presentation on the additional details sought on 13.03.2018 in its 29<sup>th</sup> Meeting and on 12/06/2018 of 32<sup>nd</sup> meeting of the Expert Appraisal Committee on Industry – 1 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 19/06/2018 vide Letter No. IA-J-11011/501/2017-IA.II(I).
- 7.3.2 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 01/04/2019 vide Online Application No. IA/GJ/IND/70023/2017.
- 7.3.3 The proposed capacity for different products of integrated steel plant is given below:

Sr. No.	Name of Unit	Product	Plant Configuration	Production Capacity
1	Pellet Plant	Pellets	4 x 200 TPD	800 TPD
2	DRI Kilns	Sponge Iron	4 x 150 TPD	600 TPD
3	Steel Melting Shop	MS Billets	Induction furnace: 4 x 25 MT/heat CCM: Eight-strand billet caster	975 TPD
4	Rolling Mill	Structural steel, TMT bars & Rolled products	2 x 500 TPD	1000 TPD
5	Power Plant			
A	WHRB	Electricity	1 x 7 MW	7 MW
B	FBC	Electricity	1 x 5 MW	5 MW

- 7.3.4 The total land required for the proposed plant is 15.3061 ha and the entire land is non-agricultural land. No forestland is involved. The entire land has been acquired for the project. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed. The topography of the area is flat with little undulating at few places and lies from 22°37'42.86"N to 22°37'33.45"N, 22°37'24.77"N to 22°37'23.77"N Latitude and 72°10'5.95"E to 72°9'37.75"E, 72°9'48.08"E to 72°9'52.39"E Longitude in Survey of India topo sheet No. F43G2 & F43G6, at an elevation of 44-55 m AMSL.
- 7.3.5 The ground water table reported to ranges between 20-25 below the land surface during the post-monsoon season and 25-30 below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 15 m. Further, the stage of groundwater development is reported to be 36.74 % and 60.28% in core and buffer zone respectively and thereby these are designated as safe/critically exploited areas.
- 7.3.6 The National Park/WL etc. are not located at a distance of 10 KM from the site/No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna provided through the District management plan of DFO, Ahmedabad reporting presence of no /Schedule-I fauna in the study area.
- 7.3.7 The list of raw material for the proposed project is given below:

Sr. No.	Name of raw materials	Quantity (TPD)	Source	Mode of Transport
<b>Pellet Plant</b>				
1.	Iron Ore fines/ Iron Oxide (Mill Scale)	832	Rajasthan, Chhattisgarh, Karnataka, Orissa and Mill scale from	By Truck (through covered trucks)

Sr. No.	Name of raw materials	Quantity (TPD)	Source	Mode of Transport
			rolling mill working in vicinity	
2.	Bentonite	48	Kutch (Gujarat)	By Truck (through covered trucks)
3.	Imported Coal	128	South Africa from Kandla Port (Gujarat)	By Truck (through covered trucks)
<b>DRI Kiln</b>				
1.	Pellets	800	Internal	Through covered conveyors
2.	Imported Coal	570	South Africa from Kandla Port (Gujarat)	By Truck (through covered trucks)
3.	Dolomite	48	Local/Gujarat	By Truck (through covered trucks)
<b>Induction Furnace with Concast</b>				
1.	Sponge Iron	582	Internal	Through covered conveyors
2.	M S Scrap	562	Bhavnagar/Alang Imported	By Truck (through covered trucks)
3.	Ferro Alloys	12.5	Local/Gujarat	By Truck (through covered trucks)
<b>Rolling Mill</b>				
1.	Billets	1000	Internal	Through covered conveyors
<b>For Power Plant [FBC boiler - Power generation 5 MW]</b>				
1.	Dolochar	100	Internal	Through covered conveyors
2.	Imported Coal	30	South Africa from Kandla Port	By Truck (through covered trucks)

- 7.3.8 The targeted production capacity of the Pellet plant is 800 TPD/0.292 million TPA. The Ore for the plant would be procured from Rajasthan, Chhattisgarh, Karnataka, Orissa. The ore transportation will be done through Road.
- 7.3.9 The water requirement of the project is estimated as 1018 m<sup>3</sup>/day, out of which 905 m<sup>3</sup>/day of fresh water requirement will be obtained from the Ground water and the remaining requirement of 113 m<sup>3</sup>/day will be met from the Recycle water from treated industrial effluent/domestic water waste water. The permission for drawl of groundwater is under process.
- 7.3.10 The power requirement of the project is estimated as 57 MW, out of which 12 MW will be obtained from the Captive Power Plant (7 MW (WHRB) + 5 MW (FBC) = 12 MW)

and Remaining 45 MW will be procured from the State Grid, i.e. Gujarat State Electricity Corporation Limited (GSECL).

- 7.3.11 Baseline Environmental Studies were conducted during winter season i.e. from January 2018 to March 2018, Ambient air quality monitoring has been carried out at 8 locations during January 2018 to March 2018 and the data submitted indicated: PM<sub>10</sub> (50.6 µg/m<sup>3</sup> to 77.2µg/m<sup>3</sup>), PM<sub>2.5</sub> (26 to 45.5 µg/m<sup>3</sup>), SO<sub>2</sub> (9.6 to 18.2µg/m<sup>3</sup>) and NO<sub>x</sub>(12.1 to 24.4 µg/m<sup>3</sup>). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 11.741 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 8.423 µg/m<sup>3</sup> with respect to the SO<sub>2</sub>, 7.842 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.
- 7.3.12 Ground water quality has been monitored in Eight locations in the study area and analyzed. pH: 7.5 to 7.9, Total Hardness: 362 to 447 mg/l, Chlorides: 958 to 1486 mg/l, Fluoride: 0.63 to 0.72 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from Six locations. pH: 7.46 to 8.02; DO: 4.9 to 6.6 mg/l and BOD: < 10 mg/l, COD from 15 to 25 mg/l.
- 7.3.13 Noise levels are in the range of 40.6 to 45.9 dB(A) for daytime and 50.0 to 56.6 dB(A) for nighttime.
- 7.3.14 It has been reported that there are 18409 people in the core zone of the project. No/ R&R is involved.
- 7.3.15 It has been reported that a total of 31500tons/annumof waste (Slag-Non-hazardous) will be generated due to the project, which will be used in road making and land filling in low lying area and no waste will be dumped in the earmarked dump yard. It has been envisaged that an area of 5.0500 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities. Summary of Solid and Hazardous waste is given below:

Sr. No	Type of Waste	Category of Waste	Quantity	Disposal facility
<b>Hazardous waste</b>				
1.	ETP Sludge & MEE salt	35.3	5.0 MT/month 13 MT/month	Collection, Storage, Transportation & disposed at TSDF site.
2.	Used Lubricating oil	5.1	5.0 Kl/year	Collection, Storage, Transportation and sale to Registered re-processors.
3.	Discarded Drums & containers	33.1	500 Nos./month	Collection, Storage, Transportation, decontamination and sale to registered recyclers.
<b>Solid waste</b>				
<b>Pellet Plant:</b>				
1.	Ash	--	32 TPD	Collection, Storage and sold to brick manufacturing units.
<b>Sponge Iron Plant</b>				

1.	Ash	--	36 TPD	Collection, Storage and sold to Cement Plants & Brick manufacturers.
2.	Dolochar	--	100 TPD	Collection, Storage and used in FBC power plant/brick manufacturing units.
<b>Induction Furnace</b>				
1.	Slag	--	90 TPD	Slag from SMS will be crushed and iron will be recovered & then remaining non-magnetic material will be sold to brick manufacturers/for road construction.
<b>Rolling Mill</b>				
1.	Mill Scale	--	25 TPD	Will be reused in the Pellet Plant
<b>Power Plant</b>				
1.	Ash from power plant	--	1.5 TPD	Ash will be sold to Cement Plants/Bricks manufacturers

7.3.16 It has been reported that the project has obtained Consent to Establish (CTE) from the Gujarat Pollution Control Board vide CTE No. 99044 dated 29/01/2019 and is valid up to 28/12/2025.

7.3.17 The Public hearing of the project was held on 03/11/2018 at Project site, Survey Nos. 661, 662, 664, 665, 1822 & 1823, Village: Bagodara, Tehsil: Bavla, District: Ahmedabad (Gujarat) under the chairmanship of Additional Collector & Additional District Magistrate as a representative District Collector & District Magistrate, Ahmedabad. The main issues raised during public hearing are employment generation and given priority to local people. An amount of 50 Lakhs has been earmarked for Enterprise Social Commitment based on public hearing issues. The issues raised during the public hearing and response given is furnished as below:

Sl. No.	Main issues raised	Action plan proposed	Budgetary allocation	Timeline for implementation
1	Employment shall be given to local people and care must be taken for no creation of pollution	Management as given the commitment to take care for no creation of pollution. APCM like ESP and bag filters will be installed and efficiently operated and GPCB & CPCB norms will be maintained and assured that in the event of non-functioning of EMS, the plant will be taken under shut down.	EMS budget of Rs. 4000 Lakhs as Capital Cost and Rs. 800 Lakhs/annum as operating Cost	Capital cost along with project implementation and operating Cost at the time operational phase.

Sl. No.	Main issues raised	Action plan proposed	Budgetary allocation	Timeline for implementation
2	Local employment	Management as given the commitment to give priority of local people for employments.	--	--

7.3.18 The capital cost of the project is Rs. 261.0 Crores and the capital cost for environmental protection measures is proposed as Rs. 40.0 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 8.0 Crores. The total employment generation from steel plant will be 500-700 persons.

7.3.19 The capital expenditure on CER will commensurate with the investment and shall be Rs. 5.22 crores in 5 years on the basis of MOEF&CCs office memorandum dated 01.05.2018, for Greenfield projects. The CER action plan is given as below:

Sr. No.	Activities	Years (Rs. in Crore)					Total Budget (Rs. in Crore)
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	
A	Based on need based & SIA study						
1	Educational facilities & trade training to educated unemployed	0.1	0.1	0.1	0.1	0.1	0.5
2	Health and Family Welfare facilities	0.3	0.3	0.3	0.3	0.3	1.5
3	Drinking water and sanitation facilities	0.26	0.26	0.26	0.26	0.26	1.3
4	Women Empowerment activities	0.18	0.18	0.18	0.18	0.18	0.9
5	Preservation of Environment and Sustainable Development-Maintaining village ponds, encouraging rain water harvesting in village	0.12	0.1	0.1	0.1	0.1	0.52
Total		0.96	0.94	0.94	0.94	0.94	4.72
B	Based on Public Consultation / Hearing						
1	Educational facilities & trade training to educated unemployed	0.1	0.1	0.1	0.1	0.1	0.5
Total (A+B)		1.06	1.04	1.04	1.04	1.04	5.22

7.3.20 Greenbelt will be developed in 5.0500 Ha which is about 33 % of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 5000 saplings will be planted and nurtured in 5.0500 hectares in 5 years.

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

7.3.22 Name of the consultant: Shivalik Solid Waste Management Limited, Punjab [Sr. No. 141, List of Accredited Consultant Organizations (Alphabetically) Rev. 76, May 06, 2019]



**Observations of the Committee:**

- 7.3.23 The Ministry sought Essential Details regarding permission for groundwater abstraction, feasibility of drawl of surface water and feasibility for transportation of material through railway siding.

**Recommendation of the Committee:**

- 7.3.24 After detailed deliberations, the Committee recommended to defer the consideration of the project proposal on the request of the PP, who wanted more time to compile the information relating to the EDS.

- 7.4 Proposed enhancement of Bagatpura residential colony units from 599 to 1028 units (Built-up area from 136766 Sqm to 201149 sqm in an area of 40ha) by M/s. Shree Cement Limited located at village Ras, Tehsil Jaitaran, District Pali, Rajasthan.** [Online Proposal No. IA/RJ/IND/93519/2019, MoEF&CC File No. J-11011/343/2012-IAII(I)] – **Environment Clearance - regarding.**

**M/s. Shree Cement Limited** has made an online application vide proposal no. IA/RJ/IND/93519/2019 dated 24<sup>th</sup> April, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

- 7.4.2 It is proposed to increase Bagatpura residential colony from 599 to 1028 units (Built-up area from 136766 sqm to 201149 sqm and area of 40 ha) with out change in change clinker production (15.0 Million TPA), Cement production (13.2 Million TPA) Captive Power Plant (160 MW), Waste Heat Recovery System (125 MW), Synthetic Gypsum (TPD) and DG sets of 2000 KVA near Village – Ras, Tehsil – Jaitaran, District – Pali, Rajasthan by M/s Shree Cement Ltd.
- 7.4.3 EC was granted vide letter no. J-11011/343 /2012 IA-II (I) dated 29.05.2018 for following capacities:

S.No.	Product	Name of Unit	Existing EC Capacity
1	Clinker (Million TPA)	Unit-III to VIII	6 X 1.55 = 9.3
		Unit-IX to XI	2 X 2.85 = 5.7
		Total for Unit-III to X	15.0
2	Cement (Million TPA)	Unit-III & IV	2 X 2.2 = 4.4
		Ras New Cement Unit (RNCU)	6.2 (4.0- VRM +2.2 Ball Mill + RP)
		Proposed Cement Mill	2.6
		Total	13.2
3	Thermal Power Generation (MW)	Thermal Power Generation	160
4	Waste Heat Recovery Power Generation (MW)	Waste heat recovery Power Generation	125

S.No.	Product	Name of Unit	Existing EC Capacity
5	Synthetic Gypsum (TPD)	Synthetic Gypsum (TPD)	1560
6	DG Sets (KVA)	DG Sets (KVA)	2000
7	Bagatpura Residential Colony (40 ha)	Built-up area and unit	136799 sq meter and 599 units

- 7.4.4 Certified EC Compliance issued by Regional Office, MoEF&CC, Lucknow vide letter no. IV/ENV/R/Ind-175/971/2018/695 dated 18.03.2019.
- 7.4.5 Environment Management Plan for increase of Bagatpura residential colony housing capacity from 599 to 1028 units (Built-up area from 136766 sqm to 201149 sqm) within the existing land of 40 ha.
- 7.4.6 There will be no significance increase in the pollution load as the proposal is for the increase in the Bagatpura residential colony from 599 units to 1028 units without Change in Production Capacities of Plant (Clinker production-15.0 Million TPA, Cement-13.2 Million TPA, CPP-160 MW, WHRS-125 MW, Synthetic Gypsum-1560 TPD and DG Sets-2000 KVA). Public hearing conducted on 20th April, 2016 for existing environment clearance. Action plan along with implementation status is enclosed herewith.

