

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

**Date of zero draft MoM sent to Chairman: 04/02/2022**

**Approval by Chairman: 05/02/2022**

**Uploading on PARIVESH: 06/02/2022**

**Summary record of the Fifty Second (52<sup>nd</sup>) meeting of Re-Constituted Expert Appraisal Committee (REAC) held on 31<sup>st</sup> January, 2022 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) Notification, 2006.**

The Fifty Second meeting of the Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environment Appraisal of Industry-1 Sector Projects was held on 31<sup>st</sup> January, 2022 in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through video conferencing in view of the ongoing Corona Virus Disease (Covid-19) pandemic. The list of EAC attendees is as follows:

S. No.	Name	Position	31/01/2022
1.	Dr. Chhavi Nath Pandey	Chairman	Present
2.	Dr. M.K.Gupta, Director, CPPRI.	Member	Present
3.	<i>Dr. Siddharth Singh,</i>	<i>Member</i>	<i>Absent</i>
4.	Dr. Jagdish Kishwan	Member	Present
5.	Dr. Tejaswini Ananth Kumar	Member	Present
6.	Dr. G.V. Subramanyam	Member	Present
7.	Shri. Ashok Upadhyaya	Member	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present
9.	<i>Dr. Sanjay Deshmukh</i>	<i>Member</i>	<i>Absent</i>
10.	Prof. S.K. Singh	Member	Present
11.	<i>Dr. R. Gopichandran</i>	<i>Member</i>	<i>Absent</i>
12.	Shri Jagannadha Rao Avasarala	Member	Present
13.	Shri. J.S. Kamyotra	Member	Present
14.	Shri. Sundar Ramanathan	Member Secretary	Present
15.	Dr. Sandeepan B.S.	Scientist 'B'	Present

**31<sup>st</sup> January, 2022**

- 52.13 Expansion of Dhenkanal Steel Plant from 3.55 to 7.53 MTPA finished steel by **M/s. Rungta Mines Limited** located at Villages Jharbandh, Galpada, Tarkabeda, Kothalu, Beruanpal, Kankalu, Benipathar, Kadala, Badamunda, Paik Purana Kote, Naraharipur, Chandrasekharapur, Sanamunda, Kaliakoli, Kantimili, Sulanali, Janhamunda, Patala and Nuapada, **District Dhenkanal, Odisha**. [Online Proposal No. IA/OR/IND/250431/2021, File No. J-11011/309/2018-IA.II(I)] – **Environment Clearance – regarding.**

52.13.1 M/s Rungta Mines Limited has made an online application vide proposal no. IA/OR/IND/250431/2021 dated 19/01/2022 along with copy of EIA/EMP report, Form- 2 and certified EC compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & nonferrous) with related activities in 2(a) Coal washery, 2(b) Mineral beneficiation, 3(b) Cement plants, 4(b) Coke oven plants and 1(d) Thermal power plant under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

**Details submitted by Project proponent**

52.13.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
11/08/2021	Standard ToR granted	Terms of Reference	13/08/2021	12/08/2025

52.13.3 The project of M/s Rungta Mines Limited is located in Villages Jharbandh, Galpada, Tarkabeda, Kothalu, Beruanpal, Kankalu, Benipathar, Kadala, Badamunda, Paik Purana Kote, Naraharipur, Chandrasekharpur, Sanamunda, Kaliakoli, Kantimili, Sulanali, Janhamunda, Patala and Nuapada, District Dhenkanal, Odisha is for enhancement of production of steel from 3.55 to 7.53 MTPA by expansion of facilities such as DRI plant (from 2.247 to 4.403 MTPA), blast furnace (from 1.943 to 4.984 MTPA), sinter plant (from 2.827 to 7.48 MTPA), coke oven plant (from 1.07 to 2.75 MTPA), steel melting shop (from 3.22 to 7.409 MTPA), continuous casting machine- billets/ bloom caster/ slab (from 3.156 to 7.303 MTPA), finished product facilities (from 3.55 to 7.53 MTPA), oxygen plant (from . 0.294 to 1.134 MTPA), cement grinding plant (from 1.686 to 3.2775 MTPA), clinker production unit (from 0.96 to 5.6 MTPA) and captive power plant (from 695 to 1290 MW). The capacity of beneficiation plant (5.4 MTPA), coal washery (5.029 MTPA), producer gas plant (5387 million Nm<sup>3</sup>/annum) and pelletisation plant (28.75 MTPA) shall remain same.

52.13.4 Environmental Site Settings:

S No	Particulars	Details
i.	Total land	1444.35 ha [Private: 1249.50 ha; Govt.: 194.85 ha]  <ul style="list-style-type: none"> <li>Existing area is 715.9 ha &amp; additional expansion area is 728.45 ha.</li> <li>Govt. land is including 3.16 ha forest land which has received Stage II FC.</li> </ul>
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Existing area is 715.9 ha & additional expansion area is 728.45 ha. 1800 acres (728.45 ha) additionally required which consists of 1609.80 acres private land and 190.20 acres government land. In principal approval for allotment of land has been given by IPICOL, Odisha vide letter no. CGM/ SLNA/ RML/ DSP/ 308/ 21 dated 08/11/2021.

S No	Particulars	Details															
iii.	Existence of habitation & involvement of R&R, if any	R&R is required as habitation is present within proposed expansion plant area. Approx. 2100 land losers and 126 displacees have been identified. All displacees and land losers will be compensated as per government policy and IDCO terms.															
iv.	Latitude and Longitude of the project site	<table border="1"> <thead> <tr> <th>Point</th> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr> <td>North most</td> <td>20°46' 33'' N</td> <td>85° 19' 04'' E</td> </tr> <tr> <td>East most</td> <td>20° 46' 32'' N</td> <td>85° 19' 13'' E</td> </tr> <tr> <td>South most</td> <td>20° 43' 10'' N</td> <td>85° 14' 32'' E</td> </tr> <tr> <td>West most:</td> <td>20° 43' 26'' N</td> <td>85° 13' 58'' E</td> </tr> </tbody> </table>	Point	Latitude	Longitude	North most	20°46' 33'' N	85° 19' 04'' E	East most	20° 46' 32'' N	85° 19' 13'' E	South most	20° 43' 10'' N	85° 14' 32'' E	West most:	20° 43' 26'' N	85° 13' 58'' E
Point	Latitude	Longitude															
North most	20°46' 33'' N	85° 19' 04'' E															
East most	20° 46' 32'' N	85° 19' 13'' E															
South most	20° 43' 10'' N	85° 14' 32'' E															
West most:	20° 43' 26'' N	85° 13' 58'' E															
V.	Elevation of the project site.	65-114 meters AMSL															
vi.	Involvement of Forest land if any.	<p><b>Existing phase:</b> Stage II forest clearance had been obtained from MOEF&amp;C vide letter No. 5-ORB207/2014-BHU dated 02/07/2015. Area of the forest land involved: 3.16 ha</p> <p><b>Expansion Phase:</b> No forest land involved</p>															
vii.	Water body exists within the project site as well as study area	<p><b>Project site:</b> Three first order, one second order seasonal nallah and several ponds in expansion area as detailed in the EIA report.</p> <p><b>Study area :</b> Nearest stream is Nigra nallah at 0.7 km North and nearest River is Brahmani at 4.9 km NE</p>															
viii.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area	<p>No National parks, Wildlife Sanctuary, Biospheres reserves within 10 km radius. The nearest sanctuary is New Satkosia Gorge WLS at a distance of 13.8 km in SW direction.</p> <p>Reserved forests:                      Jharbandh RF (Adjoining, SE), Ganthigarihia PF (3.3 km. NW), Nimidha RF (2.0 km, E), Kai R.F. (7.2 km, S), Kansara R.F. (9.7 km, WSW) and Ambithi RF (8.9 km, WSW)</p>															

52.13.5 The existing project was accorded environmental clearance vide letter no. J-11011/309/2018-IA.II.(I) dated 15/02/2021. Consent to Operate for the existing unit was accorded by office of the State Pollution Control Board, Odisha vide letter No 6969/IND-I-CON-6646 dated 06.05.2021. The validity of CTO is up to 31.03.2022.

**Chronology of Environment Clearances accorded by Ministry of Environment, Forests and Climate Change for the said project:**

- (i) J-11011/241/2009-IA.II (I) dated 02/08/2010 for integrated steel plant 1.9 MTPA steel and 385 MW power plant.
- (ii) J-11011/241/2009-IA.II (I) dated 25/01/2011 for amendments in the environmental clearance to add lime plant, dolo plant, oxygen plant and vacuum degassing.
- (iii) J-11011/241/2009-IA.II (I) dated 27/08/2015 for validity extension (i.e. within 5 years) but due to MOEF&CC's Notification dated, the validity was extended by default to 7 years. Nearing 7 years from date of environmental clearance.

- (iv) J-11011/241/2009-IA.II (I) dated 07/07/2017 for extension of validity of EC.
- (v) J-11011/241/2009-IA.II (I) dated 20/09/2018 for change in configuration of power plant.
- (vi) J-11011/309/2018-IA.II (I) dated 11/09/2019 for expansion to 2.85 MTPA steel with public hearing on 07/03/2019.
- (vii) J-11011/309/2018-IA.II (I) dated 13/04/2020 for change in configuration of pellet plant from 2x1.47 MTPA to 1x2.948 MTPA.
- (viii) J-11011/309/2018-IA.II (I) dated 04/06/2020 for expansion to 3.0 MTPA under clause 7(ii) of EIA Notification 2006. This environmental clearance is in supersession of the environmental clearance dated 11/09/2019.
- (ix) J-11011/309/2018-IA.II (I) dated 15/02/2021 for expansion to 3.55 MTPA and Power plant from 385 MW to 695 MW.

52.13.6 Implementation status of the existing EC:

Sl. No.	Facilities	Units	As per EC dated 15/02/2021	Implementation Status as on 24/01/2022	Production as per CTO letter dated 06/05/2021
1	Beneficiation Plant	MTPA	5.4 (2X2.69 MTPA)	Yet to be installed	-
2	Pelletisation Plant				
2.1	Pellet Plant (I)	MTPA	3.75 (1X3.75 MTPA)	3.75 MTPA under construction	-
2.2	Pellet Plant (II)	MTPA	25.0 (4X3.75 MTPA +10X1 MTPA)	Yet to be installed	-
	<b>Total</b>	<b>MTPA</b>	<b>28.75</b>		
3	Coal Washery	MTPA	5.029 (1X400TPH+1X235 TPH)	Yet to be installed	-
4	DRI Plant				
4.1	DRI (I)	MTPA	0.5218 (2X500 TPD)	1x500 TPD under operation, 1x500 TPD under construction	260,570 TPA
4.2	DRI (II)	MTPA	0.8626 (3X600 TPD)	1x600 TPD order placed	-
4.3	DRI (III)	MTPA	0.8626 (2X900 TPD)	Yet to be installed	-
	<b>Total</b>	<b>MTPA</b>	<b>2.247</b>		
5	Mini Blast Furnace	MTPA			
5.1	MBF I	MTPA	0.777 (1X600 cum.)	Yet to be installed	-
5.2	MBF II	MTPA	1.166 (2X450 cum.)	Yet to be installed	-
	<b>Total</b>		<b>1.943</b>		

Sl. No.	Facilities	Units	As per EC dated 15/02/2021	Implementation Status as on 24/01/2022	Production as per CTO letter dated 06/05/2021
6	Sinter Plant				
6.1	Sinter Plant (I)	MTPA	1.520 (2X80 sq.m.)	Yet to be installed	-
6.2	Sinter Plant (II)	MTPA	1.307 (1X110 sq.m.)	Yet to be installed	-
	<b>Total</b>	<b>MTPA</b>	<b>2.827</b>		
7	Coke Oven Plant	MTPA	1.07 (6 batteries x 70,000 TPA + 1 battery x 250,000 TPA + 1 battery x 400,000 TPA)	Yet to be installed	-
8	Steel Melting Shop				
8.1	Steel Melting via Induction Furnace Route	MTPA	1.54 (15 X20 T IF + 4x25T LRF + 3x45 T LRF)	IF 2x20 T under operation, IF 3x20 T under construction and 5x20 T order placed	231,000 TPA
8.2	Steel Melting via Electric Arc Furnace-Vacuum Degassing-Argon Oxygen Decarburization Route	MTPA	1.680 (1X90 T+1X110 T and 1x90 T LRF+1x110T LRF)	Yet to be installed	-
	<b>Total</b>	<b>MTPA</b>	<b>3.22</b>		
	Continuous Casting Machine (Billets/ Bloom Caster/ Slab)	MTPA	3.156 (11 nos. X 4 Strand)	1x 3 strand under operation	1x 3 strand
9	Finished Product Facilities				
9.1	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/others)	MTPA	2.55 (2 nos.X0.2 + 4 nos.X0.3 + 1 no. X0.45 + 1 nos. X0.5 MTPA)	1x0.20 MTPA TMT and 1x0.30 MTPA wire rod under construction	-
9.2	Strip Mill/ Sheet/ Coil/ Wire & Bar Mill/ Wire Rope	MTPA	0.5 (1 no.X0.2 + 1no.X0.3 MTPA)	Yet to be installed	-
9.3	Ductile Pipe Plant	MTPA	0.5 (2 nos.X0.25 MTPA)	Yet to be installed	-
	<b>Total</b>	<b>MTPA</b>	<b>3.55</b>		

Sl. No.	Facilities	Units	As per EC dated 15/02/2021	Implementation Status as on 24/01/2022	Production as per CTO letter dated 06/05/2021
10	Producer Gas Plant	Million Nm <sup>3</sup> /Annum	5387 (20 nos.X3000 + 32 nos.X12500 + 28 nos.x7500 Nm <sup>3</sup> /hr)	Yet to installed	-
11	Oxygen Plant	MTPA	0.294 (2 nos.X180 TPD + 1 no.X220 TPD + 2 nos.X130TPD)	Yet to be installed	-
12	Lime Plant	MTPA	0.3045 (1 no.X390 + 1 no.X 480 TPD)	Yet to be installed	-
13	Cement Plant	MTPA			
13.1	Cement Grinding Unit	MTPA	1.686 (1 no.X2600 + 1 no.X2300 TPD)	Yet to be installed	-
13.3	Clinker Production Unit	MTPA	0.96	Yet to be installed	-
14	Captive Power Plant				
14.1	Waste Heat Recovery Boiler (WHRB) based Captive Power Plant (CPP)				
(a)	DRI Kiln exit gas based	MW	150 (2 nos.X50 TPH + 3 nos.X85 TPH + 2 nos.X120 TPH)	1x50 TPH WHRB based power under operation 1x50 TPH under construction	16.5 MW
(b)	MBF Gas based	MW	35 (1 no.X50 TPH + 2 nos.X45 TPH)	Yet to be installed	-
(c)	Coke Oven Gas based	MW	40 (2 no.X60 TPH + 1no.X40TPH)	Yet to be installed	-
(d)	TRT	MW	10	Yet to be installed	-
	Sub Total	MW	235		
14.2	AFBC/CFBC based CPP	MW	460 (10 nos.x125 TPH + 1 nos.X130 TPH + 3nos.X250 TPH)	25 MW under operation, 75 MW under construction	25 MW
	<b>Total</b>	<b>MW</b>	<b>695</b>		<b>41.5</b>

52.13.7 The unit configuration and capacity of existing and proposed project is given as below:

MoM of 52<sup>nd</sup> meeting of the Re-constituted EAC (Industry-I) held on 31<sup>st</sup> January, 2022

SI	Plant Equipment/ facility	Existing facilities as per EC dated 15.02.2021								Proposed Units		Final (Existing + Proposed)		Remarks
		Total(A+B)		Implemented(A)		Un-implemented (B)		As per CTO		Configuration	Capacity	Configuration	Capacity	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity					
1	Beneficiation Plant	2X2.69 MTPA	5.4 MTPA	Nil	Nil	2x2.69	5.4	NA	NA	No change	No change	2X2.69 MTPA	5.4 MTPA	
2	Pelletisation Plant	5X3.75 MTPA + 10X1MTPA	28.75 MTPA	Nil	Nil	5X3.75 MTPA + 10X1MTPA	28.75 MTPA	NA	NA	No change	No change	5 nos. X3.75 MTPA +10 nos. X1 MTPA	28.75 MTPA	
3	Coal Washery	1X400TPH+1X235 TPH	5.029 MTPA	Nil	Nil	1X400 TPH + 1X235 TPH	5.029 MTPA	NA	NA	No change	No change	1X400TPH+ 1X235 TPH	5.029 MTPA	
4	DRI Plant	2X500 TPD + 3X600 TPD + 2X900 TPD	2.247 MTPA	1x500 TPD	0.261 MTPA	1X500 TPD + 3X600 TPD + 2X900 TPD	1.986 MTPA	1x500 TPD	0.261 MTPA	5X900 TPD or 6x600 TPD+1x650 TPD	2.156 MTPA	2X500 TPD + 3X600 TPD+ 2X900 TPD+ (5X900 TPD or 6x600 TPD+1x650 TPD)	4.403 MTPA	Additional alternate configuration
5	Mini Blast Furnace	1X600 cum + 2X450 cum.	1.943 MTPA	Nil	Nil	1X600 cum + 2X450 cum.	1.943 MTPA	NA	NA	2X650 cum. + 1X1250 cum.	3.0415 MTPA	1X600 cum + 2X450 cum+ 2X650 cum + 1X1250 cum	4.984 MTPA	
6	Sinter Plant	2X80+ 1X110 sq.m.	2.827 MTPA	Nil	Nil	2X80 + 1X110 sq.m.	2.827 MTPA	NA	NA	2X130 + 1X210 sq.m.	4.653 MTPA	2X80 sq.m. + 1X110 sq.m.+ 2X130 sq.m. +1X210	7.48 MTPA	

MoM of 52<sup>nd</sup> meeting of the Re-constituted EAC (Industry-I) held on 31<sup>st</sup> January, 2022

SI	Plant Equipment/ facility	Existing facilities as per EC dated 15.02.2021								Proposed Units		Final (Existing + Proposed)		Remarks
		Total(A+B)		Implemented(A)		Un-implemented (B)		As per CTO		Configuration	Capacity	Configuration	Capacity	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity					
													sq.m.	
7	Coke Oven Plant	6 batteries x 70,000 TPA + 1 battery x 250,000 TPA + 1 battery x 400,000 TPA	1.07 MTPA	Nil	Nil	6 batteries x 70,000 TPA + 1 battery x 250,000 TPA + 1 battery x 400,000 TPA	1.07 MTPA	NA	NA	12 batteries x 70,000 TPA + 2 batteries x 420,000 TPA	1.68 MTPA	18 batteries x 70,000 TPA + 1 battery x 250,000 TPA + 1 battery x 400,000 TPA + 2 batteries x 420,000 TPA	2.75 MTPA	
8.1	Steel Melting via Induction Furnace Route	15 X20 T IF + 4x25T LRF + 3x45 T LRF	1.54 MTPA	2x20 T 1x25 T LRF	0.231 MTPA	13x15 T IF + 3x25 T LRF + 3x45 T LRF	1.309 MTPA	2x20 T 1x25 TLRF	0.231 MTPA	20 X20 T IF + 8x45 T LRF	1.12 MTPA	35 X20 T IF + 4x25T LRF + 11x45 T LRF	2.66 MTPA	
8.2	Steel Melting via Electric Arc Furnace-Vacuum Degassing-Argon Oxygen Decarburization Route	1X90 T + 1X110 T and 1x90 T LRF + 1x110T LRF	1.68 MTPA	Nil	Nil	1X90 T +1X110 T and 1x90 T LRF +1x110T LRF	1.68 MTPA	NA	NA		-	1X90 T+1X110 T and 1x90 T LRF+1x110 T LRF	1.68 MTPA	
8.3	Steel Melting via BOF/ NOF/ EOF/ EAF-LF-VD/	-	-	-	-	-	-	-	-	2X65 T+4X45 T and	3.069 MTPA	2X65 T+4X45 T and 2x65 T	3.069 MTPA	



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SI	Plant Equipment/ facility	Existing facilities as per EC dated 15.02.2021								Proposed Units		Final (Existing + Proposed)		Remarks
		Total(A+B)		Implemented(A)		Un-implemented (B)		As per CTO		Configuration	Capacity	Configuration	Capacity	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity					
	RH/ AOD									2x65 T LRF+4x 45T LRF		LRF+4x45T LRF		
	<b>Total</b>		<b>3.22 MTPA</b>		<b>0.231 MTPA</b>		<b>2.989 MTPA</b>		<b>0.231 MTPA</b>		<b>4.189 MTPA</b>		<b>7.409 MTPA</b>	
8.4	Continuous Casting Machine (Billets/ Bloom Caster/ Slab)	11 nos. X 4 Strand)	3.156 MTPA	1x 3 strand	0.231 MTPA	10 nos. x 4 strand	2.925 MTPA	1x3 strand	0.231 MTPA	7 nos. X 4 Strands	4.147 MTPA	18 nos. X 4 Strand	7.303 MTPA	
9	Finished Product Facilities													
9.1	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ wire drawing/ HB Wire*/ Binding Wire*/ LRPC wire*/ others followed by one or more in series of pickling, cold rolling, annealing, galvanizing	2 nos.X0.2 MTPA + 4 nos.X0.3 MTPA + 1 no. X0.45 MTPA + 1 nos. X0.5 MTPA (TMT/ Flat/ Round/ Wire Rod/	2.55 MTPA	Nil	Nil	2 nos.X0.2 MTPA + 4 nos.X0.3 MTPA + 1 no. X0.45 MTPA + 1 nos. X0.5 MTPA (TMT/ Flat/ Round/ Wire Rod/	2.55 MTPA	NA	NA	-	-	2 nos.X 0.2 MTPA + 4 nos.X 0.3 MTPA + 1 no. X 0.45 MTPA + 1 nos. X0.5 MTPA	2.55 MTPA	Change in product mix TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ wire drawing/ HB Wire*/ Binding Wire*/ LRPC wire*/others followed by one or more in series of pickling, cold rolling,

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SI	Plant Equipment/ facility	Existing facilities as per EC dated 15.02.2021								Proposed Units		Final (Existing + Proposed)		Remarks	
		Total(A+B)		Implemented(A)		Un-implemented (B)		As per CTO		Configuration	Capacity	Configuration	Capacity		
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity						
		Structural Mill/others)				Structural Mill/others)									annealing, galvanizing
9.2	Strip Mill/ Sheet/ Coil/ Wire & Bar Mill/ Wire Rope	1 no.X0.2 MTPA + 1no.X0.3 MTPA	0.5 MTPA	Nil	Nil	1 no.X0.2 MTPA + 1no.X0.3 MTPA	0.5 MTPA	NA	NA	-	-	1 no.X0.2 MTPA + 1no.X0.3 MTPA	0.5 MTPA		
9.3	Ductile Pipe Plant (& fittings*)	2 nos.X0.25 MTPA	0.5 MTPA	Nil	Nil	2 nos.X0.25 MTPA	0.5 MTPA	NA	NA	-	-	2 nos.X0.25 MTPA	0.5 MTPA		
9.4	Rolling mill (Long/ TMT/ Flat/ Strip/ Round/ Wire Rod/ Hot Rolled/ HRC/ Structural Mill/ Plate/ Pipe & Tube Products/ wire drawing/ HB Wire*/ Binding Wire*/ LRPC wire*, etc) followed by one or more in series of pickling, cold rolling, annealing, galvanizing	-	-	-	-	-	-	-	-	2 X 0.55 MTPA+4 X0.42 MTPA	2.78 MTPA	2 X 0.55 MTPA+4X0.42 MTPA	2.78 MTPA		* Products details furnished after receiving ToR

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SI	Plant Equipment/ facility	Existing facilities as per EC dated 15.02.2021								Proposed Units		Final (Existing + Proposed)		Remarks
		Total(A+B)		Implemented(A)		Un-implemented (B)		As per CTO		Configuration	Capacity	Configuration	Capacity	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity					
9.5	Rolling Mill (Long/ TMT/ Flat/ Strip/ Round/ Wire Rod/ Hot Rolled/ HRC/ Structural Mill/ Tin Plate/ Electrical Steel/ CRGO/ Wire Drawing followed by (1) Pipe & Tube Products or (2) one or more in series of pickling, cold rolling, annealing, galvanizing and colour coating as follows:	-	-	-	-	-	-	-	-	As below in 9.5.1 to 9.5.3	1.2 MTPA	As below in 9.5.1 to 9.5.3	1.2 MTPA	9.5.1 to 9.5.3 added for further detailing of the unit after receipt of ToR
9.5.1	Cold Rolling Mill/ Plate Mill/Pipe Mill etc	-	-	-	-	-	-	-	-	2x0.3 MTPA + 3x0.2 MTPA	1.2 MTPA	2x0.3 MTPA + 3x0.2 MTPA	1.2 MTPA	
9.5.2	Galvanising Line/Galvanneal/ GI-Auto/Tin Mill Products/Coated/ Plated Products/	-	-	-	-	-	-	-	-	2x0.3 MTPA + 3x0.2 MTPA	1.2 MTPA	2x0.3 MTPA + 3x0.2 MTPA	1.2 MTPA	

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Sl	Plant Equipment/ facility	Existing facilities as per EC dated 15.02.2021								Proposed Units		Final (Existing + Proposed)		Remarks
		Total(A+B)		Implemented(A)		Un-implemented (B)		As per CTO		Configuration	Capacity	Configuration	Capacity	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity					
	Galvalume/CRGO etc													
9.5.3	Colour Coated Line, etc	-	-	-	-	-	-	-	-	2x0.3 MTPA + 3x0.2 MTPA	1.2 MTPA	2x0.3 MTPA + 3x0.2 MTPA	1.2 MTPA	
	<b>Total</b>		<b>3.55 MTPA</b>	Nil	Nil	-	<b>3.55 MTPA</b>	-	-		<b>3.98 MTPA</b>		<b>7.53 MTPA</b>	
10	Producer Gas Plant	20 nos.X3000 + 32 nos.X12500 + 28 nos.x7500 Nm <sup>3</sup> /hr	5387 Million Nm <sup>3</sup> /Annum	Nil	Nil	20 nos.X3000 + 32 nos.X12500 + 28 nos.x7500 Nm <sup>3</sup> /hr	5387 Million Nm <sup>3</sup> /Annum	NA	NA	No change	No change	20 nos.X3000 + 32 nos.X12500 + 28 nos.x7500 Nm <sup>3</sup> /hr	5387 Million Nm <sup>3</sup> /Annum	
11	Oxygen Plant	2 nos.X180 TPD + 1 no.X220 TPD + 2 nos.X130 TPD	0.294 MTPA	Nil	Nil	2 nos.X180 TPD + 1 no.X220 TPD + 2 nos.X130 TPD	0.294 MTPA	NA	NA	2 nos.X600 TPD + 1 no.X1200 TPD	0.84 MTPA	2 nos.X180 TPD + 1 no.X220 TPD + 2 nos.X130 TPD + 2 nos.X600 TPD + 1 no.X1200 TPD	1.134 MTPA	
12	Lime Plant	1 no.X390 + 1 no.X480 TPD	0.3045 MTPA	Nil	Nil	1 no.X390 + 1 no.X480 TPD	0.3045 MTPA	NA	NA	1 no.X600 + 2 no.X400 TPD	0.462 MTPA	1 no.X390 + 1 no.X480 TPD + 1 no.X600 + 2	0.7665 MTPA	

MoM of 52<sup>nd</sup> meeting of the Re-constituted EAC (Industry-I) held on 31<sup>st</sup> January, 2022

SI	Plant Equipment/ facility	Existing facilities as per EC dated 15.02.2021								Proposed Units		Final (Existing + Proposed)		Remarks	
		Total(A+B)		Implemented(A)		Un-implemented (B)		As per CTO		Configurati on	Capacity	Configurati on	Capacity		
		Configurati on	Capacity	Configurati on	Capacity	Configurati on	Capacity	Configurati on	Capacity						
13	Cement Plant														
13.1	Cement Grinding Unit	1 no.X2600 + 1 no.X2300 TPD	1.686 MTPA	Nil	Nil	1 no.X2600 + 1 no.X2300 TPD	1.686 MTPA	NA	NA	Existing revised to 2X2500 TPD + additional 13 X 1500 TPD	Existing enhanced by 0.039 MTPA + additional 1.5525 MTPA = 1.5915 MTPA	2X2500 TPD + 3 X 1500 TPD	3.2775 MTPA	Existing revised to 1.725 MTPA with change in configuration to 2X2500 TPD	
13.3	Clinker Production Unit	0.96 MTPA	0.96 MTPA	Nil	Nil	0.96 MTPA	0.96 MTPA	NA	NA	Existing enhanced by 0.24 MTPA + additional 14.4 MTPA= 4.64 MTPA	Existing enhanced by 0.24 MTPA + additional 14.4 MTPA= 4.64 MTPA	3X1.2 MTPA + 1X2 MTPA	5.6 MTPA	Existing revised to 1.2 MTPA	
14	Captive Power Plant														
(a)	WHRB DRI Kiln exit gas based	2 nos.X50 + 3 nos.X85 TPH + 2 nos.X120 TPH	150 MW	1x50 TPH	16.5 MW	1 nos.X50 + 3 nos.X85 TPH + 2 nos.X120	133.5 MW	50 TPH	16.5 MW	5 nos.X120 TPH	150 MW	2 nos.X50 + 3 nos.X85 TPH + 7 nos.X120 TPH	300 MW		

MoM of 52<sup>nd</sup> meeting of the Re-constituted EAC (Industry-I) held on 31<sup>st</sup> January, 2022

SI	Plant Equipment/ facility	Existing facilities as per EC dated 15.02.2021								Proposed Units		Final (Existing + Proposed)		Remarks
		Total(A+B)		Implemented(A)		Un-implemented (B)		As per CTO		Configuration	Capacity	Configuration	Capacity	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity					
						TPH								
(b)	WHRB MBF Gas based	1 no.X50 + 2 nos.X45 TPH	35 MW	Nil	Nil	1 no.X50 + 2 nos.X45 TPH	35 MW	NA	NA	2 no.X90 + 1 nos.X120 TPH	70 MW	1 no.X50 + 2 nos.X45 TPH + 2 no.X90 + 1 nos.X120 TPH	105 MW	
(c)	WHRB Coke Oven Gas based	2 no.X60 + 1no.X40 TPH	40 MW	Nil	Nil	2 no.X60 + 1no.X40 TPH	40 MW	NA	NA	1 no.X140 TPH + 3 no.X50 TPH + 2 no. X 75 TPH + 2no.X150 TPH	Existing enhanced by 35 MW + Additional 120 MW = 155 MW	2 no.X60 TPH + 1 no.X40TPH + 1 no.X140 TPH + 3 no.X50 TPH +2 no.X75 TPH + 2 no.X150 TPH	195 MW	Existing revised to 75 MW (2 no.X60 + 1no.X40TPH + 1 no.X140 TPH)
(d)	TRT	10 MW	10 MW	Nil	Nil	10 MW	10 MW	NA	NA	20 MW	20 MW	30 MW	30 MW	
(e)	WHRB(Clinker Plant)	-	-	-	-	-	-	-	-	2 nos.X25 TPH+1 x 50 TPH	25 MW	2 nos.X25 TPH+1 x 50 TPH	25 MW	
	Sub Total	235 MW	235 MW		16.5 MW		218.5 MW		16.5 MW		420 MW		655 MW	
14.2	AFBC/CFBC based CPP	10 nos.x125 + 1 nos.X130 +	460 MW	1x115 TPH	25 MW	9 nos.x125 + 1 nos.X130 + 3	435 MW	115 TPH	25 MW	2 nos.x 260 TPH + 1x180 TPH	175 MW	10 nos.x125 + 1 nos.X130 + 3nos.X250 TPH + 2	635 MW	

MoM of 52<sup>nd</sup> meeting of the Re-constituted EAC (Industry-I) held on 31<sup>st</sup> January, 2022

SI	Plant Equipment/ facility	Existing facilities as per EC dated 15.02.2021								Proposed Units		Final (Existing + Proposed)		Remarks
		Total(A+B)		Implemented(A)		Un-implemented (B)		As per CTO		Configuration	Capacity	Configuration	Capacity	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	
		3nos.X250 TPH				nos.X250 TPH						nos.x260 TPH+ 1x 180 TPH		
	<b>Total</b>	<b>MW</b>	<b>695 MW</b>		<b>41.5 MW</b>		<b>653.5 MW</b>		<b>41.5 MW</b>		<b>595 MW</b>		<b>1290 MW</b>	

52.13.8 The details of the raw material requirement for the expansion cum proposed project along with its source and mode of transportation is given as below:

Sl. No.	Raw Material	As per EC dated 15/02/2021	Proposed Additional	Total After Expansion	Source	Distance (km)	Mode of transportation
1.	Bag filter and ESP dust	362,633	540,090	902,723	In-house	0	Internal
2.	Bentonite	431,250	0	431,250	Rajasthan	1,800	By Rail/Road
3.	Char	414,347	395,948	810,295	In-house	0	Internal
4.	Clay component	28,905	139,095	168,000	Jharkhand	300	By Rail/Road
5.	Clinker	963,516	310,809	1,274,325	In-house	0	Internal
6.	Coal/ Coal fines/ Coal dust	11,227,155	3,716,872	14,944,027	Talcher	30	By Rail/Road
7.	Coke	835,275	1,307,845	2,143,120	In-house	0	Internal
8.	Coke fines and breeze	723,450	386,177	1,109,627	Imported	185	By Rail/Road
9.	Coking Coal	1,615,700	2,536,800	4,152,500	Imported	185	By Rail/Road
10.	Dolomite	1,131,903	1,116,965	2,248,868	Rajgangpur, Odisha	300	By Rail/Road
11.	DRI	2,247,150	2,156,625	4,403,775	In-house	0	Internal
12.	Flocculent	269	0	269	Bhubaneswar	130	By Road
13.	Fly Ash	255,054	89,084	344,138	In-house	0	Internal
14.	Iron ore, fines and concentrates and Pellet	45,687,533	3,074,266	48,761,799	OMC/ Other Pvt. Mines	240	By Rail/Road
15.	Fuel Oil	60,900	92,400	153,300	Bhubaneswar	130	By Road
16.	Gypsum	84,280	79,595	163,875	Bhubaneswar	130	By Road
17.	Pig Iron/ Hot Metal	1,958,841	2,719,603	4,678,444	In-house	0	Internal
18.	Lime	304,500	462,000	766,500	In-house	0	Internal
19.	Lime Stone	2,439,519	8,434,015	10,873,534	Rajgangpur, Odisha	300	By Rail/Road
20.	Liquid Metal from Furnace	3,220,000	4,189,000	7,409,000	In-house	0	Internal
21.	Middlings	2,137,410	0	2,137,410	In-house	0	Internal
22.	Mill Scale	28,905	244,750	273,655	In-house	0	Internal
23.	Others	9,635	46,365	56,000	Bhubaneswar	130	By Road
24.	Quartz	101,010	158,158	259,168	Jharkhand	300	By Rail/Road
25.	Semi-Finished Product from CCM	3,139,070	4,121,750	7,260,820	In-house	0	Internal
26.	Silica component	38,541	185,459	224,000	Bhubaneswar	130	By Road
27.	Sinter	2,806,913	4,394,967	7,201,880	In-house	0	Internal
28.	Sinter Return Fines	424,116	697,950	1,122,066	In-house	0	Internal
29.	Slag from BF	382,750	1,112,450	1,495,200	In-house	0	Internal
30.	Steel Scrap	83,696	59,944	143,640	Imported	185	By Rail/Road
	<b>Total</b>	<b>83,144,226</b>	<b>42,768,981</b>	<b>125,913,207</b>			

In addition to above, the fuel requirement shall be for the dozers and heavy machinery used for handling and management of raw materials and solid waste, which is anticipated to the



tune of 50,000 litre per annum. The producer gas will be used in pellet plant to the tune of 5,382,000,000 Nm<sup>3</sup>/yr. The furnace oil will be used @32litre/T in rolling mills. The total FO requirement will be 153,300 KL/annum.

52.13.9 Existing Water requirement is 90048 m<sup>3</sup>/day, water requirement is obtained from Bramhani River and permission for the same has been obtained from Water Resource Department, Govt. of Odisha vide letter no. 22055 dated 03/10/2019 for 70804 m<sup>3</sup>/day and IPICOL has recommended for allocation of additional water requirement of 19230 m<sup>3</sup>/day from river Bramhani vide letter no. CGM/SLNA/RML-226/18/2160 dated 24/08/2020. The additional fresh water requirement for the proposed project is estimated as 66000 m<sup>3</sup>/day against which 90033 m<sup>3</sup>/day from Brahmani River has been recommended by IPICOL, Odisha vide letter no. CGM/SLNA/RML/DSP/308/21/ dated 18/01/2022. Therefore, permission for total of 7502.8 KLH (180067 KLD) against a requirement of 6502 KLH (156048 KLD) has been obtained. No Ground water shall be used for industrial use.

52.13.10 Existing power requirement of 695 MW is obtained from captive power plant. The additional power requirement for the proposed expansion project is estimated as 595 MW and will be obtained from captive power plant. Therefore, total power requirement will be 1290 MW.

52.13.11 Baseline Environmental Studies:

Period	March to May 2021																				
AAQ parameters at 9 Locations	PM <sub>2.5</sub> = 19.6 to 43.7 µg/m <sup>3</sup> PM <sub>10</sub> = 30.4 to 74.7 µg/m <sup>3</sup> SO <sub>2</sub> = 3.7 to 16.4 µg/m <sup>3</sup> NO <sub>x</sub> = 8.5 to 21.8 µg/m <sup>3</sup> CO = 0.1 to 0.8 mg/m <sup>3</sup>																				
Incremental GLC level	PM <sub>10</sub> = 5.2 µg/m <sup>3</sup> (Level at 0.2 km in SSE Direction) PM <sub>2.5</sub> = 2.99 µg/m <sup>3</sup> (Level at 0.2 km in SSE Direction) SO <sub>2</sub> = 1.39 µg/m <sup>3</sup> (Level at boundary in SSE Direction) NO <sub>x</sub> = 1.57 µg/m <sup>3</sup> (Level at 0.2 km in E Direction)																				
Ground water quality at 10 locations	pH: 6.6 to 7.9, Total Hardness:172 to 592 mg/l, Chlorides: 22 to 474 mg/l, Fluoride: 0.45 to 0.96 mg/l. Heavy metals are within the limits.																				
Surface water quality at 9 locations	pH: 6.4 to 7.8; DO: 6.8 to 7.4mg/l, BOD: 2.4 to 9.6 mg/l and COD: 7 to 26 mg/l																				
Noise levels	46.18 to 52 dBA for the day time and 39.01 to 43.22 dBA for the Night time.																				
Traffic assessment study findings	<ul style="list-style-type: none"> <li>Traffic study has been conducted at NH-55, which is approximately 1.4 km from the plant site and undergoing road widening from 7-7.5 to 18 m.</li> <li>Transportation of raw material, fuel &amp; finished product will be done 100% by road.</li> <li>Existing PCU is 25582 existing level of service (LOS) is:</li> </ul> <table border="1"> <thead> <tr> <th rowspan="2">Road</th> <th rowspan="2">V (Volume in PCU/hr.)</th> <th colspan="2">Existing (road width 7-7.5 m)</th> <th colspan="2">After road widening (to 18 m, already underway)</th> </tr> <tr> <th>C (Capacity in PCU/h)</th> <th>V/C Ratio</th> <th>C (Capacity in PCU/h)</th> <th>V/C Ratio</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					Road	V (Volume in PCU/hr.)	Existing (road width 7-7.5 m)		After road widening (to 18 m, already underway)		C (Capacity in PCU/h)	V/C Ratio	C (Capacity in PCU/h)	V/C Ratio						
Road	V (Volume in PCU/hr.)	Existing (road width 7-7.5 m)		After road widening (to 18 m, already underway)																	
		C (Capacity in PCU/h)	V/C Ratio	C (Capacity in PCU/h)	V/C Ratio																

	NH-55 (towards east/ west)	25582	30000	0.85	70000	0.36
	<ul style="list-style-type: none"> <li>PCU load after proposed project will be 25582 (existing) + additional 8607 (towards west) and 13680 (towards east) and level of service (LOS) will be:</li> </ul>					
	<b>Road</b>	<b>V (Volume in PCU/hr.)</b>	<b>Existing (road width 7-7.5 m)</b>		<b>After road widening (to 18 m, already underway)</b>	
			<b>C (Capacity in PCU/h)</b>	<b>V/C Ratio</b>	<b>C (Capacity in PCU/h)</b>	<b>V/C Ratio</b>
	NH-55 towards west	34189	30000	1.14	70000	0.49
	NH-55 towards east	39262	30000	1.31	70000	0.56
	* Note: Capacity as per IRC-9-1972 Guide line for capacity for roads.					
	<b>Conclusion:</b> The level of service is currently C but will improve to B after including additional traffic due to proposed project and road widening (from 7-7.5 to 18 m, which is already underway).					
Flora and fauna	Elephant, Sloth Bear and Indian Rock Python are the schedule I fauna. Site Specific Wildlife Conservation Plan approved by PCCF (WL) & Chief Wildlife Warden, Odisha vide memo no 10181/CWLW-FDWC-FD-0123-2021 dated 22/10/2021.					