#### Observations and Recommendations of the Committee:

- 7.4.7 After detailed deliberations, the Committee opined that the proposal under consideration relates to expansion of the residential colony and not under the purview of this Committee. Hence, the Committee recommended to forward the present proposal to Infra 2 sector of Impact Assessment Division and the same was communicated to the PP.
- 7.5 Proposed Expansion of Integrated Cement Plant - Clinker (2 x 2.6 to 3 x 4.5 Million TPA), Cement (2 x 3.0 to 3 x 5.5 Million TPA), Captive Power Plant (25 to 125 MW) and Waste Heat Recovery Power Plant (30 to 100 MW) along with Synthetic Gypsum (65 TPH) and DG Sets (2000 KVA) by **M/s. Shree Raipur Cement Plant (A unit of Shree Cement Limited)** located at Village: Khapradih, Tehsil: Simga, District: Balodabazar – Bhatapara, **Chhattisgarh** [Proposal No. IA/CG/IND/26823/2015, MoEF&CC File No. J-11011/235/2008 -IAII(I)] – **Reconsideration for grant of Environmental Clearance based on ADS reply – regarding.**

**M/s. Shree Raipur Cement Plant (A unit of Shree Cement Limited)** has made an online application vide proposal no. IA/CG/IND/26823/2015 dated 25<sup>th</sup> January, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent:

- 7.5.2 The Expansion of Integrated Cement Project - Clinker (2 x 2.6 to 3 x 4.5 Million TPA), Cement (2 x 3.0 to 3 x 5.5 MTPA), Captive Power Plant (25 to 125 MW) and Waste Heat Recovery Power Plant (30 to 100 MW) along with Synthetic Gypsum (65 TPH) and DG Sets (2000 KVA) of M/s. Shree Cement Raipur Plant (Shree Cement Limited) located at

Village - Khapradih, Tehsil - Simga, District - Balodabazar - Bhatapara (Chhattisgarh) was initially received in the Ministry on 5<sup>th</sup> June, 2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC (I)] during its 20<sup>th</sup> meeting held on 10<sup>th</sup> July, 2017 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the MoEF&CC had prescribed ToRs to the project on 06<sup>th</sup> November, 2017 vide letter no. J-11011/235/2008-IA.II (I).

- 7.5.3 The project of M/s. Shree Cement Raipur Plant (A Unit of Shree Cement Limited) located at Village - Khapradih, Tehsil - Simga, District - Balodabazar - Bhatapara (Chhattisgarh) is for Expansion of Integrated Cement Plant - Clinker (2 x 2.6 to 3 x 4.5 Million TPA), Cement (2 x 3.0 to 3 x 5.5 MTPA), Captive Power Plant (25 to 125 MW) and Waste Heat Recovery Power Plant (30 to 100 MW) along with Synthetic Gypsum (65 TPH) and DG Sets (2000 KVA). The existing project was accorded environmental clearance vide letter no. J - 11011/235/2008 - IA - II (I) dated 05<sup>th</sup> Sept., 2016. The Status of compliance of earlier EC was obtained from Regional Office, Nagpur vide letter no. 5 - 11/ 2011 (ENV)/3997 dated 31<sup>st</sup> July, 2018. There are 9 partial compliances reported by Regional Officer. The closure for partially complied points have been obtained vide letter no. 5-11/2011 (ENV) 4373 dated 26<sup>th</sup> Sept., 2018.

- 7.5.4 The proposed capacity for the different products as below:

Particular	Unit	Existing Granted Capacity (dated 05 <sup>th</sup> Sept., 2016)	Existing Status	Additional Proposed Capacity		Total capacity after proposed expansion
				Phase - 1	Phase - 2	
Clinker* (Million TPA)	Unit - I	2.6	Running	2.6 to 3.5 (by internal modificati ons)	3.5 to 4.5 (by installation of additional preheater)	4.5
	Unit - II	2.6	Running	2.6 to 4.0 (by internal modificati ons)	4.0 to 4.5 (by internal modifications )	4.5
	Unit - III	Nil	Proposed	Nil	4.5	4.5
	<b>Total</b>	<b>5.2 (2 x 2.6)</b>	<b>-</b>	<b>2.3</b>	<b>6.0</b>	<b>13.5 (3 x 4.5)</b>
Cement (Million TPA)	Mill - I	3.0	Running	3.0 to 4.4 (by modificati on in VRM)	4.4 to 5.5 (by installation of Ball Mill + RP)	5.5

Particular	Unit	Existing Granted Capacity (dated 05 <sup>th</sup> Sept., 2016)	Existing Status	Additional Proposed Capacity		Total capacity after proposed expansion
				Phase - 1	Phase - 2	
	Mill - II	3.0	Yet to install	3.0 to 4.4 (by installatio n of VRM)	4.4 to 5.5 (by installation of additional Ball Mill + RP)	5.5
	Mill - III	Nil	Propose d	Nil	1 x 5.5 (4.4 MTPA by VRM & balance 1.1 MTPA by installation of Ball Mill + RP)	5.5
	<b>Total</b>	<b>6.0 (2 x 3.0)</b>	<b>-</b>	<b>2.8</b>	<b>7.7</b>	<b>16.5 (3 x 5.5)</b>
	CPP (MW)	-	25	Running	2 x 25	2 x 25
Waste Heat Recovery Power Plant (MW)	-	30	Running	25	45	100
Synthetic Gypsum Unit (TPH)	-	65	Yet to install	Nil	Nil	65
D.G. Set (KVA)	-	2000	2*250 KVA (balance yet to be installed in phased manner)	Nil		2000
<b>*Clinker will also be sent to the sister grinding units, market sale and also receive from outside if clinker unit is not in operation or shortfall of clinker.</b>						

- 7.5.5 Total land required for the project 159.256 ha which is industrial land and totally under the possession of M/s. Shree Raipur Cement Plant (A unit of Shree Cement Ltd.). No forest land is involved. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.
- 7.5.6 The topography of the area is almost flat and reported to lies between 21°35'41.84" N to 21°36'29.06" N and 82°02'14.24" E to 82°03'6.17" E Longitude in Survey of India toposheet no. 64 G/14 & 64 K/2 at an elevation of about 272 - 285 m. The ground water level reported to ranges between 3 to 5 m bgl below the land surface during the post-monsoon season and 5 to 10 m bgl below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be less than 300 m. Further, the stage of groundwater development is reported to be 86 % and 35 % in core and buffer zone respectively and thereby these are designated under safe Category.
- 7.5.7 No National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule - I fauna. The authenticated list of flora and fauna provided duly authenticated by Forest Officer, Balodabazar reporting presence of no Schedule -I fauna in the study area in the study area.
- 7.5.8 The raw materials required for the proposed expansion project are Limestone, Iron Ore & Red Mud, Indian and Imported Mineral gypsum, Synthetic and Chemical Gypsum, Fly ash and Slag. Cement Plant is based on Dry Process Technology for Cement manufacturing with Pre- Heater and Pre- Calcliner Technology. The type of cement manufactured is / will be OPC, PPC and PSC.
- 7.5.9 The targeted production capacity of the Clinker - (2 x 2.6 to 3 x 4.5 Million TPA), Cement - (2 x 3.0 to 3 x 5.5 MTPA), Captive Power Plant (25 to 125 MW) and Waste Heat Recovery Power Plant (30 to 100 MW) along with Synthetic Gypsum (65 TPH) and DG Sets (2000 KVA). Limestone is being / will be sourced from the Captive Limestone Mines (Semradih - Bharuwadih Mine and Karhi-Chandi Mine) transported through covered conveyer belt. Iron ore & Red Mud is being / will be sourced from Shri Bajrang Power & Ispat Ltd. Tilda / Bharat Aluminium Company Ltd. (Balco - Korba) and transported through Road/Rail. Indian and Imported Mineral gypsum, Synthetic and Chemical Gypsum is being / will be sourced from Swiss Singapore Overseas Pvt. Ltd. Oman Vizag; Coromondal International Ltd. Visakhapatnam Vizag; Synthetic Gypsum plant and transported through Road/Rail.
- 7.5.10 Raw material required for the project along with source with distance and mode of transportation is given below:

Raw Material	Quantity (MTPA)				Source	Distance & Mode of Transportation
	Basis	Existing as per EC granted (5.2 MTPA Clinker & 6.0 MTPA Cement)	Additional (8.3 MTPA Clinker & 10.5 MTPA Cement)	Total (13.5 MTPA Clinker & 16.5 MTPA Cement)		
Lime stone	1.6 T/ T of Clinker	8.32	13.28	21.6	Captive Limestone Mine (Semradih-Bharuwadih Mine and Karhi-Chandi Mine)	Adjacent; Covered Conveyor belt
Iron ore & Red Mud	0.015 T/ T of Clinker	0.08	0.13	0.21	Shri Bajrang Power & Ispat Ltd. Tilda / Bharat Aluminium Company Ltd. (Balco-Korba)	Tilda - 47, Korba - 151 Road / Rail
Indian, Imported Mineral gypsum, synthetic and chemical Gypsum	0.07 T / T of Cement	0.42	0.73	1.15	Swiss Singapore Overseas Pvt. Ltd. Oman Vizag; Coromondal Inter National Ltd. Visakhapatnam Vizag; Synthetic Gypsum plant	Vizag - 573; Road / Rail
Fly Ash	0.35 T/T of Cement	2.10	3.67	5.77	CPP, GMR Chhattisgarh Energy Ltd Tilda, Sarda Energy & Minerals Ltd Siltara, NSPCL Limited Bhilai, NTPC Limited Sipat, KSK	Tilda - 47, Siltara - 172, Bhilai - 121, Sipat - 106, Akaltara - 119, Marwa - 120, Raigarh - 154 Road

Raw Material	Quantity (MTPA)				Source	Distance & Mode of Transportation
	Basis	Existing as per EC granted (5.2 MTPA Clinker & 6.0 MTPA Cement)	Additional (8.3 MTPA Clinker & 10.5 MTPA Cement)	Total (13.5 MTPA Clinker & 16.5 MTPA Cement)		
					Mahanadi Power Co. Ltd Akaltara, Chhattisgarh Power Gen. Co. Ltd. (CSEB) Marwa, D B Power Limited Raigarh	
Slag	0.50 T/T of Cement	3.00	5.25	8.25	MetalmanSiltara, JayaswalNeco Industries Ltd Siltara, Jindal Steel & Power Ltd Raigarh	Siltara - 172, Raigarh - 154 Road / Rail

*Note: Limestone (0.09 MTPA) will also be required for lime dosing in CPP after proposed expansion.*

- 7.5.11 The water requirement of the project is estimated as 3935 KLD (including both captive mines); out of which, 3000 KLD fresh water requirement will be sourced from Ground Water and the remaining requirement of 935 KLD will be sourced from Rain Water collected in Mine Pits of Semradih-Bharuwadih Mine & Karhi-Chandi Mine and Earthen Pond in the plant. The Permission for withdrawal of 3000 KLD ground water has been renewed vide letter no. 21-4 (36) / NCCR / CGWA /2008- 2079 dated 24<sup>th</sup> Oct., 2018.
- 7.5.12 The Power requirement of the project is estimated as 220 MW, which will be sourced from Existing & Proposed CPP (125 MW) and WHRS (100 MW), Grid & D.G Set (for backup). The Committee noted that confirmed coal linkage document for the power plant along with its characteristics has not been submitted.
- 7.5.13 Baseline Environmental Studies were conducted during Post - Monsoon Season i.e. from Oct., to Dec., 2017. Ambient air quality monitoring was carried out at 15 locations during 01<sup>st</sup> Oct, 2017 to 31<sup>st</sup> Dec., 2017 and the data submitted indicated: PM<sub>10</sub> (59.7 to 84.2 µg/m<sup>3</sup>), PM<sub>2.5</sub> (24.3 to 43.2 µg/m<sup>3</sup>), SO<sub>2</sub> (5.3 to 13.5 µg/m<sup>3</sup>) and NO<sub>2</sub> (12.5 to 28.5

µg/m<sup>3</sup>). The results of the modeling study indicates that the maximum increase of GLC for the proposed expansion Project is 8.5 µg/m<sup>3</sup> with respect to the PM, 5.25 µg/m<sup>3</sup> with respect to the SO<sub>2</sub>, 7.58 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.