52.13.12 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

Sl. No.	Source	Type of waste	Quantity Generated, TPA	Mode of treatment / disposal
1	Beneficiation Plant	Tailing	2,155,971	Collected in small tailing decantation tank, dewatered and dredged for 100% reutilization as sand substitute in infrastructure/ fine concrete aggregate/ cement manufacture
2	Pellet Plant	Dust (Iron Ore, Coke, Coal Fines)	2,348,097	100% reused in sinter making or re-circulated to mixing bin of the pellet plant
3	Coal Washery	Middlings	2,137,410	100% reused in captive power plant
		Reject	377,190	100% temporarily stored in solid waste disposal area within project site till sent for backfilling in mine or used for road making/ filling of low lying area.
4	DRI	Char	810,295	100% reused in CFBC boiler within

Sl. No.	Source	Type of waste	Quantity Generated, TPA	Mode of treatment / disposal
				project
		ESP, bag filter dust	277,438	100% reused in sinter making within project
		Kiln Accretion	79,268	100% stored in in land fill temporarily till reused in road sub-base
		Refractories	Variable, periodic	Reusable portion of salvaged refractories are recycled, preparation of mortar
5	MBF	BF Slag	1,495,200	100% Slag will be granulated, used for cement making in own proposed cement plant.
		Dust (Iron Ore, Coke, Sinter Fines)	249,200	100% dust will be reused in Sinter Plant.
6	Sinter Plant	Sinter Return Fines	1,122,066	100% dust will be used in Sinter Plant within project
7	Coke Oven Plant	Bag Filter Dust	123,750	100% dust will be used in Sinter Plant
8.1	SMS-IF	BF dust and losses	63,840	100% dust will be used in Sinter Plant within project
		Slag	513,380	100% slag will be given for metal recovery, converted to aggregates (special balls) and used in road making within and outside plant
	SMS-Caster	Mill Scale	53,200	100% reuse/ sale in own/ other cement plant, usable in pellet making & sinter plant, LRF dephosphorisation process, as secondary coolant-replacement of iron ore after briquetting
8.2	SMS-EAF/ EOF/ NOF/ BOF	BF dust	109,227	100% reused in sinter making or pellet plant within project
		Slag	1,215,744	100% reused through various methods such as slag atomisation/ granulation to make Precious Slag balls (spherical, 0.1-4.5 mm) which can be used as blasting abrasive, casting sand, filter media etc; use as rail ballast, road & pavement material, filling material, cement making, brick/ ceramic tiles making, soil conditioner, tiles
	SMS-Caster	Mill scale	94,980	100% reused in Sinter Plant or

Sl. No.	Source	Type of waste	Quantity Generated, TPA	Mode of treatment / disposal
				clinker plant, also saleable
9.1	Rolling Mill	Reject	35,490	100% reused in SMS
		Mill Scale	43,376	100% reused in Sinter Plant or clinker plant, also saleable
9.2	Strip Mill	Reject	4,592	100% reused in SMS
		Mill Scale	5,612	100% reused in Sinter Plant or clinker plant, also saleable
9.3	Ductile Pipe Plant	Reject	4,592	100% reused in SMS
		Mill Scale	5,612	100% reused in Sinter Plant or clinker plant, also saleable
		Zinc recovered	Not separately estimated	100% sale to paint manufacturer
		Cement slurry	Not separately estimated	100% recover water & manufacture brick/ cement tiles
		Core sand (in casting area & annealing furnace)	Not separately estimated	100% used for land leveling
9.4	Color coated/ Galvanized pipe	Reject	70,875	100% reused in SMS
		Mill Scale	70,875	100% reused in sinter plant or clinker plant, also saleable
10	Producer Gas Plant	Coal Ash	359,120	100% reused as per Fly Ash Utilization Notification 1999 and its amendments of 2003, 2009, 2016. Used in cement making, brick making, block making, aggregate making, and road making.
		Coal Tar	65,295	Saleable, reuseable in coke oven plant over charge coal
11	Captive Power Plant	Bottom ash and fly ash from Char, middlings, coal fines & coal	2,496,039	100% reused as per Fly Ash Utilization Notification 1999 and its amendments of 2003, 2009, 2016. Used in own cement plant and rest sent to others cement making, brick making, block making, aggregate making, and road making.
	<b>Total</b>		<b>16,387,734</b>	

**HAZARDOUS WASTE MANAGEMENT**

Sl. No.	Source	Type of Waste	Quantity generated (TPA)	Mode of Treatment/ Disposal
1	Industrial operations using mineral or synthetic oil as lubricant in hydraulic systems or other applications	Used/ spent oil	400 KL	Storage in containers over impervious floor in leak proof containers, under well ventilated covered shed followed by disposal through captive use/ authorized TSDF facility
		Waste/ residues containing oil	500 KL	In addition to above, other option is to send for co-processing in authorized/ own clinker kiln
2	Industrial use of zinc	Zinc ash/ skimming	0.5 T	100% sent to authorized recycler for conversion to Zinc sulphate for subsequent use as micronutrient in agriculture, raw material for Zinc Chloride manufacturing or melted into zinc ingots/ slabs for further use in galvanizing.
		Flue gas dust and other particulates	0.50 T	100% sent to authorized recyclers
3	Metal surface treatment- galvanizing	Acidic and alkaline residues	80 T	Neutralized in ETP of cold rolling mill. Storage in impervious pit / containers under well ventilated covered shed followed by final disposal in Authorized HW incinerator
		Spent acid and alkali	40 T	Storage in impervious pit / containers under well ventilated covered shed followed by final disposal in Authorized HW incinerator
		Plating metal sludge (Zinc Dross)	0.50 T	100% sent to authorized recycler for conversion to zinc oxide, which is used in rubber, medicine, ceramics, glass, etc. or melted into zinc ingots/ slabs for further use in galvanizing
4	Production of iron and steel (finishing mills)	Spent pickling liquor	2000000 KL	100% sent to authorized recycler after treatment
		Sludge from acid recovery unit	80 T	Storage in impervious pit / containers under well ventilated covered shed followed by final disposal in Authorized HW incinerator and land filling
5	Coke oven plant	Tar	150000 T	Storage in impervious pit in leak proof

Sl. No.	Source	Type of Waste	Quantity generated (TPA)	Mode of Treatment/ Disposal
				containers under well ventilated covered shed followed by disposal to TSDF/ co-processing in authorized/ own DRI kiln/ charged with coking coal for coke making or sent to other authorized users
5	Handling of hazardous chemicals and wastes	Discarded barrels/ containers contaminated by Hazardous chemicals	50 T	Storage on impervious floor under well ventilated covered shed followed by captive use/ disposal through original supplier/ disposal through authorized TSDF facility
6	Gas scrubbing system	Gas cleaning residue	0.50 T	Storage in impervious pit / containers under well ventilated covered shed followed by final disposal in Authorized HW incinerator / co processing in cement plant kiln/ CHWTSDF
4	Effluent treatment plant, water treatment plant	Spent ion exchange resin containing toxic metals	0.50 T	Storage in impervious pit / containers under well ventilated covered shed followed by final disposal in Authorized HW incinerator and land filling
		Chemical sludge from waste water treatment	160 T	Storage in impervious pit in leak proof containers under well ventilated covered shed followed by disposal to TSDF
		Oil and grease skimming	29 T	Storage in impervious pit in leak proof containers under well ventilated covered shed followed by co-processing in authorized cement kiln

52.13.13 Public Consultation:

Details of advertisement given	English newspaper– Times of India dated 27/11/2021 Odisha local newspaper - Dharitri dated 27/11/2021
Date of public consultation	30/12/2021
Venue	R.I. office Ranjagaol, Hindol Tehsil, Dhenkanal District, Odisha
Presiding Officer	Additional District Magistrate, Dhenkanal district
Major issues raised	i. Air and water pollution control, ii. Plantation, iii. Employment,

	<ul style="list-style-type: none"> <li>iv. Health centre,</li> <li>v. Educational facility,</li> <li>vi. Alternate roads &amp; maintenance of existing roads,</li> <li>vii. Drinking water supply,</li> <li>viii. Industrial training Institute,</li> <li>ix. Stadium &amp; development work,</li> <li>x. Training facility to village women under SHG.</li> </ul>
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**Action plan as per MoEF&CC O.M. dated 30/09/2020**

No.	Physical activity and action plan		Year of Implementation (Budget in Rs. lakhs)			Total Expenditure (Rs. in lakhs)
	Name of the Activity	Physical Target	Year 1	Year 2	Year 3	Total
<b>1</b>	<b>Education</b>					
1.1	Provision of better educational facility	Construction of boundary wall, toilet block, provision of tables in schools of Galpada, Kantimilli & Sanamunda (one village each year)	10	10	10	30
1.2	Provision of Industrial Training Centre	Company is constructing own ITI at Karanda, PO Balimi for providing training on skill development.	100	75	75	250
<b>2</b>	<b>Health</b>					
2.1	Provision of Health Care Centre	Company will construct 4-bedded OHS centre inside plant premises, which will be available for villages also. It will be having doctor, nurse, compounder, assistant, etc and provide free consultation & medicine to villagers. The centre will be upgraded gradually.	100			100
<b>3</b>	<b>Water</b>					
3.1	Provision of drinking water	One tank and one bore well will be provided in each village Galpada, Kantimili, Patala, Beruanpal, Kadala, Badamunda, Kankalu, Tarkabeda, Sanamunda, Kothalu, Naraharipur, Sulanali, Chandrasekharapur (year 1 & 2 four village each & year 3 5 villages)	20	20	30	70
3.2	Renovation of village pond	One pond in Kantimili village, Jharabeda		5		5

No.	Physical activity and action plan		Year of Implementation (Budget in Rs. lakhs)			Total Expenditure (Rs. in lakhs)
	Name of the Activity	Physical Target	Year 1	Year 2	Year 3	Total
4	Plantation	Plantation outside project boundary @10000 trees/ year	10	10	10	30
5	Facility of Electricity	100 nos. solar street lights in Kantimili, Kadala, Sanamunda village (1 village/ year)	20	20	20	60
<b>6 Roads</b>						
6.1	Provision for construction of village roads	Construction of cement concrete roads (500-1000 m per village) in villages Galpada, Kantimili, Patala, Beruanpal, Kadala, Badamunda, Kankalu, Tarkabeda, Sanamunda, Kothalu, Naraharipur, Sulanali, Chandrasekharapur (year 1 & 2 four village each & year 3 5 villages)	40	40	50	130
6.2	Maintenance of road	Badamunda village to Purunakote village road.	5	5	5	15
6.3	Road development	Road development from Nuapada village to Mahalunda			30	30
7	Livelihood Support	Aid to Mahamayee Self Help Group (30 sewing machines, cloth & other infrastructure)	3	3	3	9
8	Social infrastructure development	Community center construction in Badamunda village		10		10
		Sports complex & children park at Kantimili			15	15
		Temple construction at Kantimili, Jharbeda, Narharipur	5	6	7	18
10	Monetary assistance	Ananta Gopal Nama Sankirtan Mandali- musical instruments & uniforms		3		3
		<b>Total</b>	<b>313</b>	<b>207</b>	<b>255</b>	<b>775</b>

52.13.14 Existing capital cost of project was Rs. 13,386.9 Crores. The capital cost of the proposed project is Rs. 11,001 Crores and the capital cost for environmental protection measures is proposed as Rs 116.6 Crore. The annual recurring cost towards the environmental protection measures is proposed expansion project is Rs 36.6 Crore. The employment generation from the proposed project is 1800. The details of the cost for environmental protection measures is as follows:



Description	Capital cost			Recurring cost		
	Sanctioned as per EC dt. 15.02.2021	Additional	Total	Sanctioned as per EC dt. 15.02.2021	Additional	Total
Air pollution control	12975.00	10165.00	23140.00	2109.93	675.69	2785.62
Water pollution control	354.50	494.00	848.50	19.76	2645.68	2665.44
Noise pollution control	10.00	10.00	20.00	1.13	5.14	6.27
Env. Monitoring and management*	499.10	17.00	516.10	137.18	34.52	171.70
Occupational health	180.00	50.00	230.00	121.78	42.32	164.10
Green belt	590.85	601.99	1192.84	85.62	86.14	171.76
Others	10.00	0.00	10.00	7.91	5.00	12.91
Overheads (3% of dep., energy, R&M & interest)	0.00	0.00	0.00	62.21	101.89	152.51
To address issues raised in public hearing dated 20.12.2020 (for EC dt. 15.02.2021 for 3.55MTPA)	235.84		235.84	-	-	-
To address issues raised in public hearing dated 30.12.2021 (for expansion from 3.55 to 7.53 MTPA)		775	775	-	-	-
<b>Total</b>	<b>14855.29</b>	<b>12112.99</b>	<b>26968.28</b>	<b>2545.52</b>	<b>3584.79</b>	<b>6124.31</b>

52.13.15 Existing green will be developed in 236.34 ha area which is about 33% of the total project area of 715.9 ha with total sapling of 585000 Trees. Proposed greenbelt will be developed in 240.78 ha which is about 33.03% of the total project area. Thus total of 477.1 ha area (33.03% of total project area) will be developed as greenbelt. A 10 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 11,79,000 saplings will be planted and nurtured in 477.1 hectares in 5 years.

52.13.16 It has been reported by PP that, there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.

52.13.17 Name of the EIA consultant:

The EIA report was originally prepared by the consultant namely Min Mec Consultancy Pvt. Ltd. and thereafter the report was revalidated by the M/s Centre for Envotech and Management Consultancy Private Limited [certificate no NABET/EIA/1821/SA 0126 and letter no QCI/NABET/ENV/ACO/21/2182 dated 16/12/2021 and is valid up to

15/03/2022] as the former consultant was not accredited by the QCI/NABET.

**Certified compliance report from Regional Office**

52.13.18 The status of compliance of earlier EC dated 15/02/2021 was obtained from Regional Office, Bhubaneswar vide letter no. 101-1069/21/EPE/143 dated 18/01/2022. The Action taken report regarding the partially complied conditions is being submitted to Regional Office MoEF&CC, Bhubaneswar. Present status as furnished by the PP is given as below:

Sl.	Category	Observation of RO (abridged) partially complied	Condition no.		Response by PP as on 23/01/2021
			Specific	General	
1	Air Pollution and control	Industrial vacuum cleaner shall be deployed to clean the roads regularly to keep fugitive emission under control.	xv	vii	One vacuum cleaner machine shall be provided by 31/03/2022
2	Water Pollution and control	Treated effluents from the plant shall be reused and recycled completely; STP shall be install to treat domestic waste water	xvii		1000 KLD ETP and 600 KLD STP are under construction and shall be operational by 31.03.2022. All treated water shall be utilised in green belt, plantation, brick plant and dust suppression
3	Air Pollution and control	The Project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.		vi	Leakage detection in bag filter will be provided by 30.04.2022
4	Air Pollution and control	Wind Shelter fence and chemical spraying shall be provided on the raw material stock piles.		xvii	All coal in being kept in covered shed. The temporary raw material storage at present is covered with tarpaulin, which will prevent dust from becoming airborne
5	Water Pollution and control	To install continuous effluent monitoring systems		III(i)	1000 KLD ETP is under construction with a 24x7 continuous effluent monitoring system, both shall be installed by 31.03.2022.
6	Water Pollution and control	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.		III (viii)	Basic Oxygen Furnace (BOF) is not yet installed. Presently we are operating SMS comprising 2x20T IF. There is no need of CO <sub>2</sub> injection so far. When BOF will be installed, CO <sub>2</sub> injection will be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.
7	Energy conservation	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		v (ix)	Installation of solar power in roof top of administrative building is under process and shall be completed by 30.04.2022

Sl.	Category	Observation of RO (abridged) partially complied	Condition no.		Response by PP as on 23/01/2021
			Specific	General	
		regularly			
8	Waste management	Used refractories shall be recycled as far as possible		vi (v)	Plant is in operation since 06.05.2021. All refractories generated in future shall be reused
9	Waste management	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick-manufacturers for further utilization and MoU in this regard shall be submitted to Ministry's Regional Office.		vi (vii)	Brick manufacturing plant (3000 bricks /hr) is under installation in the plant and will be completed by 31.03.2022.
10	Waste management	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.		vi (viii)	Presently we are operating 1x500 TPD DRI, 2x20 T IF and 25 MW power plant. 200000 TPA & 300000 TPA Rolling mills are under construction and Oil Collection Pits shall be provided when coils will be manufactured
11	Waste management	Kitchen waste shall be composed or converted to biogas for further use		Vi (ix)	Company will installed 100 kg per day compost machine in plant premises by 31.03.2022
12	Health and safety	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.		viii(ii)	Heat stress analysis under process and shall be completed by 15.02.2022

52.13.19 During the meeting, project proponent submitted written submission on the following points:

- Revised action plan to address the issues raised during public hearing as mentioned at para no. 52.13.13 above.
- Revised EMP budget as mentioned at 52.13.14 above.
- Other written submissions

Sl. No.	Points raised during EAC	Written submission by the Project Proponent
1.	Garland drain around the storage area to be connected to the process ETP	1000 KLD ETP is under construction and the garland drain overflow after settlement shall be connected to the process ETP. Till the time ETPs becomes functional, neutralization tank has been constructed and is operational for the 25 MW CPP and cooling water blow downs from 1X500 TPD DRI kiln and 2X20 T IF. The neutralization tank water is used for sprinkling and watering green belt
2.	Details of resettlement and	In the current expansion, there is addition of 1800 acres, which has been recommended for allotment by IPICOL vide letter no.

Sl. No.	Points raised during EAC	Written submission by the Project Proponent
	rehabilitation proposed for the expansion area of 1800 acres	<p>CGM/SLNA/RML/DSP/308/21/ dated 08.11.2021.</p> <p>In this 1800 acres, approximately 30 families are residing in two villages of Benipathar and Chandrasekharpur. They are having approximately 126 displacees. In addition, there will also be approximately 2100 land losers.</p> <p>Based on IPICOL recommendation, land will be acquired through IDCO, Govt. Of Odisha following the process laid out in R&amp;R rules of Odisha by IDCO. All cost of acquisition, resettlement and rehabilitation shall be borne by the Company and paid to IDCO, as per demand raised at various stages. The compensation for fixed assets in land will be paid as per IDCO rules.</p>
3.	Utilization of used oil	Used oil will be sent to the used oil recycling units in Odisha, approved by CPCB/ SPCB.
4.	Size of coke oven plant and applicability of CDQ regarding	<p>The 1.680 MTPA coke oven plan shall be of following configuration:</p> <ul style="list-style-type: none"> <li>• 12 batteries x 70,000 TPA i.e. 2 nos. of 0.42 MTPA</li> <li>• 2 batteries x 420,000 TPA i.e. 2 nos. of 0.42 MTPA</li> </ul> <p>As can be seen above, the largest coke oven unit that PP will install shall be of 0.42 MTPA. This is less than 0.8 MTPA. CDQs are feasible to install for &gt;0.8 MTPA. Hence, PP will be following modified wet quenching in our coke oven units.</p>
5.	Reutilization of BOF gas	It is proposed to reuse Basic Oxygen Furnace exit gases containing high CO content for reheating in SMS.
6.	Provision for spent liquor recovery in cold rolling	It is proposed to have an acid recovery plant (ARP) for the recovery of acids. In section 4.6.3, Chapter 4 of the EIA report, PP has submitted that “ <i>regeneration of hydrochloric acid from the pickling liquor discharged by pyro-hydrolysis. This further minimizes the need to neutralize, hauling of waste acid and reduces water consumption. The iron oxides produced are also saleable.</i> ”
7.	Reconfirmation regarding assumptions taken in modelling	<p>It is confirmed that while undertaking modelling the assumptions have been taken having standard basis as follows:</p> <ol style="list-style-type: none"> <li>(1) PM emissions complying to 30 mg/Nm<sup>3</sup> .</li> <li>(2) SO<sub>2</sub> emissions based on fuel consumption with control measures or prescribed limits, where available (variable for various units)</li> <li>(3) NO<sub>x</sub> emission based on prescribed limits or industry norms, where limits not available (variable for various units)</li> <li>(4) Elevation of receptors from Google earth</li> <li>(5) Stack locations as per layout plan</li> <li>(6) Meteorological data as monitored at site using automatic weather station</li> </ol>

Sl. No.	Points raised during EAC	Written submission by the Project Proponent
		(7) Use of standard model i.e. AERMOD

**Observations of the Committee**

52.13.20 The Committee noted the following:

- i. The Committee noted that the EIA/EMP report for the expansion project is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
- ii. The Committee also deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.
- iii. The Committee deliberated upon the certified compliance report of RO and action taken report submitted by PP with respect to the compliance status of all the existing EC and found its satisfactory.
- iv. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

**Recommendations of the Committee**

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

**A. Specific Conditions**

- i. Tailings from Iron Ore washing plant shall be dewatered in filter press and no slime /tailing pond shall be permitted.
- ii. Rejects from coal washery shall only be used either in the captive power plant (or) in the Thermal Power Plants meeting emission standards.
- iii. Solid waste utilization
  - PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making.
  - PP shall recycle/reuse 100 % solid waste generated in the plant.
  - Used refractories shall be recycled as far as possible.
- iv. Sinter Plant shall be equipped with Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant.
- v. Tar shall be recovered from producer gas and shall be sold to registered processors and phenolic water shall be incinerated in After Burn Chamber (ABC) of DRI kilns.
- vi. Coke oven plant shall be equipped with modified wet quenching system.
- vii. Coke Oven Gas shall be desulfurized.

- viii. Blast Furnaces shall be equipped with Top Recovery Turbine (capacity more than 450m<sup>3</sup>), dry gas cleaning plant, stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.
- ix. Secondary fume extraction system shall be installed on converters of Steel Melting Shop.
  - x. Basic Oxygen Furnace (BOF) gas shall be cleaned dry.
  - xi. Electric Arc Furnace shall be closed type with 4th hole extraction system.
  - xii. 85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil or Mixed BF/CO gas/Producer gas.
- xiii. Cold Rolling Mill (CRM), color coating and galvanizing plants shall have CETP to treat and recycle the treated water from CRM complex. Sludge generated at CRM ETP shall be sent to TSDF.
- xiv. Dust emission from Steel Plant stacks shall be up to 30 mg/Nm<sup>3</sup>.
- xv. 156048 KLD water shall be drawn from Brahmani river. No GW abstraction is permitted.
- xvi. Green Belt shall be developed in 33 % of total land with tree density of 2500 trees per ha. (or 1000 trees per acre) all along the periphery of the project site. This shall include development of green belt with a width of 10-20 m within the project site towards Jharbandh reserve forest and Village Beruanpal located adjacent to the project site.
- xvii. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.
- xviii. PP shall provide Railway siding at New Bhagirathpur. Dedicated roads to connect the site to highway and Railway siding shall be constructed by PP.
- xix. 4 village roads which are passing through proposed project site shall be diverted after prior approval from the Competent Authority of the State Government.
- xx. Ductile Iron (DI) plant shall have the following provisions:
  - a. Bag filter for Zn coating and Mg converter area.
  - b. Wet scrubbers in paint and bitumen coating area.
  - c. Bag Filter in Cement lining area.
  - d. PTFE dipped bags shall be used in the plant.
  - e. PM emissions from BF in Zinc coating area shall be 5 mg/Nm<sup>3</sup>.
  - f. ETP with recycling facility shall be included.
- xxi. The emission norms applicable for the cement plant shall be adhered to.
- xxii. Dioxin and Furan monitoring shall be carried out once in six months at cement kiln stack.
- xxiii. The recommendations of the approved Site-Specific 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 to the concerned Regional Office of the MoEF&CC.

## **B. General conditions**

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

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

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

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- 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 shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- vi. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- vii. 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.
- viii. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- ix. 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).
- x. Land-based APC system shall be installed to control coke pushing emissions.
- xi. 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.
- xii. Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.
- xiii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xiv. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

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

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

recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- iv. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- v. Tyre washing facilities shall be provided at the entrance of the plant gates.
- vi. Water meters shall be provided at the inlet to all unit processes in the steel plants.

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

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

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

- i. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
- ii. Restrict Gas flaring to < 1%.
- iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- iv. Provide LED lights in their offices and residential areas.
- v. Ensure installation of regenerative/recuperative type burners on all reheating furnaces.

#### **VI.Waste management**

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

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

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

#### **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.



- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

#### **IX.Environment Management**

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

#### **X.Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

52.14 Change in Plant Configuration in the existing 1.0 MTPA Steel Plant by setting up a 0.3 MTPA DI Pipe Plant with associated infrastructure and dropping certain facilities in existing EC by **M/s The Sandur Manganese & Iron Ores Ltd.** located at Village Hanumanhalli, Danapur Mandal, Taluk Hospet, **District Bellary, Karnataka.** [Online Proposal No. IA/KA/IND/240582/2021, File No. J-11011/205/2014-IA-II(I)] – **Environment Clearance under para 7(ii) of EIA Notification, 2006** – regarding. *[Proposal is also under consideration by Karnataka State Pollution Control Board – Withdrawn by the proponent on 25/01/2022]*

52.14.1 M/s The Sandur Manganese Iron Ores Limited has made an online application vide proposal no. IA/KA/IND/240582/2021 dated 20/01/2022 along with copy of Addendum EIA report, Form – 2 and certified compliance report seeking Environment Clearance (EC) under the provisions of para 7(ii) of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraisal at Central Level.

**Details submitted by the project proponent**

52.14.2 The project of M/s The Sandur Manganese Iron Ores Limited located in Hannumanhalli, Danapura Mandal, Hospet Taluk, Vijayanagar District part earlier part of Bellary District, Karnataka is for Change in Plant Configuration in the existing 1.0 MTPA Steel Plant by setting up a 0.3 MTPA DI Pipe Plant with associated infrastructure and dropping certain facilities in existing EC as given below.

Sl. No.	Description	Existing Configuration as per the EC dated 25/06/2018	Proposed configuration of expansion units	Total capacity after expansion
1	Submerged Arc Furnace	1*15MVA, 2*20 MVA  Capacity: 0.0144 MTPA FeSi or 0.03 MTPA of Ferro Alloys or 0.066 MTPA of FeMn or 0.048 MTPA of SiMn	No change in 1*15MVA, 1*20 MVA <b>Increase of 1*20MVA to 1*24 MVA furnace</b>	1*15MVA, 1*20MVA, 1*24MVA  Capacity: 0.125 MTPA of FeMn or 0.095 MTPA of SiMn or 0.135 MTPA Pig Iron or 0.050 MTPA FeSi
2	Sinter plant (Mn Ore fines)	0.012 MTPA	-	0.012MTPA
3	Mn ore beneficiation plant	0.016MTPA	-	0.016MTPA
4	Coal based power plant	32 MW	-	32 MW
5	Non-Recovery coke oven	1*0.4 MTPA	Current 0.4 MTPA + <b>increase 0.1 MTPA</b>	1*0.5 MTPA
6	WHRB and power plant	32 MW	-	32 MW
7	Blast furnace	2*0.4 MTPA	<b>Reduce 1 BF to make it 1*0.4 MTPA</b>	1*0.4 MTPA
8	Pig casting machine	1*0.4 MTPA	<b>Reduce to 1*0.2 MTPA</b>	1*0.2 MTPA
9	Sinter plant (Iron ore fines)	2*0.53 MTPA	<b>Reduce 1 Sinter plant to make it 1*0.53 MTPA</b>	1*0.53 MTPA
10	DI Pipe Plant	-	<b>0.3 MTPA (1*0.2 MTPA + 1*0.1 MTPA)</b>	1*0.2 MTPA + 1*0.1 MTPA (Total 0.3 MTPA)
11	Oxygen plant	1*23100 TPA + 1*66000 TPA	<b>Reduce in existing configuration to 1*45000 TPA</b>	1*45000 TPA
12	Energy optimizing furnace (EOF)	2*50 T (1.057 MTPA)	To be Dropped from proposed EC	-
13	Ladle refining furnace (LRF)	2*50T (1.057 MTPA)	To be Dropped from proposed EC	-
14	Vacuum de-gassers (VAD)	2*50T (1.057 MTPA)	To be Dropped from proposed EC	-
15	Continuous casting machine	2*0.5 MTPA (1.036 MTPA)	To be Dropped from proposed EC	-
16	Rolling mill	2*0.5 MTPA (1.00 MTPA)	To be Dropped from proposed EC	-

52.14.3 Environmental site settings

S No	Particulars	Details	Remarks																											
i.	Total land	129.82 ha [Private Land]	Land use: Industrial																											
ii.	Land acquisition details as per MoEF&CC OM dated 7/10/2014	The expansion is proposed in existing project area of 129.82 ha.	-																											
iii.	Existence of habitation & involvement of R&R, if any.	<b>Plant Site:</b> Nil <b>Study Area:</b> <table border="1"> <thead> <tr> <th>Habitation</th> <th>Distance (km)</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Hanumanahalli</td> <td>0.3 Km</td> <td>-</td> </tr> <tr> <td>Vyasankere</td> <td>1.85</td> <td>-</td> </tr> </tbody> </table>	Habitation	Distance (km)	Direction	Hanumanahalli	0.3 Km	-	Vyasankere	1.85	-	No R&R is required																		
Habitation	Distance (km)	Direction																												
Hanumanahalli	0.3 Km	-																												
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iv.	Latitude and Longitude of all the corners of project site	<table border="1"> <thead> <tr> <th>Point</th> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>15°12'10.82</td> <td>76°22'45.31</td> </tr> <tr> <td>B</td> <td>15°11'15.43</td> <td>76°22'39.44</td> </tr> <tr> <td>C</td> <td>15°11'14.77</td> <td>76°22'58.81</td> </tr> <tr> <td>D</td> <td>15°10'55.18</td> <td>76°23'3.19</td> </tr> <tr> <td>E</td> <td>15°10'56.59</td> <td>76°23'32.12</td> </tr> <tr> <td>F</td> <td>15°11'31.49</td> <td>76°23'13.15</td> </tr> <tr> <td>G</td> <td>15°11'31.55</td> <td>76°22'54.34</td> </tr> <tr> <td>H</td> <td>15°12'10.09</td> <td>76°22'55.12</td> </tr> </tbody> </table>	Point	Latitude	Longitude	A	15°12'10.82	76°22'45.31	B	15°11'15.43	76°22'39.44	C	15°11'14.77	76°22'58.81	D	15°10'55.18	76°23'3.19	E	15°10'56.59	76°23'32.12	F	15°11'31.49	76°23'13.15	G	15°11'31.55	76°22'54.34	H	15°12'10.09	76°22'55.12	-
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v.	Elevation of the project site	517 m above mean sea level	-																											
vi.	Involvement of Forest land if any.	No Forest Land is Involved in the plant site.	-																											
vii.	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	<b>Project site:</b> Nil <b>Study area:</b> <table border="1"> <thead> <tr> <th>Water Body</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Tungabhadra Dam Back water</td> <td>4 kms</td> <td>W</td> </tr> <tr> <td>Dhanayakana Kere</td> <td>4.7 kms</td> <td>SW</td> </tr> <tr> <td>Tugabhadra Right canal</td> <td>6.5 kms</td> <td>NE</td> </tr> </tbody> </table>	Water Body	Distance	Direction	Tungabhadra Dam Back water	4 kms	W	Dhanayakana Kere	4.7 kms	SW	Tugabhadra Right canal	6.5 kms	NE	-															
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viii.	Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area.	Nil. However, following RF are present nearby: <table border="1"> <thead> <tr> <th>Sl. No</th> <th>Name</th> <th>Distance from the project (Km)</th> <th>Remark Aerial Distance</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Gunda Reserved Forest</td> <td>3.63</td> <td>NW</td> </tr> <tr> <td>2</td> <td>Ramgad Reserved Forest</td> <td>0.8</td> <td>E</td> </tr> <tr> <td>3</td> <td>Sandur Reserved Forest</td> <td>4.6</td> <td>E</td> </tr> </tbody> </table>	Sl. No	Name	Distance from the project (Km)	Remark Aerial Distance	1	Gunda Reserved Forest	3.63	NW	2	Ramgad Reserved Forest	0.8	E	3	Sandur Reserved Forest	4.6	E	-											
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S No	Particulars	Details				Remarks
		4	Joga Reserved Forest	10.4	SE	
		5	Bandri Reserved Forest	11.2	S	
		6	Nandibanda Reserved Forest	7.6	SW	

52.14.4 The existing project was accorded Environmental Clearance vide MoEF&CC letter no. J-11011/205/2014-IA-II(I) dated 25/06/2018. Consent to Operate for the existing unit was accorded by Karnataka State Pollution Control Board vide Ir. no. AW-315069 dated 27/9/2019. The validity of CFO is up to 20/06/2021 by default further extended due to the Covid Pandemic upto 31<sup>st</sup> December 2021. The issuance of renewed CFO is awaited.

52.14.5 Implementation status of the existing EC:

SI No	Name of the Unit	As per EC dated 25/06/2018	Implementation Status	Production as per CTO per month
1	Submerged Arc Furnace	1*15MVA, 2*20 MVA Capacity: 0.0144 MTPA FeSi or 0.03 MTPA of Ferro Alloys or 0.066 MTPA of FeMn or 0.048 MTPA of SiMn	Implemented	FeSi 1200 T or Ferro Alloys 2500 T Ferro Manganese 5500 T or Silico Manganese 4000 T
2	Sinter plant (Mn Ore fines)	0.012 MTPA	Implemented	1000 T
3	Mn ore beneficiation plant	0.016 MTPA	Implemented	1360 T
4	Coal based power plant	32 MW	Implemented	32 MWH
5	Non-Recovery coke oven	1*0.4 MTPA	Implemented	33333.33 T
6	WHRB and power plant	32 MW	Implemented (Only 2 X60 TOH WHR Boilers Installed and are in Operation)	32 MW
7	Blast furnace	2*0.4 MTPA	Not Implemented	Not Applied
8	Pig casting machine	1*0.4 MTPA	Not Implemented	Not Applied
9	Sinter plant (Iron ore fines)	2*0.53 MTPA	Not Implemented	Not Applied
10	DI Pipe Plant	NA	Not Implemented	Not Applied
11	Oxygen plant	1*23100 TPA + 1*66000 TPA	Not Implemented	Not Applied
12	Energy optimizing furnace (EOF)	2*50 T – 1.057 MTPA	Not Implemented	Not Applied
13	Ladle refining furnace (LRF)	2*50T – 1.057 MTPA	Not Implemented	Not Applied

<b>Sl No</b>	<b>Name of the Unit</b>	<b>As per EC dated 25/06/2018</b>	<b>Implementation Status</b>	<b>Production as per CTO per month</b>
14	Vacuum de-gassers (VAD)	2*50T– 1.057 MTPA	Not Implemented	Not Applied
15	Continuous casting machine	2*0.5 MTPA – 1.036 MTPA	Not Implemented	Not Applied
16	Rolling mill	2*0.5 MTPA – 1.00 MTPA	Not Implemented	Not Applied

52.14.6 The unit configuration and capacity of existing and proposed unit are given as below:

MoM of 52<sup>nd</sup> meeting of the Re-constituted EAC (Industry-I) held on 31<sup>st</sup> January, 2022

Sl. No	Plant Equipment/ Facility	Existing facilities as per EC dated 25/06/2018								Proposed Units		Final (Existing + Proposed)		Remarks
		Total (A+B)		Implemented (A)		Un-implemented (B)		As per CTO						
		Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	
1	Submerged Arc Furnace	1*15MVA, 2*20 MVA	<ul style="list-style-type: none"> <li>Capacity: 0.0144 MTPA FeSi</li> <li>• or 0.03 MTPA of Ferro Alloys</li> <li>• or 0.066 MTPA of FeMn</li> <li>• or 0.048 MTPA of SiMn</li> </ul>	1*15MV A, 2*20 MVA	0.0144 MTPA FeSi Or 0.03 MTPA of Ferro Alloys Or 0.066 MTPA of FeMn Or 0.048 MTPA of SiMn	-NA-		1*15MV A, 2*20 MVA	<ul style="list-style-type: none"> <li>• FeSi 14400 TPA or</li> <li>• Ferro Alloys 30000 TPA</li> <li>• Ferro Manganese 66000 TPA or</li> <li>• Silico Manganese 48000 TPA</li> </ul>	1*15MVA, 1*20 MVA Increase of 1*20MVA to 1*24 MVA furnace	<ul style="list-style-type: none"> <li>• 0.059 MTPA FeMn</li> <li>• 0.047 MTPA SiMn</li> <li>• 0.050 MTPA FeSi</li> <li>• 0.135 MTPA Pig Iron</li> </ul>	1*15MVA, 1*20MVA, 1*24MVA	<ul style="list-style-type: none"> <li>• 0.125 MTPA of FeMn</li> <li>• or 0.095 MTPA of SiMn</li> <li>• or 0.135 MTPA Pig Iron</li> <li>• or 0.050 MTPA FeSi</li> </ul>	EC is granted for 2x20 MVA Nos of SAF Config. Now we proposed the upgrade 1 SAF among those 2 to 24 MVA Production of Pig Iron is additional
2	Sinter plant (Mn Ore fines)	0.012 MTPA	0.012 MTPA	0.012 MTPA	0.012 MTPA		-	-	-	0.048 MTPA	0.048 MTPA	-	0.06 MTPA	-
3	Mn ore beneficiation plant	0.016 MTPA	0.016 MTPA	0.016 MTPA	0.016 MTPA	-	-	6960 TPA	6960 TPA	-	-	0.016 MTPA	0.016 MTPA	-
4	Coal based power plant	32 MW	32 MW	32 MW	32 MW	-	-	32 MWH	32 MWH	-	-	32 MWH	32 MWH	-
5	Non-Recovery coke oven		1*0.4 MTPA		1*0.4 MTPA	-	-	-	1x 0.4 MTPA	-	1x 0.1 MTPA	-	1x0.5 MTPA	-
6	WHRB and power plant	-	32 MW	-	32 MW	-	-	-	32 MW	-	-	-	32 MW	-

MoM of 52<sup>nd</sup> meeting of the Re-constituted EAC (Industry-I) held on 31<sup>st</sup> January, 2022

Sl. No	Plant Equipment/ Facility	Existing facilities as per EC dated 25/06/2018								Proposed Units		Final (Existing + Proposed)		Remarks
		Total (A+B)		Implemented (A)		Un-implemented (B)		As per CTO						
		Config- uration	Capacity	Config- uration	Capacity	Config- uration	Capacity	Config- uration	Capacity	Config- uration	Capacity	Config- uration	Capacity	
7	Blast furnace	-	2*0.4 MTPA	-	-	-	2*0.4 MTPA	-	-	-	Reduce 1 BF to make it 1*0.4 MTPA	-	1*0.4 MTPA	-
8	Pig casting machine	-	1*0.4 MTPA	-	-	-	1*0.4 MTPA	-	-	-	Reduce to 1*0.2 MTPA	-	1*0.2 MTPA	-
9	Sinter plant (Iron ore fines)	-	2*0.53 MTPA	-	-	-	2*0.53 MTPA	-	-	-	Reduce 1 Sinter plant to make it 1*0.53 MTPA	-	1*0.53 MTPA	-
10	DI Pipe Plant	-	-	-	-	-	-	-	-	-	0.3 MTPA (1*0.2 MTPA + 1*0.1 MTPA)	-	1*0.2 MTPA + 1*0.1 MTPA (Total 0.3 MTPA)	-
11	Oxygen plant	-	1*23100 TPA + 1*66000 TPA	-	-	-	1*23100 TPA + 1*66000 TPA	-	-	-	Reduce in existing configuration to 1*45000 TPA	-	1*45000 TPA	-
12	Energy optimizing furnace (EOF)	-	2*50 T – 1.057 MTPA	-	-	-	2*50 T – 1.057 MTPA	-	-	-	To be Dropped from proposed EC	-	-	-
13	Ladle refining furnace (LRF)	-	2*50T – 1.057 MTPA	-	-	-	2*50T – 1.057 MTPA	-	-	-	To be Dropped from proposed EC	-	-	-



MoM of 52<sup>nd</sup> meeting of the Re-constituted EAC (Industry-I) held on 31<sup>st</sup> January, 2022

Sl. No	Plant Equipment/ Facility	Existing facilities as per EC dated 25/06/2018								Proposed Units		Final (Existing + Proposed )		Remarks
		Total (A+B)		Implemented (A)		Un-implemented (B)		As per CTO						
		Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	
14	Vacuum de-gassers (VAD)	-	2*50T- 1.057 MTPA	-	-	-	2*50T- 1.057 MTPA	-	-	-	To be Dropped from proposed EC	-	-	-
15	Continuous casting machine	-	2*0.5 MTPA – 1.036 MTPA	-	-	-	2*0.5 MTPA – 1.036 MTPA	-	-	-	To be Dropped from proposed EC	-	-	-
16	Rolling mill	-	2*0.5 MTPA – 1.00 MTPA	-	-	-	2*0.5 MTPA – 1.00 MTPA	-	-	-	To be Dropped from proposed EC	-	-	-

52.14.7 The details of the raw material requirement for the proposed project/ expansion cum proposed project along with its source and mode of transportation is given as below:

Sl. No	Raw Material /Fuel	Quantity	Unit	Other Unit	Source	Mode of Transport	Other Mode of Transport	Distance of Source from Project site (in) Kilometers)
1	Manganese Ore	145200	TPA	-	-	Own Captive mine by road	-	SB Halli-60Kms
2	Dolomite	16500	TPA	-	-	Local Suppliers By road	-	Bagalkot-150 Kms
3	Coke	46200	TPA	-	-	In-House	-	
4	Quartz	25920	TPA	-	-	Local Suppliers By road	-	Bagalkot-150 Kms
5	Charcoal	18720	TPA	-	-	Imported/Indigenous by rail to plant	-	Goa Port-308 Kms
6	Mill scale scrap(MS)	5760	TPA	-	-	Local Industries By road	-	30 Kms
7	Coal	714350	TPA	-	-	Imported/Indigenous by Sea/ Rail to plant	-	Goa Port-308 Kms
8	Hot Metal	300000	TPA	-	-	In House	-	
9	Coating & lining	26368	TPA	-	-	Local Industries By road	-	30 Kms
10	Other ferrous input	7737	TPA	-	-	In House	-	
11	Iron ore	268800	TPA	-	-	Own captive mine by rail/road	-	SB Halli-60 Kms
12	Sinter	537600	TPA	-	-	In-House	-	
13	Coke BF	192000	TPA	-	-	In-House	-	
14	Coal Dust	40,000	TPA	-	-	In-House	-	
15	Iron ore fines: SP	424000	TPA	-	-	Own captive mine by rail/road	-	SB Halli-60 Kms
16	Fine coke	34450	TPA	-	--	In-House	--	
17	Lime stone	58300	TPA	-	-	Local Suppliers By road	-	Bagalkot-150 Kms
18	Dolomite: SP	47700	TPA	-	-	Local Suppliers By road	-	Bagalkot-150 Kms
19	Mill scale: SP	13250	TPA	-	-	Local Industries By road	-	30 Kms
20	Flue Dust	7950	TPA	-	-	In-House	-	
21	Sinter dedusting fines	5300	TPA	-	-	In House	-	

52.14.8 Existing Water requirement is 16,440 m<sup>3</sup>/day as per the EC. The revised quantity of water requirement is 8,566 m<sup>3</sup>/day. The permission for drawl of 4 cusecs/day (9786 m<sup>3</sup>/day) surface water is obtained from KKNL vide Agreement dated 08<sup>th</sup> June 2021 w.e.f. 29/01/2020 up to 28/01/2025.