7.5.14 Traffic assessment for the existing and the proposed study presented by the project proponent is furnished as below : -

**Existing traffic assessment :**

S. No.	Vehicle Type	Number of Vehicles / day	Passenger Car Unit (PCU) Factor	Total Number of Vehicle (PCU) / day
1.	Motor Cycle / Scooter	1498	0.5	749
2.	Passenger Car / Van / Auto-rickshaw	920	1.0	920
3.	Tractors	408	1.5	612
4.	Truck	265	3.0	795
5.	Bus	120	3.0	360
6.	Trailer	224	4.5	1008
7.	Cycle	688	0.5	344
8.	Cycle Rikshaw	0	2.0	0
Total		4123		4788
		PCU / hr = (PCU / day) / 24 = 199.5		

**Inward Traffic due to the Raw Material Transportation - Road**

Material	Required Quantity		Source / Origin Destination	Type of vehicle and Capacity	Expected%	Approx. No. of Trucks / day
	MTPA	TPD				
Iron ore & Red Mud	0.13	382	Shri Bajrang Power & Ispat Ltd. Tilda/Bharat Aluminum Company Ltd.(Balco-Korba)	Truck / 30 Tonnes	100	13
Indian, Imported, synthetic and chemical Gypsum	0.73	2147	Cormandal Fertilizer Ltd, Vizag; Synthetic gypsum plant & nearby sources	Truck / 30 Tonnes	100	71
Fly Ash	3.67	10794	CPP, Chhattisgarh Energy Ltd Tilda, GMR Sardar	Truck / 30 Tonnes	62	222



Material	Required Quantity		Source / Origin Destination	Type of vehicle and Capacity	Expected%	Approx. No. of Trucks / day
	MTPA	TPD				
			Energy & Minerals Ltd Siltara, NSPCL Limited Bhilai, NTPC Limited Sipat, KSK Mahanadi Power Co. Ltd Akaltara, Chhattisgarh Power Gen. Co. Ltd. (CSEB) Marwa, D B Power Limited Raigarh.			
Coal & Pet Coke for Cement Plant	1.33	3912	MetalmanSiltara, JayaswalNeco Industries Ltd Siltara, Jindal Steel & Power Ltd Raigarh	Truck / 30 Tonnes	20	130
Coal for CPP	0.71	2088	Local Petroleum refinery /Jamnagar / USA/ SA/ Indonesia etc.	Truck / 30 Tonnes	75	70
<b>Total</b>						<b>608</b>

\*Considering 100% by Road to Calculate Maximum Pollution Load with 340 working days

**Outward Traffic due to Finished Product Transportation – Road**

Material	Total Quantity		Source / Origin Destination	Expected %	Type of vehicle and Capacity	Number of Trips (approx.) Per Day
	MTPA	TPD				
Clinker	6.1	16712	Shree Raipur Cement Plant	67	Truck / 30 Tonnes	373
Cement	16.5	45205	Shree Raipur Cement Plant	33	Truck / 30 Tonnes	497
<b>Total</b>						<b>870</b>

Total No. of increased trucks / tankers per day (inward) = 574

Total No. of increased trucks / tankers per day (outward) = 870

Total No. of increased trucks / tankers per day (outward) =  $574 + 870 = 1444$

Increase in PCU / day =  $1444 \times 3 = 4332$

**Railway siding with loading / unloading facilities at Shree Raipur Cement Plant - Alternative option for transportation**

A railway siding connects the plant to Bhatapara Railway Station, which is about 18 km in NW direction from the plant site. Emissions per ton - km of road transport are higher than emission per ton - km caused by rail transport. Thus, SCL will achieve emission reductions by using rail as mode of transport for clinker and cement.

**Outward Traffic Railways - Raw Material**

Material	No. of Wagon and Capacity	Number of Trips / day (approx.)
Coal / Petcoke	60 / 55 Tonnes	2
Slag	60/ 55 Tonnes	4

**Outward Traffic: Railways - Finished Products**

Material	No. of Wagon and Capacity	Number of Trips / day (approx.)
Clinker	60 / 55 Tonnes	2
Cement	60 / 55 Tonnes	9

7.5.15 After detailed discussions, the Committee was of the view that project proponent should take necessary efforts to gradually reduce the movement of raw materials and finished products by road. Also, the project proponent should make efforts on warfooting basis to establish the railway siding facility which connects the plant to Bhatapara Railway Station with a time frame of 5 years. Further, the Committee also advised all the raw materials shall be stored under covered storage and open storage of raw materials is not allowed.

7.5.16 Ground water quality has been monitored at 8 locations in the study area and analyzed. pH: 7.36 to 8.02, Total Hardness: 246.76 to 552.29 mg/l, Chlorides: 11.40 to 181.41 mg/l, Fluoride: 0.54 to 1.06 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 6 locations. pH: 7.36 to 8.08, DO: 4.4 to 5.0 mg/l, BOD: 2.3 to 7.2 mg/l and COD: 6.80 to 25.69 mg/l.

7.5.17 Noise levels are in the range of 49.5 to 65.6 Leq dB (A) for day time and 38.2 to 58.8 Leq dB(A) for night time.

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

- 7.5.19 No solid waste will be generated in the cement manufacturing process. Dust collected from various air pollution control equipments 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. Fly ash from CPP is being / will be utilized in manufacturing of PPC grade cement. Used oil & grease is 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 out of the total existing plant area of 159.256 ha, 33% (i.e. 52.55 ha) will be developed under greenbelt / plantation; out of which 39.5 ha (i.e. 25 % of the total plant area) has already been covered under greenbelt development / plantation and rest 13.05 ha area will be developed. As per the specific “TOR point no. (iv)”, additional 6.5 ha will also be developed under greenbelt / plantation as greenbelt to attenuate the noise levels and trap the dust generated due to the project development activities.
- 7.5.20 It has been reported that Consent to operate from CECB obtained *vide* letter no. 6517/TS/CECB/2018/Naya Raipur dated 16<sup>th</sup>Feb., 2018 under Air Act & letter no. 6515/TS/CECB/2017/Naya Raipur dated 16<sup>th</sup> Feb., 2018 under Water Act which is valid up to 31<sup>st</sup> Jan., 2020.
- 7.5.21 Public hearing of the project was held on 1<sup>st</sup> Aug., 2018 at Village Chandi Ground (Near Panchayat Bhawan), Tehsil- Simga, Dist.- Balodabazar- Bhatapara (C.G.) under the chairmanship of Mr. T. R. Agrawal, Additional District Magistrate, District - Balodabazar (Chhattisgarh) for Proposed Expansion Project having production capacity of Clinker (2 x 2.6 to 3 x 4.5 Million TPA), Cement (2 x 3.0 to 3 x 3.5 MTPA), Captive Power Plant (25 to 125 MW) and Waste Heat Recovery Power Plant (30 to 100 MW) under the Chhattisgarh Environment Conservation Board. The issues raised during public hearing are Employment, Environment & Pollution, CSR activities related, Land related and Plantation etc. The Statement of issues raised by the public and response of the project proponent with action plan is as follows:

S. No.	Issue	Response by project proponent (during & after PH)	Time Bound Action Plan proposed & Budgetary provision
1.	Employment	Proposed expansion project will generate around 650 employments, where the preference will be given to local candidates as per their qualification and requirement. Shree Raipur Cement Plant has already given employment to the local and around 1300 no. are employed in the plant from Chhattisgarh and out of which 1000 nos. are from Balodabazar District.	Preference in employment shall be given to suitable local candidates. Apart from providing direct employment. The company has proposed to undertake / impart skill development programs to empower the local unemployed youths for a self-sustaining career.
2.	Environment & Pollution	Plant is / will be based on Zero Liquid discharge (ZLD) policy. Also, company is taking various measures for the control of air pollution such as installation of APCEs, covered storage facilities, etc.	Company has allocated Rs. 140 Crores as a capital cost and Rs. 1.5 Crores/ annum as a recurring cost for Environmental Protection

S. No.	Issue	Response by project proponent (during & after PH)	Time Bound Action Plan proposed & Budgetary provision
		State-of-the art pollution control devices has been / will be installed. Controlled blasting is being carried out as per DGMS & IBM Rules.	Measures.
3.	CSR related	Various activities will be done by the company under CER i.e. health, education, skill development, Women Empowerment Center for employment, community infrastructure, drinking water, agriculture, plantation and solar lighting etc. in next 7 years.	Amount of Rs. 11.21 Crore will be spent for various activities under CER.
4.	Plantation	Company will develop approx. 59.05 ha area under greenbelt / plantation; out of which 39.5 ha area has already been covered and rest 13.05 ha area will be developed. As per the specific "TOR point no. (iv)", additional 6.5 ha will also be developed under greenbelt / plantation which is being / will help to arrest the particulate matter in the area and will help in attenuating noise.	Further, the company will plant around 54,216 nos. of saplings within plant premises. Cost incurred for the same will be Rs. 50 lacs. Rs. 70 Lacs has been allocated for plantation in nearby area.
5.	Land related	The land for the plant has been purchased on mutual agreement basis and registry of the land has also been done in the name of Shree Cement Ltd. Total plant area is 159.256 ha and proposed expansion will be done within the existing plant premises; which is already under the possession of M/s. Shree Raipur Cement Plant. Conversion of the same from agricultural land to industrial land has already been done.	-

7.5.22 The Committee noted that the PH proceedings submitted by the project proponent in the EIA/EMP report is not bearing any letter no, date and signature of the Officer concerned with the Chhattisgarh Environment Conservation Board. The advertisement submitted in the Annexure is not at all legible. Further, point wise issues raised during the public hearing in verbatim has not been prepared along with time bound action plan with fund allocation for the implementation of the issues raised in public hearing. The Committee requested the Ministry to obtain the original copy of the Public Hearing proceedings from CECB also as PP has not submitted the authenticated copy of the public hearing proceedings. The Committee also noted that the people in vicinity of the plant/mine site are mostly suffering from Silicosis.

7.5.23 An amount of Rs. 11.21 Crores has been earmarked for Corporate Environment Responsibility based on public hearing issues. Details of CER Plan is given below:

Total Project Cost: Rs. 2282.75 Crores, Phase-1: RS. 251.30 Crores and Phase-II: Rs. 2031.45 Crores									
Total CER Cost: Rs. 11.21Crores, Phase-1: RS. 2.13 Crores and Phase-II: Rs. 9.08 Crores									
SUMMARY OF ALL ACTIVITIES									
S. No.	Activity Heads	Years (Rs. In lacs)							Total (Rs in Lacs)
		Phase-I			Phase-II				
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	
1.	HEALTH & FAMILY WELFARE PROGRAMMES- Infrastructure, building, medicines etc	7.0	8.0	9.0	30.0	30.0	35.0	56.0	175.0
2.	EDUCATION PROMOTION PROGRAMMES- Infrastructure, building, Computer Lab, books etc	7.0	8.0	9.0	30.0	30.0	35.0	91.0	210.0
3.	WOMEN EMPOWERMENT & DEVELOPMENT CENTER- Infrastructure, building and training facilities	5.0	5.0	5.0	5.0	20.0	5.0	5.0	50.0
4.	SKILL DEVELOPMENT CENTER- Infrastructure, building and training facilities	3.0	3.0	3.0	3.0	10.0	4.0	4.0	30.0
5.	SPORTS ACADAMY- Infrastructure, building and sports facilities	2.0	2.0	2.0	10.0	4.0	5.0	5.0	30.0
6.	AGRICUITURE DEVELOPMENET ACTIVITIES- Distribution of seeds, agriculture equipment, training, drip irrigation etc	5.0	5.0	5.0	10.0	10.0	15.0	20.0	70.0
7.	DRINKING WATER SUPPLY-Tanker and permanent pipeline	7.0	8.0	8.0	10.0	10.0	12.0	15.0	70.0
8.	PLANTATION IN NEARBY AREA-10000 plantation in nearby schools, Govt offices, pond side.	7.0	7.0	8.0	8.0	10.0	15.0	15.0	70.0

Total Project Cost: Rs. 2282.75 Crores, Phase-1: RS. 251.30 Crores and Phase-II: Rs. 2031.45 Crores									
Total CER Cost: Rs. 11.21Crores, Phase-1: RS. 2.13 Crores and Phase-II: Rs. 9.08 Crores									
<b>SUMMARY OF ALL ACTIVITIES</b>									
S. No.	Activity Heads	Years (Rs. In lacs)							Total (Rs in Lacs)
		Phase-I			Phase-II				
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	
	road side and available space								
9.	SOLAR LIGHTS ALONG THE ROAD	5.0	5.0	5.0	15.0	15.0	20.0	21.0	86.0
10.	ROAD DEVELOPMENET	10.0	10.0	10.0	15.0	15.0	20.0	20.0	100.0
11.	COMMUNITY INFRASTRUCTURE DEVELOPMENT PROJECTS- Infrastructures and Buildings etc	10.0	10.0	10.0	40.0	40.0	60.0	60.0	230.0
GRAND TOTAL		68.0	71.0	74.0	176.0	194.0	226.0	312.0	1121.0
The above proposed expenditure can be shifted year to year to other heads based on need.									

7.5.24 The capital cost of the project is Rs. 2282.75 Crores and the capital cost for environmental protection measures is proposed as Rs. 140 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 1.5 Crores / annum.

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

(In Rs. Crores)

Particular	Capital Cost	Recurring Cost / annum
Air Pollution Control	135.5	1.05
Water Pollution Control and Rain Water Harvesting Measures	1.5	0.15
Environment Monitoring and management	1.0	0.20
Greenbelt Development	2.0	0.10
<b>Total</b>	<b>140</b>	<b>1.50</b>

The employment generation from the proposed expansion project is 650 persons.

7.5.26 Greenbelt will be developed in 52.55 ha (33 % of the total plant area) will be developed under greenbelt / plantation; out of which 39.5 ha (i.e. 25 % of the total plant area) has already been covered under greenbelt development / plantation and rest 13.05 ha area will be developed. Greenbelt will be developed along the plant boundary as per CPCB/MoEFCC, New Delhi guidelines. Local and native species will be planted with a proposed density of 2470 trees per hectare. Total no. of 54216 saplings will be planted and nurtured in 21.95 hectares in 3 years.

- 7.5.27 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 7.5.28 Name of the consultant: M/s. J. M. Environet Pvt. Ltd., Gurugram [S.No. 90, List of QCI Accredited Consultant Organizations (Alphabetically) Rev. 73, February 08, 2019].
- 7.5.29 The aforesaid proposal was considered in the 4<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held during 20-22<sup>nd</sup> February, 2019. After detailed deliberations, the Committee sought the following additional information for further re-consideration of the proposal.
- i. Fresh monitoring of CO and other relevant parameters in the ambient air shall be carried out and the data shall be submitted in compliance to the ToR no. para 6 (ii) and (iii).
  - ii. PH proceedings duly signed by the Officer concerned with the Chhattisgarh Environment Conservation Board along with the letter no. date and legible copy of the advertisement issued for the public hearing shall be submitted.
  - iii. Authenticated English translation of the public hearing proceedings as per point no.iii of the general ToR dated 6/11/2017.
  - iv. Point wise issues raised during the public hearing in verbatim shall be prepared along with time bound action plan with fund allocation for the implementation of the issues raised in public hearing.
  - v. Confirmed limestone linkage for the 13 MTPA capacity along with the mode of transportation shall be submitted. Accordingly, impact prediction for raw material transportation shall be re-worked out.
  - vi. Confirmed coal linkage document for the power plant along with its characteristics shall be submitted.
  - vii. Line source modelling for raw materials and finished product transportation shall be carried out and submitted.
  - viii. Commitment/undertaking from project proponent regarding transportation of raw materials and finished product transportation by rail only in a time frame of five years shall be submitted.
  - ix. Revised Hazard Identification and Risk Assessment report along with the action plan specific to the project addressing all possible hazards / risks.
  - x. Project proponent shall submit revised corporate environmental policy incorporating mechanism for reporting of non-compliances/infringements/deviations of environmental clearance conditions to the Board of Directors of the Company by identified response persons at the periodic intervals.
- 7.5.30 Point wise reply to the aforesaid additional details were uploaded by the project proponent online on PARIVESH web portal on 29<sup>th</sup> April, 2019. Brief summary of the same is given below:

S.No	Additional Details Sought	Reply
i.	Fresh monitoring of CO and other relevant parameters in the ambient	Ambient Air quality monitoring for CO and HC was conducted at 15 locations for two weeks from

S.No	Additional Details Sought	Reply
	air shall be carried out and the data shall be submitted in compliance to the ToR no. para 6 (ii) and (iii).	4 <sup>th</sup> to 17 <sup>th</sup> Mar.2019. Out of total 30 values of CO, 26 values found for BDL and rest 4 values were up to max. 0.85 mg/m <sup>3</sup> . All 30 HC values were found BDL. <i>* Detection limit for CO-0.5 mg/m<sup>3</sup> &amp; HC-10.0 ppm</i> Monitoring certificates have been submitted in this regard.
ii.	PH proceedings duly signed by the Officer concerned with the Chhattisgarh Environment Conservation Board along with the letter no. date and legible copy of the advertisement issued for the public hearing shall be submitted.	Public hearing proceedings(original copy) was duly signed by the Member Secretary, Chhattisgarh Environment Conservation Board, Raipur vide letter no. 5169/TS/CECB/2018 dated 18.9.2018 directly forwarded to the Secretary, MoEF&CC with copy to the Shree Cement Ltd. Copy of the same has been submitted.
iii.	Authenticated English translation of the public hearing proceedings as per point no.iii of the general ToR dated 6/11/2017	True copy of English translation of the public hearing proceedings has been submitted.
iv.	Point wise issues raised during the public hearing in verbatim shall be prepared along with time bound action plan with fund allocation for the implementation of the issues raised in public hearing.	Point wise issues raised at the time of public hearing in verbatim along with time bound action plan with fund allocation has been submitted.
v.	Confirmed limestone linkage for the 13 MTPA capacities along with the mode of transportation shall be submitted. Accordingly, impact prediction for raw material transportation shall be re-worked out.	Final EC application along with EIA/EMP study reports and public hearing is under consideration by the Ministry for the following adjacent captive limestone sources: 1) Karhi-Chandi Limestone Mine at 1.5 Million TPA 2) Bharuwadih - Semradih Limestone Mine from 8.6 to 11.06 Million TPA <i>Total limestone: 12.56 Million TPA</i> Adequate limestone (12.56 million TPA) requirement for expansion of Unit-1 (2.6 to 3.5 MTPA) and Unit-2 (2.6 to 4.0 MTPA). Limestone transport from crushers of both adjacently located captive mines will be transported through conveyor belt. o Additionally, proposed Unit-3 would take 2 to 3 years for erection and commissioning by the time, EC for Captive Limestone Mines would be obtained for further expansion required for



S.No	Additional Details Sought	Reply
		<p>the desired quantity to meet the Clinker production of 13.5 Million TPA.</p> <ul style="list-style-type: none"> <li>○ In case, EC for limestone mines expansion takes more time than the completion period of proposed unit-3, then all three units (U-1 2 &amp; 3) will be operated within maximum capacity of 7.5 Million TPA (2.6, 2.6 &amp; 2.3 MTPA respectively) till grant of EC of existing captive limestone mines for required quantity of limestone.</li> <li>○ Limestone required for Clinker Production (13.5 Million TPA) would be met by adjacently located Captive Limestone Mine and would be entirely through Conveyor belt and not by road. In no case, it will be sourced from any other source.</li> </ul> <p>In addition to the above, the project proponent submitted a letter during the meeting stating that the available limestone reserve from Karhi-Chandi Limestone Mine and Bharuwadih - Semradih Limestone Mine would be 268.3 million tons. Considering further mineral exploration for both the mines, the expected limestone reserves would be 578 million tons.</p>
vi.	Confirmed coal linkage document for the power plant along with its characteristics shall be submitted.	<ul style="list-style-type: none"> <li>○ Present coal linkage with South Eastern Coal Fields Ltd Bilaspur Chhattisgarh for annual quantity of 349700MT is already in existence.</li> <li>○ Coal and Pet coke are imported with supplier agreement.</li> <li>○ Indian/Imported coal and Indian/Imported Pet coke readily available in open market and may be purchased through agreement whenever required.</li> <li>○ Coal and Pet coke required will be sourced from Imported/ Indian open market for which contract will be done at the initiation of project work.</li> </ul>
vii.	Line source modeling for raw materials and finished product transportation shall be carried out and submitted.	Line source modeling for raw materials and finished product transportation was carried out. The maximum GLCs after implementation of the project is estimated to be PM <sub>10</sub> – 0.90 µg/m <sup>3</sup> , SO <sub>2</sub> – 1.82 µg/m <sup>3</sup> , NO <sub>2</sub> – 2.18 µg/m <sup>3</sup> and CO -2.23 µg/m <sup>3</sup> .
viii.	Commitment/undertaking from	<ul style="list-style-type: none"> <li>○ Existing Railway siding at village Hathbandh</li> </ul>

S.No	Additional Details Sought	Reply
	<p>project proponent regarding transportation of raw materials and finished product transportation by rail only in a time frame of five years shall be submitted.</p>	<p>(~ 18 km from the site). Company is exploring the possibility for extension of railway line at the plant site and commit to complete it within 5 years.</p> <ul style="list-style-type: none"> <li>○ Existing inward &amp; outward transportation is 9.26 Million TPA. Out of which 1.26 by rail and rest 8 million TPA by road.</li> <li>○ Additional road load will be increased by 14.3 - 8 = 6.3 Million TPA. Considering 340 days transportation and 30 Tone per truck capacity addition traffic load will be 618.</li> <li>○ In revised scenario, additional total inward and outward trucks and tankers for the proposed expansion would be 618.</li> </ul> <p>Complete dependency on rail transportation was not feasible due to following reason:</p> <ul style="list-style-type: none"> <li>• Fly ash and local Indian coal are / will be sourced from max from ~200 km, thus ferrying for short distance by rail is not feasible.</li> <li>• Till date, no thermal power plants in India have Railway sidings and required additional facility for fly ash loading in Railway wagon. However, in future, such facilities if available, railway transportation with respect to distance criteria will be considered.</li> <li>• From local markets, cement dispatch by railway is not feasible due to short distances and non-availability of railway sidings / lines at the loading/ unloading location.</li> <li>• Railway dispatch is mostly responsible for bulk dispatch of approximate 60 wagons with each of 55 tonnes capacity, which implies dispatch by rail is possible for ~ 3300 tone material. Cement requirement below the 3300 tonnes material, transportation is possible by road only.</li> <li>• Transportation by rail is subject to availability of railway wagon as and when required which is beyond our control.</li> </ul>
ix.	<p>Revised Hazard Identification and Risk Assessment report along with the action plan specific to the project addressing all possible hazards / risks.</p>	<p>Revised Hazard Identification and Risk Assessment report along with the project specific action plan has been prepared and submitted.</p>
x.	<p>Project proponent shall submit</p>	<p>Corporate Environmental Policy has been revised</p>

S.No	Additional Details Sought	Reply
	revised corporate environmental policy incorporating mechanism for reporting of non-compliances/ infringements/ deviations of environmental clearance conditions to the Board of Directors of the Company by identified response persons at the periodic intervals.	and submitted.

7.5.31 The revised CER action plan submitted by the project proponent is furnished as below:

**REVISED CER PLAN FOR SHREE RAIPUR CEMENT PLANT EXPANSION**

**PROJECT COST RS. 2282.75 CR**

**CER COST RS. 971 LACS**

SN	AREA OF CER	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amt Rs in Lacs
<b>HEALTH &amp; FAMILY WELFARE</b>							
1	Renovation of public health center of village Khapradih, Semradih, Bharuwadih, Chandi and Karhi: 1. Construction of Male, Female and Child ward-15 nos. 2. Construction of male and female toilet- 20 nos. 3. Water cooler-5 nos. 4. Ambulance: 5 nos.	0.00	0.00	25.00	25.00	30.00	80.00
2	Health management center with fullfledged medical check-up, doctors & nursing staff, free medicines and 10 beds for male and female ward for primary health treatment and availability of 24x7 ambulance at village Bharuwadih	150.00	0.00	0.00	0.00	0.00	150.00
<b>EDUCATION AND SPORTS PROMOTION</b>							

REVISED CER PLAN FOR SHREE RAIPUR CEMENT PLANT EXPANSION

PROJECT COST RS. 2282.75 CR

CER COST RS. 971 LACS

SN	AREA OF CER	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amt Rs in Lacs
3	Renovation of Govt. schools of village Khapradih, Semradih, Bharuwadih, Chandi and Karhi: 1. Construction of rooms: 25 rooms. 2. Construction of male and female toilet- 30 nos. 3. Water cooler-5 nos. 4. Computer labs: 5 nos. 5. Furnitures	0.00	0.00	25.00	25.00	30.00	80.00
4	English medium school of 12th standard at village Bharuwadih	0.00	200.00	0.00	0.00	0.00	200.00
5	Sports complex in village Khapradih and Bharuwadih: 1. Construction of rooms: 2 rooms. 2. Construction of male and female toilet- 4 nos. 3. Water cooler-2 nos. 4. Preparation of play ground: 2. nos. 5. Sports equipement-2 sets	12.00	12.00	0.00	0.00	0.00	24.00
COMMUNITY INFRASTRUCTURE DEVELOPMENT PROJECTS							
6	Construction of roads in village: 1. Bharuwadih: 2.0 kms 2. Chnadi: 3.0 kms	35.00	35.00	35.00	35.00	35.00	175.00
7	Construction of Community center at village Khapradih, Semradih, Bharuwadih, Chandi and Karhi: 5 Nos	10.00	10.00	10.00	12.00	12.00	54.00
8	Drinking water tank at village Lohari & Paunsari	0.00	0.00	0.00	15.00	15.00	30.00

REVISED CER PLAN FOR SHREE RAIPUR CEMENT PLANT EXPANSION

PROJECT COST RS. 2282.75 CR

CER COST RS. 971 LACS

SN	AREA OF CER	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amt Rs in Lacs
9	Renovation of existing water ponds for Rainwater recharge and plantation all around the boundary of pond at Village Khapradih, Semradih, Bharuwadih, Chandi and Karhi:	10.00	10.00	10.00	10.00	10.00	50.00
10	Subsidy on drip irrigation system, seeds& agroforestry in 100 Ha agriculture land in nearby villages Khapradih, Semradih, Bharuwadih, Chandi and Karhi	10.00	10.00	12.00	12.00	15.00	59.00
11	Plantation in nearby villages along the roads, Govt. offices and available free space at villages Khapradih, Semradih, Bharuwadih, Chandi and Karhi@ 5000 /YEAR	5.00	5.00	5.00	5.00	5.00	25.00
12	Installation of Solar street lights at community center, common area, dispensary, bus stand & school at village Khapradih, Semradih, Bharuwadih, Chandi and Karhi	5.00	5.00	5.00	5.00	5.00	25.00
Total		242.00	292.00	132.00	149.00	162.00	977.00

**Observations of the Committee:**

7.5.32 The committee noted that additional information furnished by the project proponent is satisfactory and adequate. Further, the Committee advised the project proponent to complete the railway siding facility in a time frame of five years and efforts shall be made for transportation of raw materials and products by rail only.

**Recommendations of the Committee:**

7.5.33 After detailed deliberations, the Committee recommended for environmental clearance under the provisions of EIA Notification, 2006 for the project cited above subject to following specific and general conditions:

**A. Specific conditions**

- i. The limestone for the project shall be sourced only from (i) Existing Captive Semradih&Bharuwadih Limestone (M.L Area - 531.126 ha) and (ii) KarhiChandi Limestone Mine (ML area 242.127 ha) which are located adjacent to plant site. In case of any change in source of limestone, the project proponent shall obtain prior permission from MoEF&CC.
- ii. Project proponent shall conduct health studies in all the villages covered within a radius of 2km radius of the project site for assessment of prevalence of silicosis for once in six months.
- iii. Railway siding shall be completed in a time frame of five years.
- iv. CER related activities shall be completed within a time frame of three years.

**B. General conditions**

**I. Statutory compliance:**

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

**II. Air quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (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 (Co-processing Cement); 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 recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system carryout to Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the plant area at least at four locations (one within

and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.

- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.
- viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- ix. Recycle and reuse lime fines, coal fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after agglomeration.
- x. 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;
- xi. Provide wind shelter fence and chemical spraying on the raw material stock piles; and
- xii. Provide Low NO<sub>x</sub> burners as primary measures and SCR /NSCR technologies as secondary measure to control NO<sub>x</sub> emissions. Have separate truck parking area and monitor vehicular emissions at regular interval.
- xiii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport
- xiv. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, cement bagging plants

### **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 recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. Adhere to 'Zero Liquid Discharge'.
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- vii. The project proponent shall practice rainwater harvesting to maximum possible extent.
- viii. Water meters shall be provided at the inlet to all unit processes in the cement plant.
- ix. The project proponent shall make efforts to 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 level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

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

- i. 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. The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
- iii. Kitchen waste shall be composted or converted to biogas for further use.

#### **VII. Green Belt**

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

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

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The PP shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

## **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 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or 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.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.