52.14.9 Existing power requirement of 92 MW as per the Existing EC. After proposed changes, the power requirement will be 64 MW. The entire power required will be generated as captive power for the new proposed facilities.

52.14.10 Baseline Environmental Studies (Post project monitoring data)

AAQ parameters at 04 locations	PM <sub>2.5</sub> = 14 to 44 µg/m <sup>3</sup> PM <sub>10</sub> = 26 to 68 µg/m <sup>3</sup> SO <sub>2</sub> = 5 to 15 µg/m <sup>3</sup> NO <sub>x</sub> = 9 to 22 µg/m <sup>3</sup> CO = 0.05 to 0.45µg/m <sup>3</sup>
Incremental GLC Level	PM = 0.76 µg/m <sup>3</sup> at Plant Area SO <sub>2</sub> = 1.65 µg/m <sup>3</sup> (Level at Plant Area) NO <sub>x</sub> = 3.86 µg/m <sup>3</sup> (Level at Plant Area)
Ground water quality at 8 locations	pH: 8.02 to 8.25 Total Hardness: 76 to 640 mg/l, Chlorides: 33 to 465 mg/l, Fluoride:<0.1 to 0.72 mg/l. Heavy metals Cadmium: <0.002 mg/l Chromium: <0.03 mg/l Lead: <0.005 mg/l Arsenic: <0.002 mg/l Mercury: <0.0005 mg/l
Surface water quality at 5 locations	pH: 8.14 to 8.25; DO: 5.4 to 5.6 mg/l and BOD: 1.3 to 1.6 mg/l.
Noise levels	51dB (A) to 65 dB(A) for the day time and 34.5 to 54.5 for the Night time.
Traffic assessment study findings	Not provided
Flora and fauna	No Schedule I fauna or Endangered Flora is found in the study area.

52.14.11 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

S. No.	Name of Waste	Item	Quantity per Annum	Unit	Mode of Transport	Other Mode of Transport	Mode of Disposal
1	Fly Ash	Power Plant	40000	Tons	Road	Closed truck or Tankers	Authorized Recyclers
2	Sinter Fines	After Screening from Blast furnace	53265	Tons	Road	Conveyers	Co- Processing
3	BF Slag	Blast Furnace (BF)	25.6	MTPA	Road	Closed truck	Authorized Recyclers
4	Flue Dust	Blast Furnace	0.8	MTPA	Within premises	Conveyers	Charged back as blend mix for

S. No.	Name of Waste	Item	Quantity per Annum	Unit	Mode of Transport	Other Mode of Transport	Mode of Disposal
		(BF)					sinter production
5	Dust	Blast Furnace (BF)	0.4	MTPA	Within premises	Conveyers	Charged back as blend mix for sinter production
6	Slag Id	Industrial Waste	9700	Tons	Road	Closed truck	Authorized Recyclers
7	Coke Fines	Coke Oven Plant	20000	Tons	Road	Conveyers	Co- Processing
8	SiMn Slag	Ferro Alloy Plant	72000	Tons	Road	Closed truck	Sold as M Sand for Construction
9	FeMn Slag	Ferro alloy Plant	100000	Tons	Road	Closed truck	Used in SiMn Production
10	Slag from the Desulphurisation Unit	DI Pipe Plant	3700	T/Year			The solid wastes are non-hazardous and will be dumped at dump yard.
11	Burnt Sand	DI Pipe Plant	6000	T/Year	Road	Closed truck	Will be stored in dump yard and sold to the KSPCB authorized end user.
12	Mill Scales	Rolling Mills	15	kg/t			

52.14.12 Public Consultation (Part of the Original EC accorded on 25/06/2018)

Details of advertisement given	Times of India” (English) and “Kannadaprabha” (Kannada) on 25/06/2017 and in local newspaper “E Namma Kannadanadu” on 28/06/2017 and in “Snajayvani” on 28/06/2017, 17/07/2017, 20/07/2017 and 25/07/2017.
Date of public consultation	25/07/2017
Venue	SMIORE PU College Ground, Vyasapuri Colony, Vysanakere, Hanumanahalli post, Hospet Taluk, Ballari.
Presiding Officer	Additional Deputy Commissioner and Additional District Magistrate, Ballari District

**Action plan as per MoEF&CC O.M. dated 30/09/2020**

Sl. No.	Activities	Details	Fund Allocation in Lakhs	Year 1 Rs. in Lakhs	Year 2 Rs. in Lakhs	Year 3 Rs. in Lakhs	Year 4 Rs. in Lakhs	Year 5 Rs. in Lakhs	Budget spent in Lakhs during 2018-19 to 2021 - 22
1.	Rural Sanitation	Providing Drainage and Sanitation / toilets in nearby villages	500	100	100	100	100	100	506.31
2.	Provision of Drinking water facilities for	Dhanapur, Hanumanahalli and Galliyamma Gudi villages.	250	100	50	35	35	30	33.10
3.	Supporting Education Programme	<ul style="list-style-type: none"> <li>• Constructing school building for Girls residential school and PU college at Hospet</li> <li>• Construction of building for Vedapatashala at Hospet,</li> <li>• Providing laboratory equipments to the following school,                             <ol style="list-style-type: none"> <li>1) Govt Higher Primary school Dhanapur,</li> <li>2) Govt High School Dhanapur</li> <li>3) Govt Primary High School Galemmanagudi</li> <li>4) Anganavadi Kendra etc.</li> </ol> </li> </ul>	2800	1050	915	410	265	160	243.76
4.	Promotion of Sports	Sports equipment and Kit to schools <ol style="list-style-type: none"> <li>1) Govt Higher Primary school Dhanapur,</li> <li>2) Govt High School Dhanapur</li> <li>3) Govt Primary High School Galemmanagudi</li> <li>4) Govt school hanumanahalli etc.</li> </ol>	100	20	20	20	20	20	
5.	Rural Health Programme	<ul style="list-style-type: none"> <li>• Health center at Hanumanahalli.</li> <li>• Ambulance for 24 x 7 Facility for surrounding villages.</li> </ul>	250	100	40	40	40	30	74.32

Sl. No.	Activities	Details	Fund Allocation in Lakhs	Year 1 Rs. in Lakhs	Year 2 Rs. in Lakhs	Year 3 Rs. in Lakhs	Year 4 Rs. in Lakhs	Year 5 Rs. in Lakhs	Budget spent in Lakhs during 2018-19 to 2021 - 22
6.	Promotion of cultural/religious faith	<ul style="list-style-type: none"> <li>Build temples for Local festival</li> <li>Build boundary wall around graveyard</li> </ul>	50	25	25	-	-	-	Graveyard: 19.68 Temple: 281.67
7.	Roads and Infrastructure	<ul style="list-style-type: none"> <li>Development of approach road from villages to Highway.</li> <li>Providing Solar Street Light to surrounding villages.</li> <li>Providing Solar Lighting system for house hold in surrounding villages.</li> <li>Construction of Labor colony.</li> </ul>	2500	600	600	500	400	400	10.75
8.	As per local body recommendation	Green belt along roads and plantation in villages and other requirement of the area as envisaged by local bodies	550	150	100	100	100	100	39.01
	<b>Total</b>	(approx 3.0 % of the project cost Rs. 2300 Cr)	<b>7000 Lakhs ~ 70.00 Crores</b>	<b>2145</b>	<b>1850</b>	<b>1205</b>	<b>960</b>	<b>840</b>	<b>1208.60</b>
<i>Note: Other Expenditure made by the proponent during 2018-19 to 2021 - 22 (Employment for local people)</i>									<b>154.01</b>

52.14.13 Existing capital cost of project was Rs 2300 Cr. The capital cost of the proposed project is Rs 900 Crores and the capital cost for Environment Management measures is proposed as Rs 96 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 5.6 Crores. The employment generation from the proposed project / expansion is 450.

S. No.	Description of Item	Existing (Rs. In Crores)		Proposed (Rs. In Crores)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
i.	Air Pollution Control/ Noise Management	17.0	4.0	70.0	4.0
ii.	Water Pollution Control	5.0	0.5	20.0	0.3
iii.	Environmental Monitoring and Management	3.0	0.5	1.0	0.3
iv.	Green Belt Development & plantation	5.0	1.0	5.0	1.0
v.	Solid Waste Management	5.0	1.0	-	-

S. No.	Description of Item	Existing (Rs. In Crores)		Proposed (Rs. In Crores)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
vi.	Occupational health	5.0	1.0	-	-
<b>Total</b>		<b>40.0</b>	<b>8.0</b>	<b>96.0</b>	<b>5.6</b>
vii.	Address of Public Consultation concerns	<b>70 Crores</b>			

52.14.14 Existing green belt has been developed in 44.5 ha area which is about 34% of the total project area of 129.82 ha with total sapling of 48,000 Saplings/ Trees. A 15 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 about 1. Lakh saplings will be planted and nurtured in the above green belt.

52.14.15 **Justification under para 7(ii) of EIA, 2006**

In view of the market requirement the proponent has proposed for the amendment in their existing Environmental Clearance under section 7(ii) of EIA Notification 2006 as amended thereof to include products that are in demand and to reduce/ drop some other operations, (Change in Product Mix) so as to ensure that there is no increase the Pollution Load that has been envisaged in the existing EC dated 25/06/2018. The proponent intends to retrofit their Submerged Arc Furnace from 55 MVA to 59 MVA in a very state-of-the-art way and hence achieve higher production with practically no increase in Pollution Load from that section.

52.14.16 It has been reported that following will be resource consumption after the proposed change:

Particulars	As per EC dated 25/06/2018	After Proposed change under Para 7(ii)	% Increase/ decrease
Land	129.82 ha	129.82 ha	0
Greenbelt	33.92 ha	44.5 ha	31%
Water	16440 m <sup>3</sup> /day	8566 m <sup>3</sup> /day	(-) 48
Power	92 MW	64 MW	(-) 30%
Raw materials			
Products	1.0 MTPA	0.9 MTPA	(-) 10%

52.14.17 Pollution load assessment:

Sl No	Section	Existing Capacity	Particulate Matter Load as per the existing EC in Kg/ Day	Proposed Change	Particulate Matter Load as per the Proposed Change under Clause 7 (ii) in Kg/ Day	Net increase (+) / Decrease (-) In Kg/ Day	Overall impact	Remarks
1	Ferro Alloy Plant	55 MVA	662.4	59 MVA	662.4	0	Neutral	No Change, marginal increase in the

Sl No	Section	Existing Capacity	Particulate Matter Load as per the existing EC in Kg/ Day	Proposed Change	Particulate Matter Load as per the Proposed Change under Clause 7 (ii) in Kg/ Day	Net increase (+) / Decrease (-) In Kg/ Day	Overall impact	Remarks
								Transformer Capacity
2	Coke Oven	4 Lakh TPA	429.12	5 Lakh TPA	429.12	0	Neutral	No change, proposed additional proposed by productivity enhancement and improved quality of Raw Material
3	Blast Furnace	8 Lakh TPA	525.6	4 Lakh TPA	262.8	(-) 262.8	Positive	Reduce the proposed capacity by half
4	Sinter Plant	10.6 Lakh TPA	550.62	5.3 Lakh TPA	275.3	(-) 275.3	Positive	Reduce the proposed capacity by half
5	Rolling Mill	10 Lakhs TPA	35.54	0 TPA	0	(-) 35.54	Positive	Dropped
6	DI Plant	NA	NA	3 Lakhs TPA	14.4	(+) 7.2	Negative	To be added into the configuration
	<b>PM Plant Emission Total, Kg/ Day</b>		<b>2203.28</b>		<b>1636.82</b>	<b>566.44</b>	<b>Positive</b>	

**Consolidated SO<sub>2</sub> and NO<sub>x</sub> Emission Load before and After the Proposed Change**

Sl No	Section	Existing Capacity	SO <sub>2</sub> Load as per the Existing EC in Kg/ Day	NO <sub>x</sub> Load as per the existing EC in Kg/ Day	Proposed Change	SO <sub>2</sub> Load as per the Proposed Change under Clause 7 (ii) in Kg/ Day	NO <sub>x</sub> Load as per the Proposed Change under Clause 7 (ii) in Kg/ Day	Net increase (+) / Decrease (-) In Kg/ Day	Overall impact
1	Ferro Alloy Plant	55 MVA	-	-	59 MVA	-	-	0	Neutral
2	Coke Oven	4 Lakh TPA	230.4	144.0	5 Lakh TPA	230.4	144.0	0	Neutral
3	Blast Furnace	8 Lakh TPA	10.4	27.3	4 Lakh TPA	5.2	13.7	(-)	Positive



Sl No	Section	Existing Capacity	SO <sub>2</sub> Load as per the Existing EC in Kg/ Day	NO <sub>x</sub> Load as per the existing EC in Kg/ Day	Proposed Change	SO <sub>2</sub> Load as per the Proposed Change under Clause 7 (ii) in Kg/ Day	NO <sub>x</sub> Load as per the Proposed Change under Clause 7 (ii) in Kg/ Day	Net increase (+) / Decrease (-) In Kg/ Day	Overall impact
4	Sinter Plant	10.6 Lakh TPA	264.32	132.16	5.3 Lakh TPA	132.16	66.08	(-)	Positive
5	Rolling Mill	10 Lakhs TPA	3.71	8.89	0 TPA	0	0	(-)	Positive
6	DI Plant	NA	-	-	3 Lakhs TPA	-	-	(+)	Positive
	<b>Plant Emission Total, Kg/ Day</b>		<b>508.83</b>	<b>312.35</b>		<b>367.76</b>	<b>223.78</b>		<b>Positive</b>

**Solid/ Hazardous Waste**

Sl. No.	Items	Description	Quantity	Pollution Control
1	Power Plant	Fly Ash	40,000 TPA	Sale to Local end users/ Cement Plants
2	Ferro Alloy Plant	SiMn Slag or FeMn Slag	72,000 TPA 1,00,000 TPA	Sold as M Sand for Construction Used in SiMn Production
3	<b>Coke Oven Plant</b>			
	Coke fines/ dust	After Screening from coke & quenching	3-4% of Coke	<b>Charged back as blend mix for sinter production</b>
4	<b>Sinter Plant</b>			
	Sinter fines (< 5mm)	After Screening from Blast furnace	10% of Sinter	<b>Charged back as blend mix for sinter production</b>
	<b>Fine Dust</b>	<b>Dust from Bag Filter/ ESP</b>	<b>0.5 Kg/t of Sinter</b>	
5	<b>Blast Furnace (BF)</b>			
	Slag	From the Process	320 Kg/t of HM	Sale to local end users/ Cement Plants
	Flue Dust	Dust from Primary dust catcher	10 Kg/t of HM	Charged back as blend mix for sinter production
	Dust	From Gas Cleaning plant (GCP)	0.5 Kg/t of HM	Charged back as blend mix for sinter production
6	DI Pipe Plant	Slag from the Desulphurisation Unit Burnt Sand	3700 t/year 6000 T/ Year	The solid wastes are non-hazardous and will be dumped at dump yard. Will be stored in dump yard and sold to the KSPCB authorized end user.
Revert Scrap from SMS will be used in house.				

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

52.14.19 Name of the EIA consultant: M/s Ecomen Laboratories Pvt. Ltd. [S. No. 156, List of ACOs with their Certificate/ Extension Letter no. NABET/EIA/2023/RA 0203; valid up to September 21, 2023; Rev. 18, January 05, 2022].

**Certified compliance report from Regional Office:**

52.14.20 The Status of compliance of earlier EC was obtained from Regional Office, Bangalore vide letter no. EP/ 12.1/2018-19//13KAR/10 dated 17/11/2021 and 11/01/2022 in the name of M/s. SMIORE. As per the report, project proponent **has NOT COMPLIED with most of the conditions of the EC and accordingly the compliance status is rated as UNSATISFACTORY.**

**Observations of the Committee**

52.14.21 The Committee noted the following:

- i. The reports submitted by consultants has discussed only water requirement and PM emissions. The observations on the report are given in the following paragraphs:

Ferro Alloy Plant

- a. All SAFs are semi closed type without 4<sup>th</sup> hole extraction.
- b. One of the 20 MVA furnace has Reverse Air Bag Filter, which cannot give PM emissions less than 30 mg/Nm<sup>3</sup>.
- c. Bag house capacity of 24 MVA furnace shall be more than that of 20 MVA furnace. Bag filter selection needs to be looked into accordingly.
- d. According to the EC of 2018, only 2 furnaces were to be operated, the absolute quantity of PM emission was calculated for lower production. Now the production has increased significantly, the PM emission shall also increase drastically.
- e. RABH was designed for 2 Furnace operations. It is mentioned that RABH would now be used for 24 MVA furnace only. It would be able to handle pollution load of 24 MVA furnace provided bag filter cloth is changed to PTFE membrane.
- f. The report does not give any details of increase in any Raw Material and power consumption and SO<sub>2</sub> & NO<sub>x</sub> emission

- ii. Coke oven

- a. In 2018 EC, CDQ was envisaged which could result in coke having 0.1-0.3% moisture. Now that wet quenching is being practiced which will give more than 6 % moisture. This change would result in increased gross coke production by more than 6 %. This may be revisited.
- b. Due to the change from CDQ to wet quenching, there would be an increase in the PM emission from quenching tower as there are no pollution devices attached to wet quenching tower as compared to Bag houses installed in CDQ to reduce PM to less than 30mg/Nm<sup>3</sup>.
- c. PP claims that the burning losses in the oven have been brought down from 1.8 to 0.3 %, also the Volatile matter level in the coal has been controlled below 24%, which at the designed stage was considered as 26%.
- d. These changes in the operating practice and coal blend composition would increase the yield. To make 1 ton of gross coke, 1.48 Ton coal, was required originally. Now it would be 1.36 Ton coal. This would result in the increase in coke yield. Now with the same input of coal, there would be more coke production (nearly 4.614 LTPA).

- e. PP also claims that they have reduced coking time due to change in the VM level and innovative process control from 38 to 35 hours i.e. an increase of 7.5% throughput resulting in the production increase in 4.96 LTPA. There would be an increase in coal input equivalent to 7.5 % increase in through put.
  - f. There would be an increase of 7 MW power from WHR. This would result in saving of 75 MT of coal per day if equivalent power is generated in CPP.
  - g. PP has proposed 50mg/Nm<sup>3</sup> PM emission from coke oven. This should be brought down to 30 mg/Nm<sup>3</sup>.
  - h. Due to increased input of 7.5% coal requirement there would be an increase of PM, SO<sub>2</sub> and NO<sub>x</sub> emissions.
- iii. DI Pipe Plant
- a. 0.3 MTPA DIP Plant is proposed.
  - b. DS plant to reduce 'S' content to less than 0.03% in hot metal is also proposed. Oxygen plant is also proposed to produce low carbon metal.
  - c. IF is required for temperature correction or a holding furnace with oil fired/gas fired heating arrangement shall be installed. 3 Nos holding furnaces are proposed.
  - d. Mg Converter shall be used to spheroidize the metal before sending it to centrifugal casters. Slag is generated in Mg Converter and the process also generates fumes. The slag contains carbonate and sulfate of Magnesium. The slag is stored in the plant in a dump yard.
  - e. 8 Centrifugal casting machines are proposed to manufacture different sizes of DI pipes.
  - f. Cast pipes are annealed in LDO (2000 Kg/hr.) fired furnaces.
  - g. Annealed pipes are coated with zinc metal. Zinc meting and spray coating results in fuel consumption and generation of fumes and zinc dross/zinc dust from bag filters.
  - h. Hydraulic testing of all pipes is done that generates waste water.
  - i. This follows Cement lining of internal of all pipes. Cement slurry preparation, spraying inside pipe causes dust pollution and fumes containing cement dust.
  - j. All pipes are cured with steam generated in two 4 TPH coal fired boilers. PM, SO<sub>2</sub> and NO<sub>x</sub> pollution is generated from boilers along with fly ash and bottom ash.
  - k. After curing, all pipes are externally coated with bitumen or epoxy paint. This process generates hazardous fumes.
  - l. Additional pollution load generated from all above processes and sub processes has not been estimated by the Consultant in the report.
- iv. BF slag shall be granulated. SAF slag during pig iron manufacture is not granulated. Overall pollution from BF shall reduce due to reduced capacity of the furnace now proposed.
- v. Waste heat recovery from sinter cooler has been kept as optional. This will result into wastage of green energy potential. It should be included.
- vi. Overall water consumption in the plant complex shall reduce from 16440 KLD to 12275 KLD although DIP shall require additional 1137 KLD water.
- vii. PM reduction calculations given by the consultant do not include additional PM load as mentioned above.
- viii. Solid waste generated in the plant is proposed to be dumped inside the plant complex. CREP guidelines are not being followed.

- ix. RO compliance report of 11.1.2022 indicates that several conditions of EC of 25.6.2018 have not been complied. Action taken report on the observed non-compliances and closure report from RO has not been made available.
- x. PP has not been able to plant GB as per EC. Against 42.84 ha land to be covered under green belt, only 12.5 ha has been planted. GB is not uniform along the plant boundary.
- xi. Rain water harvesting not being done.
- xii. Sewage Treatment Plan has not been installed so far.
- xiii. Configuration and environmental concerns arising out of ductile iron plat has not been furnished.

**Recommendations of the Committee**

52.14.22 In view of the foregoing and after deliberations, the Committee recommended that the proposal to be returned in its present form to address the technical deficiencies enumerated at para no. 52.14.21 and submit the revised application as per the provisions of EIA Notification, 2006.

52.15 Proposed Greenfield project involving Sponge Iron Kilns, Induction Furnace, Rolling Mills, Captive Power Plant (AFBC + WHRB), Ferro Alloys Plant and Fly Ash Brick Manufacturing by **M/s. Gravity Sponge and Power Private Limited** located at Village Champa, Tehsil Tilda, **District Raipur, Chhattisgarh** [Online Proposal No. IA/CG/IND/107593/2019, File No. J-11011/237/2019-IA.II(I)] – **Environment Clearance – regarding**

52.15.1 M/s. Gravity Sponge and Power Private Limited has made an online application vide proposal no. IA/CG/IND/107593/2019 dated on 18/01/2022 along with copy of EIA/EMP report and Form-2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (Ferrous and Non/ferrous) and 1 (d) Thermal Power Plant under Category “A” of the schedule of the EIA Notification, 2006 and appraised at central level.

**Details submitted by Project proponent**

52.15.2 The details of the ToR are furnished as below:

<b>Date of application</b>	<b>Consideration</b>	<b>Details</b>	<b>Date of accord</b>	<b>Validity of ToR</b>
10/07/2019	9 <sup>th</sup> Meeting of the REAC (Industry-I) held on 31st July, 2019	Terms of References	21/08/2019	20/08/2023

52.15.3 The project of M/s. Gravity Sponge and Power Private Limited located at Village - Champa, Tehsil Tilda, District Raipur Chhattisgarh is for sponge iron plant (2x100 TPD & 2 x350TPD) – 3,15,000 TPA; MS billets (IF:15Tx8) – 3,15,000 TPA; Rerolled steel product through hot charging mill – 1,87,630TPA; Re-rolled steel product through billet reheating furnace – 94622 TPA; Ferro alloys (4x4 MVA) – 31920 TPA (OR) Pig iron – 63840 TPA; Captive power plant (WHRB – 20 MW; AFBC – 12 MW) and fly ash bricks – 122500 TPA.

52.15.4 Environmental Site Settings:

S.No.	Particulars	Details	Remarks
i.	Total land	30.156 ha. [Private land 24.858 Ha and Govt Land 5.298 Ha]	The proposed site is having clear land without vegetation and not used for cultivation.
ii.	Land acquisition details as per MoEF&CC, O.M. dated 7/10/2014	24.858 Ha Private Land is already acquired and owned by the company and its directors and 5.298 ha Govt land is in the process of allotment.	Proponent has reported that Govt. land will be allotted soon as per the Industrial Policy of State Govt. of Chhattisgarh
iii.	Existence of habitation & involvement of R&R, if any.	There are no existence of Habitation at proposed site and No R & R is involved in the project.	
iv.	Latitude and Longitude of the project site	Latitude: - 21°33'16.50" N Longitude:- 81°51'56.00" E	
v.	Elevation of the project site	291 m AMSL	--
vi.	Involvement of Forest Land, if any	Nil	--
vii.	Water body exists within the project site as well as study area	<b>Project Site:</b> Nil <b>Study area:</b> <ul style="list-style-type: none"> <li>• Jamuniya Nala – 3.5 km, W.</li> <li>• Banjari Nala – 6 km, E.</li> <li>• Kumhari Tank – 7.6 km, SE.</li> <li>• Bhatapara Branch (Mahanadi Canal) – 7.7 km, WSW.</li> <li>• Kumhari Irrigation Channel – 4.3 km, E</li> <li>• Manpur Reservoir – 1.5 km, E</li> </ul>	
viii.	Existence of ESZ / ESA / National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. if any within the study area	Nil	

52.15.5 The unit configuration and capacity of proposed project is given as below:

Sl.	Plant Equipment/ Facility	Proposed Units		Remarks
		Configuration	Capacity	
1.	DRI kilns	100 TPD x 2 nos. and 350 TPD x 2 Nos.	315000 TPA	Production of Sponge Iron
2.	Induction Furnace, LRF, CCM	15 TONS X 8 Nos.	315000 TPA	Production of MS Billet
3.	Hot charging rolling mill	187630 TPA	187630 TPA	Production of Rerolled steel product (wire rod, etc)
	Billet reheating furnace (BRF) based Rolling Mill	94622 TPA	94622 TPA	Production of Rerolled steel product (rerolled structural steel, etc.)
4.	Submerged arc furnace	4Nos x4 MVA each with Total capacity 31920 TPA	FeSi- 19328 TPA or SiMn- 31920 TPA or FeMn- 31920 TPA	Production of Ferro Alloys
		or		
	Submerged arc furnace	4 Nos x4 MVA each with Total f capacity 63840 TPA	63840 TPA	Production of Pig Iron
5.	WHRB Power Plant	20 MW	20MW	Production of Captive power
6.	AFBC Power Plant	12 MW	12 MW	Production of Captive power
7.	Fly ash brick making	122500 TPA	122500 TPA	Production of Fly ash bricks

52.15.6 The details of the raw material requirement for the proposed project along with its source and mode of transportation is given as below:

S. No.	Raw Material	Quantity required per annum (TPA)	Source	Distance from site (Kms)	Mode of Transportation
<b>Sponge Iron Plant</b>					
1.	Iron ore	510300	Odisha iron ore mine and NMDC	Within 600 kms	By Road through covered truck as well as Rail through Nearest Railway siding at Hathbandh then by Road through covered truck

S. No.	Raw Material	Quantity required per annum (TPA)	Source	Distance from site (Kms)	Mode of Transportation
2.	Coal	393750	SECL coal mines/ Coal India	Within 300 kms	By Road through covered truck as well as Rail through Nearest Railway siding at Hathbandh then by Road through covered truck
3.	Limestone/ dolomite	11025	Open market	Within 100 kms	By Road through covered truck
4.	Refractory material	500	Open market	Within 100 kms	By Road through covered truck
<b>Induction Furnace, CCM and LRF</b>					
5.	Sponge iron	315000	Captive production/ local market	Internal Transfer	Internal Transfer
6.	Pig iron/ Cast Iron/ HM scrap	47250	Captive production/ local market	Internal Transfer	Internal Transfer
7.	Aluminum	315	Open market	Within 100 kms	By Road through covered truck
8.	Ramming mass	788	Open market	Within 100 kms	By Road through covered truck
9.	Coal for reheating furnace	12210	SECL mines/ Coal India	Within 300 kms	By Road through covered truck
10.	Furnace oil (for ladle preheating)	150 (KLA)	Open market	Within 100 kms	By Road through covered truck
<b>Ferro Alloys Plant</b>					
<b>Silico Manganese</b>					
11.	Mn ore	67032	Open market	Within 350 kms	By Road through covered truck
12.	High Mn slag	12768	Open market	Within 100 kms	By Road through covered truck
13.	Quartz	2554	Open market	Within 100 kms	Internally Available
14.	Coke/coal/charcoal	19152	Open market	Within 100 kms	By Road through covered truck
15.	Dolomite	958	Open market	Within 100 kms	By Road through covered truck
16.	Electrode paste	958	Open market	Within 300 kms	By Road through covered truck
17.	M.S. item	320	Open Market	Within 100 kms	By Road through covered truck
18.	Lancing pipe	479	Open market	Within 100 kms	By Road through covered truck

S. No.	Raw Material	Quantity required per annum (TPA)	Source	Distance from site (Kms)	Mode of Transportation
<b>Ferro Manganese</b>					
19.	Mn Ore	57456	Open market	Within 350 kms	By Road through covered truck
20.	Coke	19152	Open market	Within 100 kms	By Road through covered truck
21.	Dolomite	9576	Open market	Within 100 kms	By Road through covered truck
22.	Electrode Paste	799	Open market	Within 100 kms	By Road through covered truck
<b>Ferro Silicon</b>					
23.	Quartz	31191	Open market	Within 100 kms	By Road through covered truck
24.	Coke	18888	Open market	Within 100 kms	By Road through covered truck
25.	Mill Scale/ Iron Ore Fines	6932	Open market	Within 100 kms	By Road through covered truck
26.	Electrode Paste	867	Open market	Within 100 kms	By Road through covered truck
<b>Pig Iron</b>					
27.	Iron Ore Fines & Mill Scale	95760	Open market	Within 100 kms	By Road through covered truck
28.	Coke/Coal/Charcoal	38304	Open market	Within 100 kms	By Road through covered truck
29.	Dolomite/Lime/Limestone	6384	Open market	Within 100 kms	By Road through covered truck
30.	Electrode Paste	958	Open market	Within 100 kms	By Road through covered truck
31.	M.S. Item.	447	Open market	Within 100 kms	By Road through covered truck
32.	Lancing Pipe	192	Open market	Within 100 kms	By Road through covered truck
<b>Captive Power Plant</b>					
33.	Char dolochar	78826	Captive byproduct	Internal Transfer	Internal Transfer
34.	Coal	50400	SECL mines/ Coal India	Within 300 kms	By Road through covered truck
35.	Fluidizing bed media	150	Open market	Within 100 kms	By Road through covered truck
<b>Ash Brick making</b>					
36.	Fly ash	85750	Fly ash brick/block, etc.	Internal Transfer	Internal Transfer
37.	Granulated ferro alloys slag	8575	ferro alloys plant	Internal Transfer	Internal Transfer



S. No.	Raw Material	Quantity required per annum (TPA)	Source	Distance from site (Kms)	Mode of Transportation
38.	Gypsum and cement	18375	Fly ash brick/block, etc.	Internal Transfer	Internal Transfer
39.	Granulated slag from induction furnace	9800	Induction furnace etc.	Internal Transfer	Internal Transfer

52.15.7 Estimated water requirement will be 1230 KLD, out of which 68 KLD will be used for domestic purposes. It is proposed to meet this water requirement through combination of 120000 KL capacity rain water collection reservoir to meet water requirement for 97 days. During the rainy season, about 75 days, it is proposed to source the water from rain water collection tank of 25000 KL, remaining 158 days water will be sourced from ground water in the beginning and then later on within 2 years from surface water. The NOC for ground water is reported to be under process. The Govt. of Chhattisgarh constructed Manpur Reservoir which is 1.5 KM radius in East of South East direction from the project site. The application for grant of Surface water allocation has been submitted to Water Resources Department Govt of Chhattisgarh. Thus, with due permission from Water Resources Department, Chhattisgarh will further reduce the ground water requirement.

52.15.8 Total power requirement will be 46.26 MW out of which 32 MW will be met through captive power plant and 14.26 MW will be sourced through State Grid (CSPDCL). In addition to these total 3300 kVA DG sets are proposed for emergency backup.

52.15.9 Baseline Environmental Studies:

Period	1 <sup>st</sup> October 2020 – 31 <sup>st</sup> December 2020
AAQ parameters at 8 locations (Min and max)	PM <sub>10</sub> = 52.9 - 91.2 µg/m <sup>3</sup> PM <sub>2.5</sub> = 16 – 40.5 µg/m <sup>3</sup> SO <sub>2</sub> = 12 – 31.8 µg/m <sup>3</sup> NO <sub>2</sub> = 14.3 – 27.1 µg/m <sup>3</sup> CO = 0.215- 0.47 mg/m <sup>3</sup> Ozone = 5.1 – 11.4 µg/m <sup>3</sup> NH <sub>3</sub> = 5.5-16 µg/m <sup>3</sup>
Incremental GLC level	PM <sub>10</sub> = 1.7 µg/m <sup>3</sup> (2.2 km WSW and SSW) PM <sub>2.5</sub> = 1.1 µg/m <sup>3</sup> (2.2 km WSW and SSW) SO <sub>2</sub> = 4.4 µg/m <sup>3</sup> (2.2 km WSW and SSW) NO <sub>x</sub> = 4.6 µg/m <sup>3</sup> (2.2 km WSW and SSW)
Ground water quality at 8 locations	pH: 7.13-7.92, TDS: 510-982 mg/l, Total hardness: 287.97-686.45 mg/l, Fluoride: 0.19-0.62 mg/l, Nitrate: 19.86-41.86 mg/l and Sulphate: 14.08-43.98 l.
Surface water quality at 8 locations	pH: 7.08-7.91, TDS: 432-486 mg/l , Total hardness:155.39-182.08 mg/l, Chloride: 50.72-139.46 mg/l, Sulphate: 14.62-45.88 mg/l, Dissolved oxygen (DO): 6.1-6.3 mg/l.
Noise levels Leq (Day and	Noise levels at every station were within CECB standards. • Residential Area – 52.7 to 54.4 dBA for day time and 43.2 to 44.5

Night)	<p>dBA for night time.</p> <ul style="list-style-type: none"> <li>Commercial Area – 56.6 to 63.1 dBA for day time and 49.8 to 54.8 dBA for night time.</li> <li>Silience Zone – 45.4dBA to 48.6 dBA for day time and 36.4 dBA to 38.2dBA for night time.</li> <li>Industrial area - 62.9 to 65.7 dBA for day time and 54.7 to 57.1 dBA for night time.</li> </ul>																																								
Traffic assessment study findings	<ul style="list-style-type: none"> <li>Traffic study has been conducted at <b>Raipur- Bilaspur Highway</b> which is approximately 18 km in WNW direction from the plant site and <b>Ghulghul- Tulsi Road</b> (0.4km/S) which connects Project site with Raipur-Bilaspur road.</li> <li>The raw material will be transported through rail and truck. Coal from SECL as well as MCL or imported as well as Iron Ore from NMDC will be transported through rail upto nearest railway siding at Tilda and/or Hathbandh; thereby it will be transported by Road to the proposed plant through covered truck.</li> <li>Existing PCU is 316 <b>PCU/day</b> (towards Bilaspur/ Raigarh/ Korba), <b>402.5 PCU/day</b> (towards) and <b>364 PCU/day</b> (on Ghulghul-Tulsi road) and existing level of service (LOS) is:</li> </ul> <table border="1"> <thead> <tr> <th>Road</th> <th>V (volume in PCU/day)</th> <th>C (capacity in PCU/day)</th> <th>Existing V/C Ratio</th> <th>LOS</th> </tr> </thead> <tbody> <tr> <td>Plying Towards – Bilaspur/Raigarh/Korba</td> <td>316</td> <td>15000</td> <td>0.021</td> <td>A</td> </tr> <tr> <td>Plying towards Raipur</td> <td>402.5</td> <td>15000</td> <td>0.026</td> <td>A</td> </tr> <tr> <td>Plying towards Ghulghul Tusi road</td> <td>364</td> <td>15000</td> <td>0.024</td> <td>A</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>The Existing PCU load will be increased by <b>746 PCU/day</b> (Additional) after proposed project and level of service (LOS) will be:</li> </ul> <table border="1"> <thead> <tr> <th>Road</th> <th>V (volume in PCU/day)</th> <th>C (capacity in PCU/ day)</th> <th>(Existing + Proposed) V/C Ratio</th> <th>LOS</th> </tr> </thead> <tbody> <tr> <td>Plying Towards Bilaspur/Raigarh/Korba</td> <td>316+746=1062</td> <td>15000</td> <td>0.071</td> <td>A</td> </tr> <tr> <td>Plying towards Raipur</td> <td>402.5+746=1148.5</td> <td>15000</td> <td>0.077</td> <td>A</td> </tr> <tr> <td>Plying Towards Ghulghul-Tulsi Road SH-10 Baloda Bazar</td> <td>364+746=1110</td> <td>15000</td> <td>0.074</td> <td>A</td> </tr> </tbody> </table>	Road	V (volume in PCU/day)	C (capacity in PCU/day)	Existing V/C Ratio	LOS	Plying Towards – Bilaspur/Raigarh/Korba	316	15000	0.021	A	Plying towards Raipur	402.5	15000	0.026	A	Plying towards Ghulghul Tusi road	364	15000	0.024	A	Road	V (volume in PCU/day)	C (capacity in PCU/ day)	(Existing + Proposed) V/C Ratio	LOS	Plying Towards Bilaspur/Raigarh/Korba	316+746=1062	15000	0.071	A	Plying towards Raipur	402.5+746=1148.5	15000	0.077	A	Plying Towards Ghulghul-Tulsi Road SH-10 Baloda Bazar	364+746=1110	15000	0.074	A
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Flora and fauna	No Schedule - I species have been observed and recorded in the study area. No Critically Endangered flora found in the study area.																																								

52.15.10 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

S. No.	Type of Waste	Quantity generated in TPA	Mode of Treatment /Disposal
<b>Solid Waste</b>			
1.	Char/ Dolochar	78750	To be used in own captive power plant.
2.	Bottom and Flue Dust Ash	63000	To be used in Brick making.
3.	Kiln Accretion and Refractory waste	1200	To be used in Brick making and low lying areas.
4.	Mill Scale (CCM and RM)	9644	To be used in own Ferro Alloys as raw material/ sold to Ferro Alloys / Pellet Plants.
5.	MS Scrap	10504	Sold / Reused in Induction furnace.
6.	Slag	43234	Sold to metal recovery units.
7.	Ash	4274	To be used for brick making.
8.	Refractory Waste	394	Sold to the refractory recycling units/ used in brick making.
9.	Ferro Alloy Slag	31920	To be used in Brick making after granulating.
10.	Fly Ash	59120	To be used in own Fly Ash Brick making unit.
11.	Ash from Coal	22680	To be used in own Fly Ash Brick making unit.
12.	Fluidized Bet material	150	To be used in own Fly Ash Brick making unit.
<b>Hazardous Waste</b>			
13.	Waste Oil/Used Oil (H. W. Category 5.1)	4 KL/annum	Will be given to authorized recycler having authorization from competent authority.