## **X. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

- iv. The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- xi. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- xii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- viii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- ix. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- x. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xi. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other

orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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

**7.6 Proposed Manufacturing of Manganese oxide, Manganese dioxide and Various Ferro alloys (by Thermite Process) by M/s. Singh Ferro Alloys located at Plot no. C/156, MIDC Butibori., Nagpur, Maharashtra [Online proposal No. IA/MH/IND/29969/2015, MoEF&CC File No. J-11011/-170/2015-IAII(I)] – Environment Clearance - regarding.**

M/s. Singh Ferro Alloys has made an online application vide proposal no. IA/MH/IND/29969/2015 dated 25<sup>th</sup> April, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

- 7.6.2 The proposed project of M/s Singh Ferro Alloys located in plot no. C/156, MIDC Butibori, District: Nagpur, State Maharashtra was initially received in the Ministry on 10<sup>th</sup> August 2015 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 5<sup>th</sup> meeting held on 30<sup>th</sup> – 31<sup>st</sup> March 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 24<sup>th</sup> May 2016 vide Lr. No. J-11011/170/2015-IA.II(I).
- 7.6.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 17/04/2019 vide Online Application No. IA/MH/IND/29969/2015.
- 7.6.4 The project of M/s. Singh Ferro Alloys located in plot no. C/156, MIDC Butibori, District: Nagpur, State Maharashtra for setting up of a new unit for production of Manganese Oxide, Manganese Dioxide and Ferro Alloys by Thermite Process.
- 7.6.5 The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Furnace (Bhatti)	2 nos.	6T	1000 TPA
Reaction Vessels (For Thermite Process)	2 nos.	1T	1200 TPA

- 7.6.6 The total land leased by MIDC for the project is 0.06 ha. No forestland involved. The entire land has been leased by MIDC for the project. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

- 7.6.7 The topography of the area is flat and reported to lie between 20°56'46.67"N to 20°56'46.43"N Latitude and 78°56'49.20"E to 78°56'49.79"E Longitude in Survey of India topo sheet No. 55K/16, 55P/1, 55O/4, 55L/13, at an elevation of 288 m AMSL. The ground water table reported to range between 0.6 to 10.6 below the land surface during the post-monsoon season and 0.8 to 15.59 below the land surface during the pre-monsoon season.
- 7.6.8 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 be a corridor for Schedule-I fauna.
- 7.6.9 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process is given in Chapter 2 of the EIA Report.
- 7.6.10 The targeted production capacity of Manganese oxide and Manganese dioxide is 1000 TPA respectively, 600 TPA Ferro Titanium OR 1200 TPA Low/medium carbon ferro manganese OR 250 TPA Ferro molybdenum OR 250 TPA Ferro vanadium. The ore for the plant would be procured from Manganese Mines of MOIL. The ore transportation will be done through road by tarpaulin covered trucks.
- 7.6.11 The water requirement of the project is estimated as 5 m<sup>3</sup> /day, which will be obtained from MIDC.
- 7.6.12 The power requirement of the project is estimated as 93KW, which will be obtained from the State Electricity Board.
- 7.6.13 Baseline Environmental Studies were conducted during Winter season i.e. from 1st October 2016 to 30th December 2016. Ambient air quality monitoring has been carried out at 8 locations during from 1st October 2016 to 30th December 2016 and the data submitted indicated: PM<sub>10</sub> (31.5 to 57.6 µg/m<sup>3</sup>), PM<sub>2.5</sub> (15.4 to 32.5 µg/m<sup>3</sup>), SO<sub>2</sub> (7.6 to 24.5 µg/m<sup>3</sup>) and NO<sub>x</sub> (9.9 to 25.2 µg/m<sup>3</sup>). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 0.02 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 0.58 µg/m<sup>3</sup> with respect to the SO<sub>2</sub>, 0.9 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.
- 7.6.14 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.1 to 7.9, Total Hardness: 210 to 518 mg/l, Chlorides: 37.5 to 167 mg/l, Fluoride: 0.3 to 0.6 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 5 locations. pH: 7.3 to 8.0; DO: 5.3 to 6.3 mg/l and BOD: 1.2 to 2.2 mg/l. COD from 5.2 to 10.6 mg/l.
- 7.6.15 Noise levels are in the range of 39.3 to 54.6 dBA for daytime and 36.3 to 45 dBA for nighttime.
- 7.6.16 No R&R is involved.
- 7.6.17 It has been reported that due to the proposed project a total of 970 TPA slag will be generated which will be sold to manufacturer of Silico-manganese & 30 TPA Ash will be generated which will be sold to brick manufacturers. It has been envisaged that an area of 0.02 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

- 7.6.18 The Public hearing of the project was held on 21st March 2018 at Manufacturing Association Hall, MIDC, Butibori under the chairmanship of Additional District Magistrate for production of Manganese Oxide, Manganese Dioxide and Ferro Alloys by Thermite Process. The issues raised during public hearing are employment & pollution control. An amount of 3.0 Lakhs (2% of Project cost) has been earmarked for Corporate Environment Responsibility based on public hearing issues.
- 7.6.19 The capital cost of the project is Rs. 1.5 Crores and the capital cost for environmental protection measures is proposed as Rs. 33 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 7 Lakhs. The detailed CER plan has been provided in the EMP in its page No. 112 to 113. The employment generation from the proposed project is 40.
- 7.6.20 Greenbelt will be developed in 0.02 Ha which is about 33% of the total acquired area. A 100 m wide greenbelt, 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 1600 trees per hectare. Total 32 no. of saplings will be planted and nurtured in 0.02 hectares.
- 7.6.21 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 7.6.22 Consultant: Pollution and Ecology Control Services (PECS) Listed at no. 121 in QCI List

**Observations and Recommendations of the Committee:**

- 7.6.23 After detailed deliberations, the committee recommended the proposal for Environmental Clearance with following specific and general conditions.

**A. Specific conditions**

- i. No ground water abstraction is permitted.
- ii. Rain water harvesting and recharge shall be more than the water consumption.
- iii. Stack emissions shall be maintained below 30 mg/Nm<sup>3</sup>.
- iv. PP shall develop green belt in an area of 1 ha outside the project site.
- v. PP shall conduct TCLP tests for the slag generated in the process.

**B. General Conditions:**

**I. Statutory compliance:**

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.
- ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

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

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

- i. The project proponent shall monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. Monitor fugitive emissions in the plant premises.
- 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 submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. 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.
- v. The project proponent use leak proof trucks carrying ore and other raw materials and cover them with tarpaulin.
- vi. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

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

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

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

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

**V. Energy Conservation measures**

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

**VI. Waste management**

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

**VII. Green Belt and EMP**

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

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

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

**IX. Corporate Environment Responsibility**

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or 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 shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out
- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Mineral Beneficiation plants shall be implemented.

**X. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; 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 authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

**7.7 Proposed Manufacturing of Manganese Oxide & Manganese Dioxide, Manganese Sulphate, Zinc Sulphate and Ferro Alloys (By Thermite Process) by M/s. Raghav Minerals located at B-16/9, B-16/10, MIDC Butibori, District Nagpur, Maharashtra [Online Proposal No. IA/MH/IND/29993/2015, MoEFCC File No. J-11011/211/2015-IAII(I)] – Environment Clearance - regarding.**

M/s. Raghav Minerals has made an online application vide proposal no. IA/MH/IND/29993/2015 dated 25th April, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance under the provisions of the EIA Notification, 2006

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

7.7.2 The manufacturing of Manganese Oxide & Manganese Dioxide, Manganese Sulphate, Zinc Sulphate and Ferro Alloys (By Thermite Process) of M/s Raghav Minerals is located at Plot no. B – 16/9, B - 16/10, MIDC Butibori, District: Nagpur (Maharashtra) was initially received in the Ministry on 10<sup>th</sup> August 2015 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 5<sup>th</sup> meeting held on 30<sup>th</sup> to 31<sup>st</sup> March 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on May 24<sup>th</sup>, 2016 vide Lr. No.J-11011/211/2015-IA-II (I)

7.7.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 25<sup>th</sup> April 2019 vide Online Application No. IA/MH/IND/29993/2015.

7.7.4 The project of M/s Raghav Minerals located in MIDC Butibori, District: Nagpur (Maharashtra) is for setting up of a new unit for production of Manganese Oxide, Manganese Dioxide, Manganese Sulphate, Zinc Sulphate and Ferro Alloys (thermite process).

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

<b>Name of the unit</b>	<b>No. of unit</b>	<b>Capacity of each unit</b>	<b>Production Capacity</b>
Furnace (Bhatti)	4 nos.	6T	4800 TPA
Reactors (for MnSO <sub>4</sub> & ZnSO <sub>4</sub> )	2nos.	15 KL	2400 TPA
Reaction Vessel (Thermite Process)	2 nos.	1T	8

7.7.6 The total land leased by MIDC for the project is 0.2 ha, which is industrial land. No /forestland involved. MIDC has leased 2000sqmt land for the proposed project. A Shed of 1000sqmt is already constructed.

7.7.7 No River passes through the project area It has been reported that no water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

7.7.8 The topography of the area is flat and reported to lies between 20°55'31.20" to 20°55'30.59"N Latitude and 78°57'34.18" to 78°57'35.90"E Longitude in Survey of India topo sheet No. 55 L/13,55K/16, 55 P/1 and 55 O/4, at an elevation of 276 m AMSL. The ground water table reported to ranges between 0.6 to 10.6 below the land surface during

the post-monsoon season and 0.8 to 15.59 below the land surface during the pre-monsoon season.

- 7.7.9 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 for corridor for Schedule-I fauna.
- 7.7.10 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process given in the chapter 2.
- 7.7.11 The targeted production capacity of the Manganese oxide is 7200 TPA, Manganese Dioxide is 4800 TPA, MnSO<sub>4</sub> is 2400 TPA and ZnSO<sub>4</sub> is 2400 TPA and Ferro Alloys is 2400 TPA. The ore for the plant would be procured from Manganese Mines of MOIL. The ore transportation will be done through Road, in tarpaulin covered trucks.
- 7.7.12 The water requirement of the project is estimated as 11 m<sup>3</sup> /day, which will be sourced from MIDC.
- 7.7.13 The power required will be supplied by State Electricity Board. The power requirement for the proposed project will be 75 KW.
- 7.7.14 Baseline Environmental Studies were conducted during winter season i.e. from 01.10.2016 to 31.12.2016. Ambient air quality monitoring has been carried out at 8 locations during 01.10.2016 to 31.12.2016 and the data submitted indicated: PM<sub>10</sub> (31.5 to 58.5 µg/m<sup>3</sup>), PM<sub>2.5</sub> (15.4 to 32.1 µg/m<sup>3</sup>), SO<sub>2</sub> (7.6 to 25.0 µg/m<sup>3</sup>) and NO<sub>x</sub> (9.8 to 28.2 µg/m<sup>3</sup>). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.96 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 2.83 µg/m<sup>3</sup> with respect to the SO<sub>2</sub>, 4.27 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.
- 7.7.15 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.1 to 7.9., Total Hardness: 210 to 518 mg/l, Chlorides: 37.5 to 167 mg/l, Fluoride: 0.3 to 0.6 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 5 locations. pH: 7.3 to 8.0; DO: 5.3 to 6.3 mg/l and BOD: 1.2 to 2.2 mg/l. COD from 5.2 to 10.6 mg/l.
- 7.7.16 Noise levels are in the range of 39.3 to 53.8 dBA for daytime and 36.8 to 45.0 dBA for nighttime.
- 7.7.17 No/ R&R is involved.
- 7.7.18 It has been reported that due to the proposed project a total of 1926 TPA slag will be generated which will be sold to manufacturer of Silico-manganese & 720 TPA Ash will be generated which will be sold to brick manufacturers. It has been envisaged that an area of 0.066 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities. Raghav Minerals is a member of Common Hazardous Waste Treatment Storage & Disposal Facility (CHWTSDF) set up by "Maharashtra Enviro Power Limited (Nagpur unit)" in MoU with MIDC and MPCB.
- 7.7.19 It has been reported that the Consent to Establish/Consent to Operate from the Maharashtra Pollution Control Board / Pollution Control Committee obtained vide Lr.

No. MPCB/UAN/No.53361/1810001115 dated 22.10.2018 and consent is valid up to 31.05.2020.

- 7.7.20 The Public hearing of the project was held on 21<sup>st</sup> March 2018 at Butibori manufacturing Association Hall at 11.30 am under the chairmanship of Additional District Magistrate for production of Manganese Oxide, Manganese Dioxide, Manganese Sulphate, Zinc Sulphate and Ferro Alloys (thermite process). The issue raised at the time of public hearing is associated with employment, water pollution and Air Pollution in nearby villages. An amount of 3.5 Lakhs (2% of Project cost) has been earmarked for Corporate Environment Policy based on public hearing issues.
- 7.7.21 The capital cost of the project is Rs.1.57 Crores and the capital cost for environmental protection measures is proposed as Rs. 53 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 9.1 Lakhs. The detailed CER plan has been provided in the EMP in its page No. 120 to 121. The employment generation from the proposed project / expansion is 50.
- 7.7.22 Greenbelt will be developed in 0.066 Ha which is about 33% of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 1600 trees per hectare. Total no. of 100 saplings will be planted and nurtured in 0.066 hectares.
- 7.7.23 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 7.7.24 Consultant: Pollution and Ecology Control Services (PECS) Listed at no. 121 in QCI List.

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

- 7.7.25 After detailed deliberations, the committee recommended the proposal for Environmental Clearance with following specific and general conditions.

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

- i. No ground water abstraction is permitted.
- ii. Rain water harvesting and recharge shall be more than the water consumption.
- iii. Stack emissions shall be maintained below 30 mg/Nm<sup>3</sup>.
- iv. PP shall develop green belt in an area of 1 ha outside the project site.
- v. PP shall conduct TCLP tests for the slag generated in the process.

##### **B. General Conditions:**

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

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

- ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time

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

- i. The project proponent shall monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. Monitor fugitive emissions in the plant premises.
- 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 submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. 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.
- v. The project proponent use leak proof trucks carrying ore and other raw materials and cover them with tarpaulin.
- vi. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

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

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

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

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

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

**V. Energy Conservation measures**

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

**VI. Waste management**

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

**VII. Green Belt and EMP**

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

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

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

**IX. Corporate Environment Responsibility**

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions.

The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or 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 shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out
- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Mineral Beneficiation plants shall be implemented.

#### **X. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; 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 authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

**7.8** Expansion of MS Ingot / MS Billet production from 57,600 TPA to 204,200 TPA and Rolled Production from 88,200 TPA to 200,000 TPA by **M/s. Kashi Vishwanath Steels Private Limited** located at Narain Nagar Industrial Estate, Bazpur Road, Kashipur, District Udham Singh Nagar, **Uttarkhand** [Proposal No. IA/UK/IND/101521/2019, MoEF&CC File No.IA-J-11011/195/2019-IAII(I)] – **Prescribing of Terms of Reference - regarding.**

**M/s. Kashi Vishwanath Steels Private Limited** has made an online application vide proposal no. IA/UK/IND/101521/2019 dated 18<sup>th</sup> April, 2019 along with copies of Form – I and prefeasibility study for prescribing ToRs to undertake EIA study under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

- 7.8.2 **M/s Kashi Vishwanath Steels Private Limited (KVS)** proposes to expand its production capacity for production of MS Ingots / MS Billets from 56,700 TPA to 204,200 TPA by replacing the existing 2x5 Tons and 2x4 Tons Induction Furnaces with 4x12 Ton and enhancing production of existing Rolling Mill from 88,200 to 200,000 TPA through modernization, by increasing the output (speed). Additionally 1x20 Ton Gas Oxygen Refining Unit, 20 TPD Cold Drawing Complex and 4 TPD Metal Recovery Plant shall be installed.
- 7.8.3 Initially the company was set up in the year 1985 after obtaining NOC from Uttar Pradesh Pollution Control Board on 12.12.1985 for setting up of small Steel Plant for production of 30 TPD Rolled Products (MS Bar, MS Round and Channels). The plant was expanded in 1992 for 100 TPD production after obtaining NOC from Uttar Pradesh Pollution Control Board on 24.06.1992. Again, the plant was expanded for production of 160 TPD after obtaining NOC from Uttarakhand Environment Conservation & Pollution Control Board on 21.12.2005. M/s KVS has further expanded its capacity for the production 245 TPD after obtaining NOC from UECPCB on 24.06.2006.
- 7.8.4 The proposed unit will be located within existing plant area of 5.981 ha. at Narain Nagar Industrial Estate, Bazpur Road, Kashipur, District Udham Singh Nagar, Uttarakhand. Project does not envisage additional land for the expansion. The entire project will be installed in the vacant land of the existing plant. No forestland involved. Out of the total area, 1.974 ha (33%) will be developed as green belt.
- 7.8.5 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.
- 7.8.6 Total project cost is approx. Rs. 20 crores. Employment generation from proposed project will be 500 direct employments and approx. 1000 indirect employments.
- 7.8.7 The Raw material for the plant would be procured from local and other state markets depending upon the quality. The ore transportation will be done through NH-309 which is 0.3 km away from the project site. The capacity of different units after the proposed expansion shall be as follows:

Plant	Existing			Proposed (Total after the proposed expansion)		
	Unit	Operational Days	Capacity TPA	Unit	Operational Days	Capacity TPA
<b>Steel Melting Shop</b>						
Induction Furnace	2x 5 Tons	300		4x 12 Ton	360	207,360
Continuous Casting Machine (CCM) / Ingot Casting	2x 4 Tons 2 Strand, 6/11 m radius	300	57,600	2 Strand, 6/11 m radius	360	204,200
Gas Oxygen Refining Unit	-	-	-	1 x 20 Ton	360	-
<b>Producer Gas plant</b>	Existing Producer Gas Plant shall be phased out after the proposed expansion. PNG Gas will be used in Reheating Furnace					
<b>Metal Recovery Plant</b>	--	--	--	1	300	4 TPD
<b>Reheating Furnace</b>	1 x 45 TPD 1 x 200 TPD	360	-	1 x 45 TPD 1 x 200 TPD	300	-
<b>Rolling Mill</b>						
Low Speed Rolling Mill	45 TPD	360	16,700	120 TPD	350	41,760
High Speed Rolling Mill	200 TPD	360	71,500	452 TPD	350	158,240
<b>Total Rolling Mill Production</b>	245 TPD	360	88,200	572 TPD	350	200,000
<b>Cold Drawing Complex</b>	--	--	--	20 TPD	360	7,200
Industry may either roll MS Billets/Ingots produced in the plant or sold it directly in market. In case sufficient Billets / Ingots produced in the plant are not available for rolling, billets / ingots shall be purchased from the market for rolling, within the maximum production of 200,000 TPA.						

7.8.8 Total requirement of power for the unit is 26.5 MW. The total power demand of the plant will be met through UPCL. DG sets existing 63 kVA will be replaced with 685 kVA green DG set (125, 160 & 400 KVA on standby basis).

7.8.9 Raw material requirement for the existing plant and total after the expansion is given below:

S. No	Raw Material	Ratio	Quantity (TPA)		Source of Raw Materials
			Existing	Total after the proposed expansion	
Steel Melting Shop – Induction Furnace			58,750	207,600	
1.	Sponge iron	0.84	49,247	174,130	Keonjhar, Odisha

S. No	Raw Material	Ratio	Quantity (TPA)		Source of Raw Materials
			Existing	Total after the proposed expansion	
2.	Scrap / Pig Iron	0.245	14,410	50,882	Delhi & UP
3.	Ferro Alloys (FeMn, FeSi, Al)	0.005	340	1,130	Raipur & UP
<b>Total</b>		<b>1.09</b>	<b>63,997</b>	<b>226,142</b>	
<b>Steel Melting Shop – Billet Caster</b>			<b>57,600</b>	<b>204,200</b>	
1	Liquid Steel	<b>1.02</b>	<b>58,750</b>	<b>207,600</b>	In-house
<b>Steel Melting Shop – Ingot Casting</b>			<b>57,600</b>	<b>204,200</b>	
1	Liquid Steel	<b>1.02</b>	<b>58,750</b>	<b>207,600</b>	In-house
<b>High Speed Rolling Mill</b>			<b>71,500</b>	<b>158,240</b>	
1	MS Ingots/ MS Billets (In-house)	1.02	40,600	161,550	In-house
2	MS Ingots/ MS Billets (Purchased)	1.02	32,335	-	Open Market
<b>Total</b>		<b>1.02</b>	<b>72,935</b>	<b>161,550</b>	
<b>Slow Speed Rolling Mill</b>			<b>16,700</b>	<b>41,760</b>	
1	MS Ingots/ MS Billets (In-house)	1.02	17,000	42,650	In-house
<b>Total</b>		<b>1.02</b>	<b>17,000</b>	<b>42,650</b>	
<b>Cold Drawing Complex</b>					
1	MS Rod	<b>1.0</b>	---	7,200	In-house

7.8.10 The total water requirement after the expansion is estimated to be 295 KLD. Water requirement will be met from ground water. Zero Liquid Discharge ‘ZLD’ shall be followed.

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

7.8.12 Name of Environment Consultant – M/s VardanEnvironet.S.L. No. 154 in QCI list of accredited consultants dated 05.09.2018. Certificate No. NABET/EIA/1619/RA 0037.

#### Observations and Recommendations of the Committee

7.8.13 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- No ground water abstraction is permitted.
- Rain water harvesting and recharge shall be more than the water consumption.

- iii. Stack emissions shall be maintained below 30 mg/Nm<sup>3</sup>.
  - iv. PP shall develop green belt in an additional area of 2 ha outside the project site within the study area. The existing green belt needs improvement.
  - v. Detailed engineering drawing showing shop wise details of facilities installed, storage yard for raw materials and products and green belt shall be furnished.
  - vi. PP shall not use producer gas for reheating.
  - vii. Details of metal recovery plant including treatment of the wastewater shall be provided.
  - viii. PP shall ensure 100% waste utilization.
- 7.9 Expansion of MS Billet from 2,37,600 MTPA to 5,74,200 MTPA, TMT Bars from 2,00,000 MTPA to 4,20,000 MTPA, MS Structure from 37,600 MTPA to 1,80,000 MTPA and additional MS Wire Rod of 4,20,000 MTPA by M/s. Galwalia Ispat Udyog Private Limited located at Narain Nagar Industrial Estate, Bazpur Road, Kashipur, Udham Singh Nagar, Uttarakhand [Proposal No. IA/UK/IND/101930/2019, MoEF&CC File No.J-11011/193/2019-IAII(I)] – Prescribing of Terms of Reference - regarding.**
- M/s. Galwalia Ispat Udyog Pvt Ltd** has made an online application vide proposal no. IA/UK/IND/101930/2019 dated 24<sup>th</sup> April, 2019 along with copies of Form – 1 and prefeasibility study for prescribing ToRs to undertake EIA study under the provisions of the EIA Notification, 2006 for proposed expansion project. The project proposal is appraised at Central level under the activity listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006.
- 7.9.2 The existing plant was established before 2006 and commenced the operations on 25.04.2006. Consent to Operate was accorded by Uttarakhand Environment Protection and Pollution Control Board vide Ir. No. UEPPCB/ HO/C/G-17/2018/1556 dated 04.12.2018, validity of CTO is up to 31.03.2019
  - 7.9.3 The proposed unit will be located at Plot No 27, 28, 48, 49, Village: Narain Nagar Industrial Area Nainital Road, Taluka: Kashipur District: Udham Singh Nagar., State: Uttarakhand.
  - 7.9.4 The land area acquired for the proposed plant is 13.15 Ha. No forestland is involved. The entire land has been acquired for the project. Of the total area, 3.5 Ha of land will be used for green belt development.
  - 7.9.5 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
  - 7.9.6 Total project cost is approx 45.71 Crore rupees. Employment generation from proposed project will be 153 nos of persons through direct employment.
  - 7.9.7 The targeted production capacity of the unit is MS Billet 5,74,200 MTPA, TMT Bars 4,20,000 MTPA, MS Structure 1,80,000 MTPA and Wire Rod 4,20,000 MTPA. The ore for the plant would be procured from (linkages...Scrap and sponge Iron from Open Market, MS Billets/Ingots from Open Market/ Own Manufacturing).The ore

transportation will be done through Road (Rail/Road/Conveyor/Slurry Pipeline). The proposed capacity for different products for new site area as below:

Product Name	Section	Existing Capacity (MTPA)	Proposed Capacity (MTPA)	Total Capacity (MTPA)
<b>Billet</b>	Melting	<b>2,37,600</b>	<b>3,36,600</b>	<b>5,74,200</b>
<b>TMT Bars</b>	Rolling	<b>2,00,000</b>	<b>2,20,000</b>	<b>4,20,000</b>
<b>MS Structure</b>	Rolling	<b>37,600</b>	<b>1,42,400</b>	<b>1,80,000</b>
<b>Wire Rod</b>	Rolling	-	<b>4,20,000</b>	<b>4,20,000</b>

7.9.8 The electricity load of 70 MW (41.5 MW existing and 28.5 MW Proposed) will be procured from Uttarakhand Power Corporation Limited. Company has also proposed to install 2 Nos of 500 KVA and 1 No. of 1010 KVA DG Set.

7.9.9 Proposed raw material and fuel requirement for project are

7.9.10 For making of Melting Division

S.No.	Raw Materials	Ratio	Quantity (MT/annum)			Source of Supply
			Existing	Additional	Total	
<b>1.</b>	Sponge Iron	50	1,32,000	<b>1,87,000</b>	3,19,000	Open Market
<b>2.</b>	Iron Scrap	50	1,32,000	<b>1,87,000</b>	3,19,000	Open Market
<b>Total</b>		<b>100</b>	<b>2,64,000</b>	<b>3,74,000</b>	<b>6,38,000</b>	

7.9.11 For making of Rolling Division

S. No.	Raw Materials	Quantity (MT/annum)			Source of Supply
		Existing	Additional	Total	
1.	MS Billets/Ingots	2,37,600	<b>7,82,400</b>	<b>10,20,000</b>	Open Market/ Own Manufacturing

7.9.12 The requirement would be fulfilled by Uttarakhand Power Corporation Limited as well as open market / own manufacturing. Fuel consumption will be mainly from electric furnace.

7.9.13 Water Consumption for the proposed project will be 635 KLD and waste water generation will be CT & Softener Plant Bleed which shall be reused in the green belt development & Dust Suppression respectively. Domestic waste water will be treated in to proposed STP and industrial waste water generated will be treated Not applicable and STP treated water will be reused for green belt.

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

7.9.15 Name of EIA Consultant – Enviro Infra Solutions Pvt. Ltd. (S. No.:49 in QCI list dated 6<sup>th</sup> May 2019)

**Observations of the Committee:**

- 7.9.16 The availability of land for expansion project and unit wise proposed land use details are not available in the proposal.

**Recommendations of the Committee:**

- 7.9.17 After detailed deliberations, the Committee recommended the proposal to return in present form as the proposal was lacking requisite details such as area availability, lay out and green belt provision.

- 7.10 Proposed Stainless Steel Billets unit expansion of the Existing Production 60, 000 MT per Annum to 180,000 MT per Annum by M/s. Chandan Steel Limited located at Plot no. 32, 33B, 34,35 & 36 GIDC, Umbargaon, District Valsad, Gujarat [Proposal No. IA/GJ/IND/103794/2019, MoEF&CC File No.J-11011/479/2011-IAII(I)] – Prescribing of Terms of Reference - regarding.**

**M/s. ChandanSteel Ltd** has made an online application vide proposal no. IA/GJ/IND/103794/2019dated 29<sup>th</sup>April, 2019 along with copies of Form – 1 and prefeasibility study for prescribing ToRs to undertake EIA study under the provisions of the EIA Notification, 2006 for proposed expansion project. The project site is located 4km from interstate boundary. Due to applicability of general condition, the proposal is appraised at Central level under the activitylisted at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006.