52.15.11 Public Consultation:

Details of advertisement given	The announcement notice of public consultation/hearing scheduled date and agenda was made public through print media advertisement and reflected in one of National English Daily and One Hindi regional Newspapers (Hindi & English). 1. Patrika (Hindi News Paper) Dated- 03/06/2021. 2. The Pioneer (English National Daily Newspaper) Dated- 03/06/2021
Date of public consultation	03/07/2021
Venue	In front of Gauthan of Gram Panchayat Champa at Village Champa Tehsil: Tilda District- Raipur (CG).
Presiding Officer	Additional District Magistrate, Raipur
Major issues raised	<ul style="list-style-type: none"> <li>• Regarding Provision of Employment to locals</li> <li>• Most of the people welcomed the project for the advantage of employment.</li> <li>• Regarding Waste water disposal</li> <li>• Regarding Impact of Air Pollution on Air Regime</li> </ul>

	<ul style="list-style-type: none"> <li>• Development of Area.</li> <li>• Education facilities, Cow shelters, development of playground under CER.</li> <li>• Harm to crops should be avoided</li> </ul>
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**Action plan as per MoEF&CC O.M. dated 30/09/2020**

Sr. No.	Physical activity and action plan		Target of Implementation of Action Plan (Timeline)			Total Expend. Rs. (in lakhs)
	Name of the activity	Physical Targets	Year1	Year2	Year3	
1.	Road for villagers to connect their agriculture field surrounding the periphery of plant for as per the demand.	<b>Location:</b> Village: Champa, Tilda, Raipur, surrounding Plant periphery. <b>Length:</b> 1.5 km, <b>Road Width:</b> minimum 3meter and maximum 6 meter. <b>Quality:</b> Pukka with black bitumen top. In consultation with local Gram panchayat and administrative approvals the route map for proposed road will be finalized.	<b>Village Road 1.5</b> km, 3meter to maximum 6 meter. will be completed at Village Champa in 1 <sup>st</sup> Year	-	-	75.00
2.	Renovation of Village Internal Roads, pavement road or Paver block roads will be built.	<b>Location:</b> Village: Champa, Tilda, Raipur, <b>Length:</b> Approx. 1 km, <b>Width:</b> minimum 2 meter and maximum 4 meter (as present road/land available in the village). <b>Quality:</b> Pavement road or Paver block roads	-	Work will be started in 2 <sup>nd</sup> Year at village Champa <b>Village Road 0.5</b> km, 2meter to maximum 4 meter. will be completed	Work will be completed on 3 <sup>rd</sup> Year <b>Village Road Balance 0.5</b> km, 2meter to max 4 meter. will be completed	25.00
3.	School/ Anganwadi/ Community Hall spare room will be built.	<b>School:-</b> Government School Champa. <b>Location:</b> School of Village: Champa, Tilda, Raipur, <b>Size of Room:</b> 15 X 20 = 300 Sq.ft. <b>No. of Room:</b> 2 Nos <b>Quality:</b> RCC Roof and Floor, Fly Ash Brick Wall.	-	Work will be started in 2 <sup>nd</sup> Year at village Champa <b>Size of Room:</b> 15 X 20 = 300 Sq.ft. <b>1st Room: will be completed</b>	Work will be completed on 3 <sup>rd</sup> Year <b>Size of Room:</b> 15 X 20 = 300 Sq.ft. <b>2<sup>nd</sup> Room: will be completed at Village Champa</b>	15.00
		<b>Anganwadi Champa Village</b> <b>Location:</b> Village: Champa, Tilda, Raipur, <b>Size of Room:</b> 15 X 15 = 225 Sqft <b>No. of Room:</b> 2 Nos <b>Quality:</b> RCC Roof and Floor, Fly Ash Brick Wall.	-	Work will be started in 2 <sup>nd</sup> Year at village Champa <b>Size of Room:</b> 15 X 15 = 225 Sq.ft. <b>1st Room: will be completed</b>	Work will be completed on 3 <sup>rd</sup> Year <b>Size of Room:</b> 15 X 15 = 225 Sq.ft. <b>1st Room: will be completed at Village Champa</b>	10.00
		<b>Community Hall Building:-</b> Community Hall (in Government Community	-	Work will be started in 2 <sup>nd</sup> Year at village Champa	Work will be completed on 3 <sup>rd</sup> Year Balnce	18.00

Sr. No.	Physical activity and action plan		Target of Implementation of Action Plan (Timeline)			Total Expend. Rs. (in lakhs)
	Name of the activity	Physical Targets	Year1	Year2	Year3	
		land) <b>Location:</b> Village: Champa, Tilda, Raipur, <b>Size of Room:</b> 30 X 30 = 900 Sqft <b>No. of Room:</b> 1 Nos <b>Quality:</b> RCC Roof and Floor, Fly Ash Brick Wall.		30 X 30 = 900 Sqft <b>No. of Room:</b> 1 Nos <b>Quality:</b> RCC Roof and Structure and wall s Fly Ash Brick Wall will be completed in this year	work of plastering flooring electrification and Plumbing in the 30 X 30 = 900 Sqft room will be completed in this year	
4.	Building of Spare room for Hospital/ Clinic.	<b>Community Hall Building:</b> - Community Hall (in Government Community land) <b>Location:</b> Village: Champa, Tilda, Raipur, <b>Size of Room:</b> 30 X 30 = 900 Sqft <b>No. of Room:</b> 1 Nos <b>Quality:</b> RCC Roof and Floor, Fly Ash Brick Wall.	-	Work will be started in 2 <sup>nd</sup> Year at village Champa 30 X 30 = 900 Sqft One Room: Civil work RCC Roof and Structure and wall s Fly Ash Brick Wall will be completed in this year	Work will be completed on 3 <sup>rd</sup> Year	10.00
5.	To make rural women self-dependent, Skill development programs, weaving machine, embroidery machine, grinding machine to prepare Papad and Pickle, Computer, Printer etc. will be provided.	Women Skill development Centre Location: Village Champa at community land provided by Village Panchayat/ Local Authority. Size: Approx 1000 Sqft. (50 X 20 sqft) <b>Quality:</b> RCC Roof and Floor, Fly Ash Brick Wall. <b>Facilities:</b> Weaving machine, embroidery machine, Grinding machine to prepare Papad and Pickle, Computer, Printer etc.	Work will be started in 1 <sup>st</sup> Year at village Champa One Room: Civil work RCC Roof and Structure and wall s Fly Ash Brick Wall will be completed in this year	Work will be completed on 2 <sup>nd</sup> Year <b>Balance Facilities such as</b> : Weaving machine, embroidery machine, Grinding machine to prepare Papad and Pickle, Computer, Printer etc. will be supplied during this year.	-	20.00
6.	Rain water harvesting structure for Water Shed Management.	<b>Location :</b> Village Champa The detail study of water bodies 10 KM will be done and accordingly the structures will be made to improve the water table in the area.	Work will be started in 1 <sup>st</sup> Year at village Champa. The detail study of water bodies 10 KM will be done in this year.	Work will be completed on 2 <sup>nd</sup> Year. the raind water recharge structures will be made to improve the water table in the area during this year	-	40.00
7.	Greenbelt	Location: Champa to Gulgul	Work will be started	Work will be	-	20.00

Sr. No.	Physical activity and action plan		Target of Implementation of Action Plan (Timeline)			Total Expend. Rs. (in lakhs)
	Name of the activity	Physical Targets	Year1	Year2	Year3	
	development on both sides of the road from Ghulghul to Champa and greenbelt development.	Length: approx. 1 KM No. of Plants: 2000 Plants Security: Tree guard make of Fly Ash Bricks.	in 1 <sup>st</sup> Year at village Champa Plantation Length: approx 0.5 KM No. of Plants : 1000 Plants with Tree guard make of Fly Ash Bricks will be completed in this year .	completed on 2 <sup>nd</sup> Year at village Gulgul Balance Plantation Length : approx 0.5 KM No. of Plants : 1000 Plants with Tree guard make of Fly Ash Bricks will be completed in this year		
8.	Pucca Shed for Cow shelter in the village will be built.	Location- Village Champa Size: 1000 Sqft (20 X 50) <b>Quality:</b> Asbestos sheet Roof, Fly Ash Brick Wall.	Work will be started in 1 <sup>st</sup> Year at village Champa Civil work for Cow shed of Size: 1000 Sqft (20 X 50 ) <b>Quality:</b> Asbestos sheet Roof, Fly Ash Brick Wall will be completed this year.	Work will be completed on 2 <sup>nd</sup> Year. Electrification Plumbing and Flooring will be completed during this year		10.00
9.	Renovation of Playground and Boundary wall renovation.	<b>Location-</b> Village Champa <b>Size:</b> 20000 Sqft (community land- already in use as playground) <b>Work:</b> Fly Ash based Boundary wall and seating area.	Work will be started in 1 <sup>st</sup> Year at village Champa Civil work for 10000 Sq feet area of Fly Ash Brick Wall will be completed this year.	Work will be completed on 2 <sup>nd</sup> Year Balance Civil work for 10000 Sq feet area of Fly Ash Brick Wall will be completed this year.		5.00
10.	Water cooler, Septic tank, Overhead tank, Solar power system will be provided to school in village.	Location: 2 Nos. of Government of School Champa Government School Chhapora Government School Sadbhava Government School Boerjhiti Government School Deori Government School Khudmudi <b>RWH Structure:</b> Size :1 meter dia X 3-meter depth X 1 No. at every school total 6 RWH = 0.50 Lakhs X 7 = 3.50 Lakhs <b>Portable Water facility:</b> Size: Overhead tank 500 liter with water purifier with	Civil Work will be started in 1 <sup>st</sup> Year at village Champa. <b>RWH Structure:</b> Size :1 meter dia X 3-meter depth X 1 No. <b>Portable Water facility:</b> Size: Overhead tank 500 liter with water purifier with AMC at every school Solar Power System at School: Size: 1 KW SPP at every school So total 1 nos will be completed this year.	Work will be continued on 2 <sup>nd</sup> Year at village Chhapora, Sadbhava <b>RWH Structure:</b> Size :1 meter dia X 3-meter depth X 1 No. X 2 Schools <b>Portable Water facility:</b> Size: Overhead tank 500 liter with water purifier with Solar Power	Work will be completed by 3 <sup>rd</sup> Year at village Boerjhiti, Deori and Khudmudi <b>RWH Structure:</b> Size :1 meter dia X 3-meter depth X 1 No eac X 3 Schools <b>Portable Water facility:</b> Size: Overhead tank 500 liter with water purifier with	21.00

Sr. No.	Physical activity and action plan		Target of Implementation of Action Plan (Timeline)			Total Expend. Rs. (in lakhs)
	Name of the activity	Physical Targets	Year1	Year2	Year3	
		AMC at every school (1Lakhs X 7 Nos= 7.00 Lakhs)  Solar Power System at School: Size : 1 KW SPP at every school (1.50 Lakhs X 7 Nos. = 10.50 Lakhs)		System at School: Size: 1 KW SPP at every school So total 2 nos will be completed this year.	AMC at every 3 school Solar Power System at each School: Size: 1 KW SPP at every school So total 3 nos will be completed this year.	
12.	Solar Water Pumps for Drinking and domestic Water for Villager at Village Champa	Location: Village Champa <b>Size</b> : 12.5 HP Solar Water Pump with Overhead tank of 1000 Liter Nos. : 5 Nos (7.4 Lakhs each).	Work will be started in 1 <sup>st</sup> Year at village Champa with 1 Nos of Solar Water Pump will be completed	Work will be continued on 2 <sup>nd</sup> Year at village Champa with 2 Nos of Solar Water Pump will be completed	Work will be completed by 3 <sup>rd</sup> Year at village champa with 2 Nos Solar Water Pump will be completed	37.0 0
<b>Total Rs. =</b>						<b>306.00</b>

52.15.12 The capital cost of the project is Rs. 35206 Lakhs (352.06 Cr.) and the capital cost for environmental protection measures is proposed as Rs. 41 Crore. The annual recurring cost towards the environmental protection measures is proposed as Rs. 1.90 Crore. The proposed project will provide employment to 969 peoples as direct employment which includes 91 people as administrative staff and 868 people will be production staff whereas indirect employment to 1000 nos. to 1500 nos. persons will also be generated. The details of cost for environmental protection measures are as follows:

S. NO.	Description of Items	Amount	Operation and Maintenance cost
		(in Crores Rs)	(in Crores Rs)
	<b>Plant and Machinery proposed for EMP</b>		
1	Dry ESP for DRI Kilns	10	0.5
2	Dry ESP for Power Plant	2.5	0.125
3	Bag Houses for the Sponge Iron Kilns	5.6	0.28
4	Cost of Bag Houses for Induction Furnaces	1.2	0.06
5	Cost of Bag Houses for Ferro Alloys	3	0.15
6	Cost of Rotary Vane Wet Scrubber for Rolling Mill for Reheating Furnaces	0.6	0.03
7	Cost of Bag Houses for Boiler Furnaces for Power Plant Coal Handling and Ash Handling Area	1	0.05
	<b>Building and Civil works used for EMP</b>		
8	Cost of a Common Chimney in Sponge Iron	1	0.05

S. NO.	Description of Items	Amount	Operation and Maintenance cost
		(in Crores Rs)	(in Crores Rs)
	Plant and FBC		
9	Cost of a Common Chimney in Induction Furnace Plant and LRF	0.25	0.0125
10	Cost of Industrial ETP (100 KLD)	1.5	0.075
11	Oil Trap in the drains system	0.3	0.015
12	Silt Arrestation Pit in Storm Water Drains	0.5	0.025
13	Internal Road Black topping and other construction works for Paving the Floors	1	0.09
14	Drainage system	0.75	0.0375
	Exclusive cost of works used for EMP		
15	Cost of STP for Domestic Waste	0.6	0.03
16	Green Belt Plantation along with Irrigation System and Pipe Line	0.65	0.0325
17	Fugitive dust Control Spray system in Plant	0.33	0.0175
18	Movable Vaccum cleaning system	0.35	0.03
19	Wheel Washing System in Security area	0.1	0.007
20	On Line stack Monitoring three sets in DRI with Power; Induction Furnace and in Rolling mill	0.23	0.01125
21	On Line AAQ station	0.6	0.04
22	High Volume sampling and Stack Monitoring Kits	0.4	0.04
23	Weather Monitoring Station	0.05	0.0025
24	Ground water Monitoring Piezo Meters	0.03	0.0015
25	On Line Effluent Quality Monitoring System(EQMS)	0.2	0.02
26	Environment Monitoring Laboratory Testing Equipments and Chemicals and Furniture and computer systems etc.	0.6	0.05
27	Rain Water Harvesting and Recharge system with Roof Harvesting and Rain Water Collection Tank	2.5	0.188
28	Noise Reduction enclosure/ anti vibrating pad etc.	0.6	0.04
29	Miscellaneous	1.5	0.085
30	Environmental Monitoring Cost		0.08
31	CER works for improvement of surrounding Environment (CAPEX)	3.06	
	<b>Total Expenses in Crores Rs.</b>	<b>41</b>	<b>1.90</b>

*Note: The budget may increase as per actual requirement during plant operations in the subsequent years.*



- 52.15.13 Greenbelt will be developed in 10.00 ha which is about 33.16 % of the total project area (30.156 Ha). Greenbelt will be provided with local species with broad leaves and higher canopy and fast-growing tree species. Total 25000 nos. of saplings shall be planted.
- 52.15.14 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 52.15.15 Name of the EIA consultant: M/s Anacon Laboratories Pvt. Ltd., Nagpur [Sl. No. 66, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/1922/RA 0150 dtd. Feb 03, 2020 Valid till 30<sup>th</sup> September, 2022 Rev. 18, January 05, 2022].
- 52.15.16 The proponent had earlier applied for Environment Clearance vide proposal no. IA/CG/IND/107593/2019 dated 03/11/2021 and the proposal was considered in 48<sup>th</sup> meeting of REAC held on 11 – 12<sup>th</sup> November, 2021 wherein the Committee recommended the proposal to be returned in present form due to the shortcomings.
- 52.15.17 The proponent has again applied vide proposal no. IA/CG/IND/107593/2019 dated on 18/01/2022 with revised EIA Report addressing the observations of the EAC and the proposal is considered in the 52<sup>nd</sup> meeting of the Re-constituted EAC (Industry-I) held on 27-28<sup>th</sup> & 31<sup>st</sup> January, 2022.

#### **Observations by the Committee**

- 52.15.18 The Committee observed the following:
- i. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
  - ii. The Committee also deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.

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

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

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

- i. Ground water use is permitted only during the construction phase for construction purposes after obtaining approval from the concerned competent authority.
- ii. Green belt shall be developed in 33% of the total area all along the entire periphery of the area with a density of 2500 trees per ha.
- iii. Particulate matter emission from all the stacks shall not exceed 30 mg/Nm<sup>3</sup>.
- iv. Rain water harvesting shall be implemented as per the action plan submitted in the EIA report.
- v. 100 % solid waste generated in the facility shall be utilized.

- vi. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
- vii. Slip roads shall be provided at the gates and along crossings on main roads to avoid traffic congestion.
- viii. Performance monitoring of all Pollution Control Devices shall be carried out annually and report submitted to MoEF&CC, Regional Office.
- ix. Ferro-chrome shall not be manufactured without the prior permission of MoEF&CC.
- x. Si-Mn slag shall be used for road construction and cement making. SMS slag shall be crushed for metal and flux recovery and aggregate shall be used for the purposes such as road construction, brick manufacturing and filling up of low-lying area etc.
- xi. Tar generated from Coal gasifier shall be burnt in RHF and phenolic water shall be incinerated in After Burn Chamber (ABC) of DRI kilns.
- xii. Hot charging shall be achieved up to 85 % as committed.
- xiii. Air Cooled condensers shall be used in the captive power plant.
- xiv. 4<sup>th</sup> hole extraction system shall be provided in the Sub Merged Arc Furnaces.

**B. General conditions**

**I. Statutory compliance:**

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

**II. Air quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as four Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.

- vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- viii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

**III. Water quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30<sup>th</sup> May 2008; G.S.R 277 (E) dated 31<sup>st</sup> March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7<sup>th</sup> December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- iv. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31<sup>st</sup> March 2012 (applicable to IF/EAF) as amended from time to time.
- v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

**IV. Noise monitoring and prevention**

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

**V. Energy Conservation measures**

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

**VI. Waste management**

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

**VII. Green Belt**

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

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

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

- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

**IX. Environment Management**

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

**X. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

52.16 Expansion of Steel Plant by enhancing Sponge Iron Plant from 2,83,500 TPA to 4,93,500 TPA; Sinter plant from 2,59,000 TPA to 5,18,400 TPA; Pig Iron through Blast Furnace from 87,500 TPA to 3,12,500 TPA; Billets through IF from 2,16,000 TPA to 4,50,000 TPA, Rolled products through Rolling Mill from 90,000 TPA to 4,20,000 TPA, Power generation through WHRB of DRI Kilns -16 MW to 40 MW & Pelletization Plant of 2 x 0.6 MTPA capacity with existing Ferro Alloy plant (Si- Mn) of 10,800 TPA, Coal washery of 1,50,000 TPA and CPP (FBC Boiler) of 48 MW by **M/s. Singhal Enterprises Private Limited** located at Taraimal Village, Tamnar Tehsil, **Raigarh District, Chhattisgarh** [Online Proposal No. IA/CG/IND/252503/2020, File No. J- 11011/195/2007-IA.II(I)] – **Environment Clearance – regarding.**

52.16.1 M/s. Singhal Enterprises Private Limited has made an online application vide proposal no. IA/CG/IND/252503/2020 dated 21/01/2022 along with copy of EIA/EMP report, Form – 2 and certified compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (Ferrous and Non/ferrous) and 1 (d) Thermal Power Plant under Category “A” of the schedule of the EIA Notification, 2006 and appraised at central level.

**Details submitted by Project proponent**

52.16.2 The details of the ToR are furnished as below:

<b>Date of Application</b>	<b>Consideration</b>	<b>Details</b>	<b>Date of Accord</b>	<b>ToR Validity</b>
09/09/2020	Standard TOR Granted	Terms of Reference	19/09/2020	18/09/2024

52.16.3 The project of M/s. Singhal Enterprises Private Limited located in Taraimal Village, Tamnar Tehsil, Raigarh District, Chhattisgarh is for expansion of Steel Plant by enhancing Sponge Iron Plant from 2,83,500 TPA to 4,93,500 TPA; Sinter plant from 2,59,000 TPA

to 5,18,400 TPA; Pig Iron through Blast Furnace from 87,500 TPA to 3,12,500 TPA; Billets through IF from 2,16,000 TPA to 4,50,000 TPA, Rolled products through Rolling Mill from 90,000 TPA to 4,20,000 TPA, Power generation through WHRB of DRI Kilns -16 MW to 40 MW & Pelletization Plant of 2 x 0.6 MTPA capacity with existing Ferro Alloy plant (Si- Mn) of 10,800 TPA, Coal washery of 1,50,000 TPA and CPP (FBC Boiler) of 48 MW.