- 7.10.2 M/s. Chandan Steel Limited proposed to expand manufacturing capacity of Stainless Steel Billets from 60,000 TPA to 1,80,000 TPA in existing premises. The existing project was accorded environmental clearance vide letter .no .J-11011/479/2011-IA-II(I) dated 16<sup>th</sup> March 2012.Consent to Operate was accorded by Gujarat State Pollution Control Board vide letter. no. AWH-88107 validity of CTO is up to 30/06/2022.Earlier Terms of reference was issued for expansion project under consideration vide letter no.No.J-11011/219/2015-IA II dated 29<sup>th</sup> January 2015.
- 7.10.3 The proposed expansion will be existing plant premises at plot no. 32,33B,34, 35, & 36, GIDC Umbargaon , District Valsad, Gujarat. The site is situated at a distance of 4km in SE direction from Gujarat-Maharashtra interstate boundary.
- 7.10.4 Total land for expansion in possession is1.7 Ha The land is present in industrial area. The entire land has been leased for the project. Of the total area 0.561ha (33%) land will be used for green belt development in addition to the existing green belt.
- 7.10.5 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc are located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 7.10.6 Total project cost is Rs. 12 Crore. Proposed employment generation from proposed project will be 75 including direct and indirect employment.

7.10.7 Existing and Proposed production capacity of the plant is as below:

Name of the Product	For Existing Unit Capacity (TPA)	For Proposed Capacity (TPA)	For Total Capacity After Expansion (TPA)
S.S. Billets	60,000	1,20,000	1,80,000

7.10.8 The electricity load of 15 MW will be procured from Gujarat State Electricity Board Company.

7.10.9 Existing and Proposed raw material requirement for the project is as below:

Name of the Material	Existing Unit Capacity (TPA)	Proposed Capacity (TPA)	Total Capacity After Expansion (TPA)
S.S. Scrap	92400	1,48,500	2,40,900
H.C. Ferro Chrome	5135	8217	13352
H.C. Ferro Manganese	4104	6567	10671
Ferro Silicon	3465	5544	9009
Ferro Nickel	3093	4950	8043
Lime	5280	8448	13728
Dolomite	2640	4224	6864

7.10.10 Water Consumption for the proposed expansion will be 466KLD and waste water generation will be 89KLD. Domestic waste water will be treated in packaged type STP and industrial waste water generated will be reused for slag cooling and dust suppression.

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

7.10.12 **Environment Consultant:** Pollution and Ecology Control Services NABET Accreditation No.121

7.10.13 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- No ground water abstraction is permitted.
- Rain water harvesting and recharge shall be more than the water consumption.
- Stack emissions shall be maintained below 30 mg/Nm<sup>3</sup>.



- iv. PP shall develop green belt in an area of four (4) ha outside the project site within the study area.

**7.11 Capacity Enhancement of Steel Manufacturing Unit by Replacing Existing Induction Furnace and Enhance production capacity 45,000 MTPA to 1, 40,000 MTPA by M/s Vardhman Ispat Udyog located at Village- Bathri, Distt. Una, State Himachal Pradesh [Proposal No. IA/HP/IND/104614/2019, MoEF&CC File No. IA-J-11011/187/2019-IAII(I) – Prescribing of Terms of Reference - regarding.**

**M/s Vardhman Ispat Udyog** has made an online application vide proposal no. IA/GJ/IND/103794/2019 dated 29<sup>th</sup> April, 2019 along with copies of Form – 1 and prefeasibility study for prescribing ToRs to undertake EIA study under the provisions of the EIA Notification, 2006 for proposed expansion project. The proposal is appraised at Central level under the activity listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006.

- 7.11.2 **M/s Vardhman Ispat Udyog** proposes to install a new manufacturing unit of **Steel at Village Bathri, Distt. Una (HP)**. M/s Vardhman Ispat Udyog acquired M/s H.N Steel & M/s S.R. Steel along with Rakesh Kumar’s land (10199 sq.m) in the village Bathri and formed a new unit. M/s. H. N. steel has induction furnaces of capacity of 4T & 6T and M/s. SR Steel has only rolling mill, both these units were located adjacent to each other at Village Bathri district Una Himachal Pradesh.
- 7.11.3 The project proponent submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on 7<sup>th</sup> May 2019 vide Online Application No. IA/HP/IND/104614/2019
- 7.11.4 The existing project was accorded environmental clearance vide ltr. No. NA dated NA Consent to Operate was accorded by Himachal Pradesh State Pollution Control Board vide ltr. No. HPSPCB /PCB-ID10611 (H N Steel) & HPSPCB /PCB-ID10264 (S R Steel) validity of CTO is up to 31.03.2019 and 31.03.2023 respectively.
- 7.11.5 The proposed unit will be located at. Village: Bela Bathri, Taluka: Haroli, District:Una, State: Himachal Pradesh.
- 7.11.6 The land area acquired for the proposed plant is 2.7 Ha out of which 0 ha. is an agricultural land, 0ha.is grazing land and 0 ha.is others (NA Government Land). No /forestland involved. The entire land has been acquired/ not acquired for the project. Of the total area 0.8 ha (33%) land will be used for green belt development.
- 7.11.7 The National Park/WL etc. are located at a distance of NA KM from the site/No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 7.11.8 Total project cost is approx. 30.38 Crore rupees. Proposed employment generation from proposed project will be 184 direct employment and indirect employment.

- 7.11.9 The targeted production capacity of the 45,000 is 1,40,000 MTPA. The ore for the plant would be procured from (linkages Open Market). The ore transportation will be done through Road (Rail/Road/Conveyor/Slurry Pipeline). The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Vardhman Ispat Udyog	1	Existing: 45,000 MTPA	Proposed:1,40,000 MTPA

- 7.11.10 The electricity load of 9925 KW will be procured from Himachal Pradesh State Electricity Board Company has also proposed to install 125 & 250 KVA DG Set.
- 7.11.11 Proposed raw material and fuel requirement for project 1,47,000 MTA are. The requirement would be fulfilled by Open Market as well as HSD Fuel consumption will be mainly DG Set.
- 7.11.12 Water Consumption for the proposed project will be 31 KLD (10 KLD (Domestic)+ 21KLD (Industrial)) and waste water generation will be 8 KLD Domestic waste water will be treated in Proposed STP 10 KLD and industrial waste water generated will be treated and reused within the plant premises after neutralization and addition of makeup water.
- 7.11.13 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 7.11.14 **Consultant:** Shivalik Solid Waste Management Limited, Certificate No. NABET/EIA/1619/RA 0040, Sr. No. 140, Rev. 75, April 10, 2019
- 7.11.15 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToRs enclosed **at Annexure-1 read with additional ToRs at Annexure-2:**
- PP shall undertake rain water harvesting and recharge, and the quantum of water so channelized shall be more than the water consumption in the project area.
  - Stack emissions shall be maintained below 30 mg/Nm<sup>3</sup>.
  - PP shall develop green belt in an additional area of 1 ha by planting local broadleaved tree species outside the project site within the study area.
  - PP shall prepare detailed engineering drawing showing shop-wise details of facilities installed and to be installed, expansion of storage yard for raw materials and products, and for creation of green belt shall be furnished.
  - PP shall not use producer gas for reheating.
  - PP shall ensure 100% utilization of waste generated in the plant.

**7.12 Proposed Manufacturing of Manganese Oxide (3000 TPM) and Manganese Dioxide (700TPM) by M/s. Bhartia Non-conventional Products located at Plot NO. C-20, MIDC Industrial area, Ghugus Road, District Chandrapur, Maharashtra [Proposal No. IA/MH/IND/104773/2019, MoEF&CC File No. IA-J-11011/192/2019-IAII(I)] – Prescribing of Terms of Reference - regarding.**

**M/s. Bhartia Non-Conventional Products** has made an online application vide proposal no. IA/MH/IND/104773/2019 dated 11<sup>th</sup> May, 2019 along with copies of Form – 1 and prefeasibility study for prescribing ToRs to undertake EIA study under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

- 7.12.2 M/s. Bhartia Non-Conventional Products has proposed manufacturing of 36000 TPA of Manganese Oxide and 8400 TPA of Manganese Dioxide.
- 7.12.3 The proposed unit will be located at Plot No. C-20, MIDC Chandrapur, Tahsil Chandrapur, District Chandrapur, (M.S.)
- 7.12.4 The unit has been allotted (0.4495 ha) 4495 Sq. mt of land at Plot No. C-20, MIDC Chandrapur, Tahsil Chandrapur, District Chandrapur, (M.S.). The land for proposed unit is in Notified Industrial Area. The MIDC plots are already developed and leveled and no forestland is involved.
- 7.12.5 Shed of 3900 Sq. m (0.3900 ha) is constructed in 2012 for storing of manganese ore which is imported mainly from Zambia, Peru, and Australia etc. for marketing in Indian Market. Looking after the potential of processed manganese, it is proposed to install a roasting furnace (Bhatti) in this constructed shed. Of the total area (0.1483 ha) 33% land will be used for green belt development.
- 7.12.6 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form a corridor for Schedule-I fauna. Extended boundary of Eco-sensitive zone Tadoba Andheri Tiger Reserve is 11.5 km
- 7.12.7 Total project cost is Rs. 7.5 Crores. Proposed employment generation from proposed project will be 40-50 direct and indirect employment.
- 7.12.8 The targeted production capacity is 36000 TPA of Manganese Oxide and 8400 TPA of Manganese Dioxide
- 7.12.9 The total power requirement for proposed project will be 500 KVA and will be procured from State Electricity Board.
- 7.12.10 Proposed major raw materials required for project will be Manganese Ore (4470 TPM) and coal (925 TPM).
- 7.12.11 Water Consumption for the proposed project will be 18 KLD (Source-MIDC) and waste water generation will be 11 KLD. About 2 KLD domestic waste water will be treated in Packaged Type STP and 9 KLD industrial waste water generated will be treated in settling tank and reused in process.

- 7.12.12 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 7.12.13 Name of Consultant: M/s Pollution Control Ecology Service Sr No in QCI List: 121
- 7.12.14 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**
- i. Rain water harvesting and recharge shall be more than the water consumption.
  - ii. Stack emissions shall be maintained below 30 mg/Nm<sup>3</sup>.
  - iii. PP shall develop green belt in an additional area of one (1) ha outside the project site within the study area.
  - iv. No ground water abstraction is permitted.
  - vi. PP shall conduct TCLP tests for the slag generated in the process.

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

M/s. Shri Bajrang Power and Ispat Limited has made online application vide proposal no. IA/CG/IND/20501/2012 dated 16<sup>th</sup> April, 2019 along with updated Form I and sought for validity extension of the environmental clearance accorded by the Ministry vide letter no. J-11011/394/2009- IA-II(I) dated 23/05/2012. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

#### Details submitted by the project proponent

- 7.13.2 MoEF&CC has accorded prior Environmental Clearance to M/s. Shri Bajrang Power and Ispat Limited for expansion of expansion of iron ore beneficiation plant and pelletization plant at villages Tandwa & Kundru, Tehsil Tilda District Raipur. The details of the facilities and production capacities are given as below:

Environmental Clearance Obtained			Proposed Expansion	Total
Facilities	Phase-I	Phase-II		
Sponge Iron	4x0.15 MTPA	-	-	0.60 MTPA
Hot Re-rolling Mill	2x0.20 MTPA	-	-	0.40 MTPA
Coal Washery	2x1.20 MTPA	-	-	2.40 MTPA
Captive Power Plant (WHRB)	5x10 MW	25 MW using coke oven gas	-	75 MW
Power Plant	2x25 MW	-	-	50 MW

Environmental Clearance Obtained			Proposed Expansion	Total
Facilities	Phase-I	Phase-II		
(AFBC)				
Steel Melting Shop & Continuous Casting Machine	2x0.25 MTPA	0.50 MTPA	-	1.00 MTPA
Coke Oven Battery*		0.50 MTPA	-	0.50 MTPA
Sintering Plant		0.70 MTPA	-	0.70 MTPA
Blast Furnace		0.55 MTPA	-	0.55 MTPA
Oxygen Plant		500 TPD	-	500 TPD
<b>Pelletisation Plant</b>		0.60 MTPA	<b>0.80 MTPA</b>	<b>1.40 MTPA</b>
Ferro Alloy Plant		36,000 TPA		36,000 TPA
Iron Ore Beneficiation Plant		0.60 MTPA	<b>1.40 MTPA</b>	<b>2.00 MTPA</b>

- 7.13.3 Subsequently, MoEF&CC vide letter no. J-11011/394/2009-IA.II.(I) dated 6/09/2016 amended the Environmental Clearance dated 23/05/2012 and the amendment details are furnished as below:

S. No.	Existing Production capacity and configuration	Proposed capacity and Change in configuration	Remarks
1	Sponge Iron – 6,00,000 TPA 4 X 500 TPD X 300 days	Sponge Iron – 6,00,000 TPA 3 X 600 TPD X 330 days	No change in existing Sponge Iron Production Capacity. However, 4 kilns of 500 TPD capacities replaced with 3 kiln of 600 TPD by use of good quality of coal in order to achieve maximum production by process optimization.
2	Power Plant – 125 MW	Power Plant – 125 MW	Change in configuration in terms of WHRB & AFBC boiler, however, the captive power plant capacity remains the same as existing one.
	WHRB – 4 X 10 MW	WHRB – 3 X 16 MW	
	Blast F/C – 10 MW	Blast F/C – 10 MW	
	Coke Oven – 25 MW	Coke Oven – 25 MW	

S. No.	Existing Production capacity and configuration	Proposed capacity and Change in configuration	Remarks
	AFBC – 50 MW	AFBC – 42 MW	
3	Hot Re-Rolling Mill – 2x0.20 – 0.40 MTPA	Hot Re-Rolling Mill – 2x0.20=0.40MTPA	No change in capacity or configuration, it remains the same with existing EC. Only at Pellet Plant, 3 x 17000 Nm <sup>3</sup> /hr capacity Coal Gasifier will be installed and Paste thickener technology will be adopted in beneficiations plant. Fly Ash Brick Plant of capacity 100,00,000 NPA will be installed.
4	Pellet Plant – 1.40 MTPA	Pellet Plant – 1.40 MTPA with Coal Gasifier (3x17000 Nm <sup>3</sup> /Hr)	
5	Iron ore beneficiation Plant – 2.0 MTPA	Iron ore beneficiation Plant – 2.0 MTPA	
6	Ferro Alloys Plant 36000 TPA	Ferro Alloys Plant 36000 TPA	
7	Steel Melting Shop& continuous Casting Machine – 1.0 MTPA	Steel Melting Shop& continuous Casting Machine – 1.0 MTPA	
8	Coal washery – 2.4 MTPA	Coal washery – 2.4 MTPA	
9	Coke Oven Battery – 0.5 MTPA	Coke Oven Battery – 0.5 MTPA	
10	Sintering Plant -0.7 MTPA	Sintering Plant -0.7 MTPA	
11	Blast Furnace – 0.55 MTPA	Blast Furnace – 0.55 MTPA	
12	Oxygen Plant – 500 TPD	Oxygen Plant – 500 TPD	
13		Fly Ash Bricks Plant – 100,00,000 NPA	

7.13.4 The implementation status of the existing EC dated 23/05/2012 and its subsequent amendment dated 6/09/2016 are furnished as below:

*MoM of 7<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held during 29-31<sup>st</sup> May, 2019*

S.no.	Particulars	Total capacity for which EC has been granted	Installed units capacity & configuration	Units under Establishment	Yet to be installed capacity & configuration	% of work completed	Project cost (Rs in crores)		Time required for completion
1	Sponge Iron Plant	0.6 MTPA (3 X 600 TPD X 330 Days)	1st Kiln 0.2 MTPA (1 X 600 TPD X 330 Days)	2 <sup>nd</sup> Kiln 0.2 MTPA (1 X 600 TPD X 330 Days)	3rd Kiln 0.2 MTPA (1 X 600 TPD X 330 Days)	Civil: 100% Works Completed Electrical: 90 % Works Completed Mechanical : 90% Works Completed	36.05	75	Unit-2 Time required is 15 days Unit-3: Sep 2021
2	Power Plant	125 MW	16 MW (WHRB)	25 MW (WHRB + AFBC Combustor)	84 MW (WHRB + AFBC)	-	-	-	Sep-2021
	WHRB	3 X 16 MW	1 X 16 MW	1 X 16 MW Boiler (60 TPH) & 30 MW Turbine	1 X 16 MW	Civil: 100% Works Completed Electrical: 90 % Works Completed Mechanical : 90% Works Completed	33.36	100	Unit-2 Time required is 15 days Unit-3: Sep 2021
	Blast Furnace	10 MW	-	-	10 MW	Work Will be Started in October 2019	-	-	Sep 2021
	Coke Oven	25 MW	-	-	25 MW	Work Will be Started in October 2019	-	-	Sep 2021
	AFBC	42 MW	-	AFBC - 9 MW Boiler (Combustor 35 TPH)	AFBC - 33 MW	Civil Works 100% Works completed Electrical Works 90% works completed Mechanical 90% completed.	14.38	45	9MW: Time Required is 15 Days 33 MW: Sep 2021

*MoM of 7<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held during 29-31<sup>st</sup> May, 2019*

S.no.	Particulars	Total capacity for which EC has been granted	Installed units capacity & configuration	Units under Establishment	Yet to be installed capacity & configuration	% of work completed	Project cost (Rs in crores)		Time required for completion
3	Hot Re-Rolling Mill	2 X 0.20 = 0.40 MTPA	-	-	2 X 0.20 = 0.40 MTPA	Work Will be Started in January 2020	-	-	Nov 2021
4	Pellet Plant	1.40 MTPA	1.40 MTPA	-	-	Plant in operation.	-	-	-
	Coal Gasifier	3 X 17000 Nm <sup>3</sup> /Hr	1 X 17000 Nm <sup>3</sup> /Hr	1 X 17000 Nm <sup>3</sup> /Hr	1 X 17000 Nm <sup>3</sup> /Hr	Civil Works 80% completed Electrical Works 20% completed Mechanical Works 20% completed	1.2	5	Unit-2 Time required is 15 days Unit-3: Sep 2021
5	Iron Ore beneficiati on Plant	2.0 MTPA	2.0 MTPA	-	-	Plant in operation.	-	-	-
6	Ferro Alloys Plant	36000TPA	-	1 X 18000TPA	-	Civil : 5 % work completed Electrical: Works not yet started. Mechanical : Not yet Started.	0.20	20	Time Required is 8 Months
					1 X 18000TPA				Sep, 2021
7	Steel Melting Shop & continuou s Casting Machine	1.0 MTPA	-	-	1.0 MTPA	Work Will be Started in January 2020	-	-	Nov 2021
8	Coal Washery	2.4 MTPA	-	-	2.4 MTPA	Work Will be Started in April 2020	-	-	Nov 2021
9	Coke Oven Battery	0.5 MTPA	-	-	0.5 MTPA	Work Will be Started in October 2019	-	-	Sep 2021
10	Sintering Plant	0.7 MTPA	-	-	0.7 MTPA	Work Will be Started in October	-	-	Sep 2021



S.no.	Particulars	Total capacity for which EC has been granted	Installed units capacity & configuration	Units under Establishment	Yet to be installed capacity & configuration	% of work completed	Project cost (Rs in crores)		Time required for completion
						2019			
11	Blast Furnace	0.55 MTPA	-	-	0.55 MTPA	Work Will be Started in October 2019	-	-	Oct 2021
12	Oxygen Plant	500 TPD	-	-	500 TPD	Work Will be Started in October 2019	-	-	Nov 2021
13	Fly Ash Bricks Plant	100,00,000 NPA	100,00,000 NPA	-	-	Plant in operation.	-	-	-

7.13.5 The project proponent submitted during the meeting that they are unable to implement aforesaid facilities due to economic slowdown and sluggish market conditions.

#### Observations of the Committee

7.13.6 The Committee noted that project proponent was unable to implement aforesaid facilities due to economic slowdown and sluggish market conditions.

#### Recommendations of the Committee

7.13.7 After detailed deliberations, the Committee recommended to extend the validity of the Environmental Clearance for a period of three years beyond 22/05/2019, i.e., from 23/05/2019 to 22/05/2022 subject to environmental safeguards. All other terms and conditions stipulated in the environmental clearance accorded vide letter no. J-11011/394/2009- IA-II(I) dated 23/05/2012 and 6/9/2016 shall remain unchanged.

**7.14** 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 Limited** located at village Gokulpur, PachimMedinipur District, **West Bengal** [Proposal No. IA/WB/IND/21443/2014; MoEF&CC File No. J-11011/377/2013-IA.II (I)] - **Corrigendum in the Environmental Clearance – regarding.**

M/s. Tata Metaliks Limited has made online application vide proposal no. IA/WB/IND/21443/2014 dated 29<sup>th</sup> April, 2019 requested for issue of corrigendum in the environmental clearance accorded by the Ministry vide letter no. J-11011/377/2013- IA-II(I) dated 28/01/2019. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

**Details submitted by the project proponent**

- 7.14.2 MoEF&CC has accorded prior Environmental Clearance to M/s. Tata Metaliks Limited for 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 located at village Gokulpur, Pachim Medinipur District, West Bengal.
- 7.14.3 The corrections sought by the project proponent in the EC dated 28/01/2019 is furnished as below:

Portion/ section of EC	Current EC	To be corrected to
Organization name in address section	Mentioned as “M/s Tata Metaliks Private Limited”	“M/s Tata Metaliks Limited”
Mail ID below address section	<a href="mailto:rahul.dep@tatametaliks.co.in">rahul.dep@tatametaliks.co.in</a>	<a href="mailto:rahul.deb@tatametaliks.co.in">rahul.deb@tatametaliks.co.in</a>
The first line of the clearance letter	Mentioned as “M/s Tata Metaliks Private Limited”	“M/s Tata Metaliks Limited”
Page 6 of the clearance letter S.N. 23	Mentioned as “M/s Tata Metaliks Private Limited”	“M/s Tata Metaliks Limited”
The footer note of all the pages	Mentioned as “M/s Tata Metaliks Private Limited”	“M/s Tata Metaliks Limited”

**Observations of the Committee**

- 7.14.4 The Committee noted that the corrections sought by the project proponent are factual in nature.

**Recommendations of the Committee**

- 7.14.5 After detailed deliberations, the Committee recommended for issue of corrigendum to the EC dated 28/01/2019 by correcting the organization name as M/s. Tata Metaliks Limited and e-mail of the contact person as [rahul.deb@tatametaliks.co.in](mailto:rahul.deb@tatametaliks.co.in).

\*\*\*\*\*

**ANNEXURE –1**

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

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

Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

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)

Co-ordinates (lat-long) of all four corners of the site.

Google map-Earth downloaded of the project site.

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.

Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.

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)

A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area

- i. Geological features and Geo-hydrological status of the study area shall be included.
- ii. 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)
- iii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- iv. 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 NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
  - iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
  - v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
  - vi. Ground water monitoring at minimum at 8 locations shall be included.
  - vii. Noise levels monitoring at 8 locations within the study area.
  - viii. Soil Characteristic as per CPCB guidelines.
  - ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
  - x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
  - xi. Socio-economic status of the study area.
- 7. **Impact Assessment and Environment Management Plan**
  - i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
  - ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
  - iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport

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

## 8. Occupational health

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

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

The following general points shall be noted:

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

\*\*\*\*\*



**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**

1. A note on pulp washing system capable of handling wood pulp shall be included.
2. 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

3. 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.
4. 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.
5. A commitment that no extra chlorine basebleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills. Plan for reduction of water consumption.

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

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

#### **ADDITIONAL ToRs FOR COKE OVEN PLANT**

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

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

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

**ADDITIONAL ToRs FOR  
INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE**

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

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

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

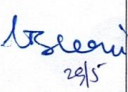
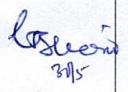
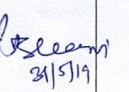
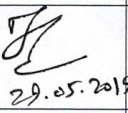
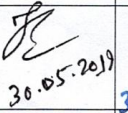
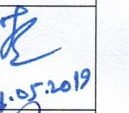
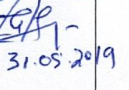
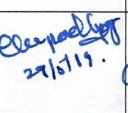
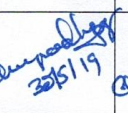
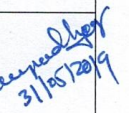
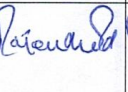
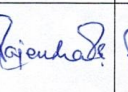
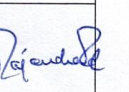
### **Executive Summary**

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

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



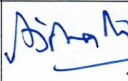
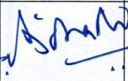
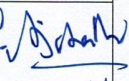

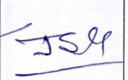
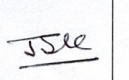


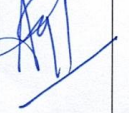
\*\*\*\*\*

**LIST OF PARTICIPANTS IN 7<sup>th</sup> MEETING OF EAC (INDUSTRY-I) HELD  
ON 29<sup>th</sup> to 31<sup>st</sup> MAY, 2019**

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE		
			29 <sup>th</sup>	30 <sup>th</sup>	31 <sup>st</sup>
1	Dr. Chhavi Nath Pandey, IFS(Retired) Email: <a href="mailto:pandeychhavinath55@gmail.com">pandeychhavinath55@gmail.com</a>	Chairman	ABSENT	ABSENT	ABSENT
<b>Members</b>					
2.	, Representative of Central Pulp and Paper Research Institute, Saharanpur.	Member	ABSENT	ABSENT	ABSENT
3.	, Representative of Indian Meteorological Department, New Delhi.	Member	ABSENT	ABSENT	ABSENT
4.	Dr. G. Bhaskar Raju Email: <a href="mailto:gbraju55@gmail.com">gbraju55@gmail.com</a>	Member	 29/5	 30/5	 31/5/19
5.	Dr. Jagdish Kishwan, IFS (Retd.) Email: <a href="mailto:jkishwan@gmail.com">jkishwan@gmail.com</a>	Member	 29.05.2019	 30.05.2019	 31.05.2019
6.	Dr. G.V. Subramanyam Email: <a href="mailto:sv.godavarthi@gmail.com">sv.godavarthi@gmail.com</a>	Member	ABSENT	ABSENT	 31.05.2019
7.	Shri. Ashok Upadhyaya Email: <a href="mailto:ahupadhy@rediffmail.com">ahupadhy@rediffmail.com</a>	Member	 29/5/19	 30/5/19	 31/05/2019
8.	Shri. R.P. Sharma Email: <a href="mailto:rps2@hotmail.com">rps2@hotmail.com</a>	Member	 29/5/19	 30/5/19	 31/5/19
9.	Shri. Sanjay Deshmukh Email: <a href="mailto:sanjaydeshmukh@mu.ac.in">sanjaydeshmukh@mu.ac.in</a>	Member	ABSENT	ABSENT	ABSENT



*MoM of 7<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held during 29-31<sup>st</sup> May, 2019*

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE		
			29 <sup>th</sup>	30 <sup>th</sup>	31 <sup>st</sup>
10.	Prof. S.K. Singh Email: <a href="mailto:sksinghdee@gmail.com">sksinghdee@gmail.com</a> <a href="mailto:singhsk@email.com">singhsk@email.com</a>	Member			ABSENT
11.	Dr. R. Gopichandran Email: <a href="mailto:r.gopichandran@vigyanprasar.gov.in">r.gopichandran@vigyanprasar.gov.in</a>	Member	ABSENT	ABSENT	ABSENT
12.	Shri. Jagannath Rao Avasarala Email: <a href="mailto:avasaralajagan@gmil.com">avasaralajagan@gmil.com</a>	Member			
13	Shri. J.S. Kamyotra Email: <a href="mailto:kamyotra@yahoo.co.in">kamyotra@yahoo.co.in</a>	Member			
14.	Shri. Aravind Kumar Agrawal Director, MoEF&CC Email: <a href="mailto:dirind-moef@gov.in">dirind-moef@gov.in</a>	Member Secretary			

\*\*\*\*\*

\*\*\*\*\*