52.16.4 Environmental Site Settings:

SNo	Particulars	Details		
i.	Total land	137 Ha. (338.53 Acres) [Private Land: 137 Ha.]		
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Already Acquired Total land available for the plant is 137 Ha. Out of this 74.836 Ha. is registered in the name of M/s. Singhal Enterprises Pvt. Ltd. and for the remaining land of 62.583 Ha. Long-term lease deed (30 years) has been executed between the Directors of the company (individuals) & Ms/. Singhal Enterprises Pvt. Ltd.		
iii.	Existence of habitation & involvement of R&R, if any.	<b>Project site:</b> No habitation exists in the plant site <b>Study Area:</b> Taraimal Village (1.0 Km)		
iv.	Latitude and Longitude of the project site	<b>Point</b>	<b>Latitude</b>	<b>Longitude</b>
		1	22°02'21.96"N	83°21'03.20"E
		2	22°02'17.15"N	83°21'10.51"E
		3	22°02'14.46N	83°21'29.74"E
		4	22°02'10.03"N	83°21'31.47"E
		5	22°02'10.03"N	83°21'40.51"E
		6	22°02'12.54"N	83°21'48.40"E
		7	22°02'10.61"N	83°21'57.44"E
		8	22°02'03.88"N	83°22'06.29"E
		9	22°02'02.15"N	83°21'53.98"E
		10	22°01'30.60"N	83°22'05.91"E
		11	22°01'40.99"N	83°21'32.63"E
		12	22°01'42.33"N	83°21'18.39"E
		13	22°01'48.68"N	83°21'12.04"E
14	22°01'49.64"N	83°21'06.85"E		
v.	Elevation of the project site	275 m AMSL		
vi.	Involvement of Forest land if any.	Nil		
vii.	Water body exists within the project site as well as study area	<b>Project Site:</b> Nil <b>Study area:</b> Kelo river (3.0 Kms.), Dewanmunda Nallah (1.2 Kms.) & Gerwani Nallah (2.4 Kms.) are flowing within the study area And Few other ponds are present within study area of the plant.		
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere	Nil. However, movement of Elephants is observed within		

SNo	Particulars	Details
	reserve/ tiger reserve/ elephant	<p>10 Kms. radius of the plant, as per the secondary source. Conservation plan is prepared. Conservation plan is approved by PCCF vide letter no. va.pra./Prabandh-433/129 dated 14/09/2021 with budget of Rs. 57 Lakhs to be spent over a period of 5 years.</p> <p>Other details: Taraimal RF (adjacent), Barkachar RF (6.0 Kms.), Rabo RF (9.0 Kms), Maghat RF (6.5 Kms.), Samaruna RF (7.5 Kms), Paihar PF (5.0 Kms.) &amp; Urdana RF (6.0 Kms.) exists within 10 Km. radius of the plant site.</p>

52.16.5 The project was originally accorded EC on 19/02/2008. Subsequently, EC was amended on 21/12/2010 & 23/03/2011. Thereafter, another expansion EC was accorded vide lr.no. J-11011/195/ 2007 – IA II (I) dated 23/07/2018 and amended on 06/03/2019. Consent to Operate for the existing unit was accorded by Chhattisgarh Environment Conservation Board (CECB) vide lr. no. 9605 /TS/CECB/ 2021 dated 04/02/2021, which is valid up to 30/11/2023.

52.16.6 Implementation status of the existing EC:

S No	Plant Equipment/ Facilities	Units	As per EC dated 23/07/2018 and EC amendment dated 06/03/2019	Implementation Status as on 23/11/2021	As per CTO renewal dated 04/02/2021
1	DRI Kilns [Sponge Iron]	TPA	2,83,500	2,53,500 (in operation) 30,000 (under implementation)	2,53,500 (1x25 + 3x40 + 7x100) TPD DRI Kiln
2	Induction furnace with CCM & LRF [Hot Billets / MS Billets]	TPA	2,10,000	1,14,000 (in operation) 96,000 (under implementation)	1,14,000 (90,000 to Hot charging for rolled product and 24,000* MS Billets)
3	Rolling Mills (with Hot charging) [Rolled products]	TPA	90,000	90,000 (in operation)	90,000*
4	Ferro Alloy [Si-Mn]	TPA	10,800	10,800 TPA (in operation)	10,800
5	Sinter Plants [Sinter]	TPA	2,59,200 (1 x 50 m <sup>2</sup> )	Yet to be Implemented	--
6	Blast Furnaces [Pig Iron]	TPA	87,500 (1 x 125 m <sup>3</sup> )	Yet to be Implemented	--
7	Coal Washery	TPA	1,50,000	(Applied for CTO)	--

S No	Plant Equipment/ Facilities	Units	As per EC dated 23/07/2018 and EC amendment dated 06/03/2019	Implementation Status as on 23/11/2021	As per CTO renewal dated 04/02/2021
	[Washed Coal]			& awaiting for the same)	
8	Power Plant through WHRB	MW	16	14 (in operation) 2 (yet to be Implemented)	14(8 + 6*)
9	Power Plant through FBC Boiler	MW	48	33 (in operation) 15 (yet to be Implemented)	33 (18+ 8+ 7*)

Note: \* For 24,000 TPA MS Billets, 90,000 TPA Rolling Mill, 6 MW WHRB and 7 MW FBC Power plant validity is for one year from first date of month of commissioning of facility or 30/11/2023 whichever is earlier.

52.16.7 The unit configuration and capacity of existing and proposed project is given as below:

S No	Unit (Products)	Existing Plant (in Operation) As per EC dated 19/02/2008 and its amendments dated 21/12/2010 & 23/03/2011 (A)	EC dated 23/07/2018 & 06/03/2019 (B)	Present Expansion Proposal (C)	Production capacities after Proposed Expansion (A+B+C)
1.	Pelletization Plant (Pellets)	---	---	2 x 0.6 MTPA	2 x 0.6 MTPA
2.	DRI Kilns [Sponge Iron]	2,53,500 TPA	30,000 TPA (Under operation)	2,10,000 TPA (2x350TPD)	4,93,500 TPA
3.	Induction furnace with CCM & LRF [Hot Billets / MS Billets]	96,000 TPA	1,20,000 TPA	2,40,000 TPA (4x20 MT)	4,56,000 TPA
4.	Rolling Mills (With Hot charging) [Rolled products]	--	90,000 TPA* (300 TPD) (In operation)	3,30,000 TPA (1,20,000 TPA* + 2,10,000 TPA) (The existing 300 TPD will be upgraded to 1x700 TPD & New 1x700 TPD unit)	4,20,000 TPA
5.	Ferro Alloy [Si-Mn]	10,800 TPA	--	--	10,800 TPA
6.	Sinter Plants [Sinter]	--	2,59,200 TPA (1x50 m <sup>2</sup> ) (Yet to be implemented)	2,59,200 TPA (1 x 50 m <sup>2</sup> )	5,18,400
7.	Blast Furnaces [Pig Iron]	--	87,500 TPA (1x125 M <sup>3</sup> ) (Yet to be implemented)	2,25,000 TPA (1 x 300 M <sup>3</sup> )	3,12,500 TPA



S No	Unit (Products)	Existing Plant (in Operation) As per EC dated 19/02/2008 and its amendments dated 21/12/2010 & 23/03/2011 (A)	EC dated 23/07/2018 & 06/03/2019 (B)	Present Expansion Proposal (C)	Production capacities after Proposed Expansion (A+B+C)
8.	Coal Washery [Washed Coal]	--	1,50,000 TPA (Applied for CTO & awaiting for the same)	--	1,50,000 TPA
9.	Power Plant through WHRB	8 MW	8 MW (in operation) (2 MW Yet to be implemented)	2x8 MW from DRI + 8.0 MW from MBF (from Existing & proposed)	40 MW
10.	Power Plant through FBC Boiler	1x8 MW & 1x18 MW	7 MW (in operation) (1x15 MW Yet to be implemented)	--	48 MW
11.	Fly Ash Brick Making Plant	30,000 Bricks/day	---	----	30,000 Bricks/day
<p><b>Note:</b>                      * The CTO of 90,000 TPA* (300 TPD) Rolling mill has been obtained and in operation. After Obtaining E.C. for present expansion proposal this 300 TPD Rolling mill will be upgraded to 700 TPD (2,10,000 TPA) capacity.</p>					

52.16.8 The details of the raw material requirement for the proposed project along with its source and mode of transportation is given as below:

Raw Material	Quantity (TPA)	Sources	Distance (in Km)	Mode of Transport	
<b>For manufacturing Pellets – 2 x 0.6 MTPA</b>					
Beneficiated Iron Ore	13,44,000	Odisha & NMDC Chhattisgarh	300 to 600	By rail & road (through covered trucks)	
Bentonite	9,600	Local area	50	By road (through covered trucks)	
Limestone	72,000	Janjirchampa, CG	120	By road (through covered trucks)	
Coal (Bituminous)	12,000	Chhattisgarh	100	By rail & road (through covered trucks)	
Fuel (Anthracite Coal)	52,800	Chhattisgarh	100	By rail & road (through covered trucks)	
<b>For manufacturing Sponge Iron – 2,10,000 TPA</b>					
Iron ore / Pellets	3,36,000 3,15,000	Oraghat Mines, Sanindpur Mines, Odisha in plant generation	300-400	By rail & road (Through covered trucks) conveyers	
Coal	Indian	2,73,000	SECL Chhattisgarh / MCL Odisha	100-150	By rail & road (Through covered trucks)

Raw Material		Quantity (TPA)	Sources	Distance (in Km)	Mode of Transport
	Imported	1,74,720	Indonesia / South Africa / Australia	700	Through sea route, rail route & by road
Dolomite		10,500	Local area	50	By road (through covered trucks)
<b>For manufacturing Sinter – 2,59,200 TPA</b>					
Iron ore fines		2,30,688	Oraghat Mines, Odisha / Sanindpur Mines, Odisha	300-400	By rail & road (through covered trucks)
Limestone		18,144	Janjgirchampa, CG	120	By rail & road (through covered trucks)
Dolomite		20,736	Local area /Janjgirchampa, CG	50-120	By rail & road (through covered trucks)
Coke breeze		15,552	Chhattisgarh	250-300	By road (through covered trucks)
Burnt Lime Powder		6,480	Raigarh / Durg	300-350	By road (through covered trucks)
Mill scale		6,600	Nearby Industries	20	By road (through covered trucks)
Flue dust		31,104	In plant generation	---	through covered conveyors
Sinter plant return		25,920	In plant generation	---	through covered conveyors
Return fines from BF		23,328	In plant generation	---	through covered conveyors
<b>For manufacturing Pig Iron –2,25,000 TPA</b>					
Sinter		2,97,000	In plant generation	---	through covered conveyors
Iron ore lump		2,02,500	Oraghat Mines, Sanindpur Mines, Odisha	300-400	By rail & road (through covered trucks)
LAM coke		78,750	Vizag.	700	Through sea route, rail route & by road
Quartzite		5,625	CG / MP region	200-400	By rail & road (through covered trucks)
Manganese ore		3,375	MOIL, Maharashtra	600	By rail & road (through covered trucks)
<b>For manufacturing Hot Metal / MS Billets – 2,40,000 TPA</b>					
Sponge Iron		2,42,000	In plant generation	---	By Conveyor
Pig iron / Scrap		36,000	In plant generation /Raigarh	0-50	By conveyor / By road (Through covered trucks)
Ferro Alloys		12,000	Raigarh	20-40	By road (through covered trucks)
<b>For manufacturing Rolled Products –3,30,000 TPA</b>					
Hot Metal / MS Billets		3,63,000	In plant generation	---	Covered Conveyor
LDO / LSHS		10,800 KL	Local	50	By Road through tanker

52.16.9 Existing Water requirement is 6,735 m<sup>3</sup>/day, water requirement is obtained from Chuikansa Nallah (a tributary of Kelo river) and permission for the same has been obtained from Water Resources Department of Government of Chhattisgarh vide letter no. 342/WRD/05/D-4 dated 23<sup>rd</sup> June 2008 for a quantity of 5.42 MCM per annum (14,850 KLD). The water requirement for the proposed expansion project is estimated as 2968 m<sup>3</sup> /day. The existing permission is sufficient for expansion project also.

52.16.10 Existing power requirement of 52.5 MW is obtained from Captive Power Plant and State grid. Power requirement for the existing & present proposal is estimated as 100.6 MW, out of which 88 MW will be obtained from Captive Power Plant & remaining 12.6 MW will be imported from State Grid.

52.16.11 Baseline Environmental Studies:

Period	<b>1<sup>st</sup> October 2020 to 31<sup>th</sup> December 2020</b>													
AAQ parameters at 8 locations	PM <sub>2.5</sub> = 21.7 to 51.2 µg/m <sup>3</sup> PM <sub>10</sub> = 36.8 to 88.2 µg/m <sup>3</sup> SO <sub>2</sub> = 7.5 to 22.8 µg/m <sup>3</sup> NO <sub>2</sub> = 8.3 to 35.1 µg/m <sup>3</sup> CO = 425 to 1495 µg/m <sup>3</sup>													
AAQ modelling	PM = 4.7 µg/m <sup>3</sup> (1550 m in S) SO <sub>2</sub> = 9.8 µg/m <sup>3</sup> (1550 m in S) NO <sub>2</sub> = 14.7 µg/m <sup>3</sup> (1550 m in S) CO = 3.9 µg/m <sup>3</sup> (1550 m in S)													
Ground water quality at 8 locations	pH: 7.0 to 7.8, TSS: 0.2 to 0.5 mg/l, TDS: 319 to 556 mg/l, Total hardness: 208 to 300 mg/l, Chlorides: 134 to 188 mg/l, Fluoride: 0.42 to 0.75 mg/l Heavy metals (Iron -Fe): 0.014 to 0.19 mg/l													
Surface water quality at 4 locations	pH: 7.2 to 7.8, DO: 3.9 to 6.5 mg/l, BOD: 2.2 to 2.7 mg/l TDS: 177 to 308 mg/l, Chlorides: 88 to 142 mg/l; Sulphates: 54 to 94 mg/l													
Noise levels	42 to 63 dBA for day time ; 34 to 56 dBA for night time													
Traffic assessment study findings	The existing plant site is well connected by SH # 1 (Ambikapur to Raigarh) is adjacent to the plant which is capable of absorbing additional truck movement due to transportation.													
	<table border="1"> <thead> <tr> <th>Particulars</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>Traffic load study period</td> <td>December 2020</td> </tr> <tr> <td>Baseline Traffic load (PCU/day )</td> <td>14737</td> </tr> <tr> <td>Additional traffic load during operation of the expansion project (PCU/day)</td> <td>2222</td> </tr> <tr> <td><b>Total traffic load during operation of existing and proposed expansion project</b></td> <td><b>16959</b></td> </tr> <tr> <td><b>Traffic capacity as per the IRC 106 : 1990 for highways (PCU/day)</b></td> <td><b>30,000</b></td> </tr> </tbody> </table>		Particulars	Details	Traffic load study period	December 2020	Baseline Traffic load (PCU/day )	14737	Additional traffic load during operation of the expansion project (PCU/day)	2222	<b>Total traffic load during operation of existing and proposed expansion project</b>	<b>16959</b>	<b>Traffic capacity as per the IRC 106 : 1990 for highways (PCU/day)</b>	<b>30,000</b>
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	Level of Service (LOS) of the Road as per IRC													
	<table border="1"> <thead> <tr> <th>V/C</th> <th>LOS</th> <th>Performance</th> </tr> </thead> <tbody> <tr> <td>0.0 – 0.2</td> <td>A</td> <td>Excellent</td> </tr> <tr> <td>0.2 – 0.4</td> <td>B</td> <td>Very Good</td> </tr> </tbody> </table>		V/C	LOS	Performance	0.0 – 0.2	A	Excellent	0.2 – 0.4	B	Very Good			
V/C	LOS	Performance												
0.0 – 0.2	A	Excellent												
0.2 – 0.4	B	Very Good												

	<b>0.4 – 0.6</b>	<b>C</b>	<b>Good</b>
	0.6 – 0.8	D	Fair/ Average
	0.8 – 1.0	E	Poor
	1.0 & Above	F	Very Poor
	<p>The Level of Service (LOS) of the Road = 16,959 / 30,000 = 0.56                  As per the above the LOS of the ROAD is categorised under ‘C’, which implies “GOOD”.                  Hence the existing road is capable of taking the additional traffic load.</p>		
Flora and fauna	<p>No Endemic, Rare, Endangered and Threatened (RET) species of flora were found in the study area.                  In buffer zone Elephant (Elephas maximus) schedule -I species is present.                  Conservation Plan has been approved by PCCF, Raipur vide letter dated 14/09/2021 and allotted budget of Rs.57 Lakhs to be spent over a period of 5 years.</p>		

52.16.12 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

S No	Waste	Quantity (TPA)			Method of disposal	Agreement Details of Disposal
		Existing	Proposed	Total		
1	Ash from Pellet Plant	--	11,400	11,400	used in own brick manufacturing	Own Brick making unit
2	Ash from DRI	51,030	37,800	88,830	used in own brick manufacturing unit and remaining quantity will be given to other brick manufacturers.	Own Brick making unit
3	DoloChar	85,050	42,000	1,27,050	is being utilized in FBC boiler as fuel. Similar practice in expansion also.	Captive consumption
4	Wet scrapper sludge	14,075	10,500	24,575	Brick manufacturing	Own Brick making unit
5	Kiln Accretion Slag	2,835	2,100	4,935	Will be given to Road contractor	Willingness letter given by Rakesh Kumar Agarwal (Road Contractor)
6	FES & Bag filter dust	6,470	24,562	31,032	will be utilized in the sinter plant.	Captive consumption
7	Sinter returns	23,860	23,860	47,720	Will be recycled to process again	Captive consumption
8	Granulated slag	26,250	67,500	93,750	Will be given to Road contractor	Willingness letter given by Rakesh Kumar Agarwal (Road Contractor)
9	GCP sludge	30	72	102	will be used in Sinter Plant	Captive consumption
10	Slag from SMS*	21,600	24,000	45,600	Slag will be crushed and after recovery of iron, will be given to Road	Willingness letter given by Rakesh Kumar Agarwal (Road Contractor)

S No	Waste	Quantity (TPA)			Method of disposal	Agreement Details of Disposal
		Existing	Proposed	Total		
					contractor	
11	Mill Scale from Rolling Mill	1,800	6,600	8400	Will be reused in Ferro Alloy plant / Sinter Plant	Captive consumption
12	End Cuttings from Rolling Mill	2,700	9,900	12,600	Will be reused in Induction Furnace.	Captive consumption
13	Ash from Power Plant (with Indian coal)	1,64,749	--	1,64,749	is being given to local Fly Ash Bricks Manufacturer	Agreement entered with M/s. G.S. Fly ash Bricks, M/s. Bhanu Pratap Sahu, M/s. Shri Shakti Enterprises.
14	Ash from Power Plant (with Imported coal)	1,12,048	--	1,12,048	is being given to local Fly Ash Bricks Manufacturer	
15	Washery rejects (yet to implement)	42,000	--	42,000	Will be utilized in FBC boiler.	Captive consumption
<b>Hazardous waste Generation:</b> 1) Waste Oil: 30 KL/Annum <b>Disposal:</b> This will be stored in covered HDPE drums in a designated area and will be given to SPCB approved vendors. 2) Used batteries will be given back to the supplier under buy back agreement with supplier.						

52.16.13 Public Consultation:

Details of advertisement given	25/06/2021 & 27/06/2021 Local newspaper (Hindi) "PATRIKA SARKAR" National newspaper (English) "TIMES OF INDIA"
Date of public consultation	28/07/2021
Venue	Near Banjari Temple, Village-Taraimal, Tehsil-Tamnar, District-Raigarh (Chhattisgarh).
Presiding Officer	Additional District Magistrate
Major issues raised	<ul style="list-style-type: none"> <li>• Employment to Locals</li> <li>• Air, water and Soil Pollution Control measures</li> <li>• Protection of elephants</li> <li>• NGT case pending on project</li> <li>• Impact on crop yield</li> <li>• Additional facilities in schools</li> <li>• Relaying of Road</li> <li>• Social &amp; infrastructural development activities</li> </ul>

**Action plan as per MoEF&CC O.M. dated 30/09/2020:**

S.NO.	MAJOR ACTIVITY HEADS	YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lakhs)	
		1 <sup>st</sup> Year (Rs. in Lakhs)	2 <sup>nd</sup> Year (Rs. in Lakhs)	3 <sup>rd</sup> Year (Rs. in Lakhs)		
<b>A). Based on Need Based &amp; SIA Study</b>						
1	<b>Community &amp; Infrastructure Development</b>					
	i) Construction of public toilets	<b>Physical Nos. &amp; village</b>	2 nos. in Taraimal (V) 2 nos. Gerwani	2 nos. in Saraipali (V) 2 nos. in Delari	2 nos. in Samaruma (V) 2 nos. in Shivpuri	12

S.NO.	MAJOR ACTIVITY HEADS		YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lakhs)
			1 <sup>st</sup> Year (Rs. in Lakhs)	2 <sup>nd</sup> Year (Rs. in Lakhs)	3 <sup>rd</sup> Year (Rs. in Lakhs)	
			(V)	(V)	(V)	
		<b>Budget in Lakhs</b>	4	4	4	
	ii) Providing LED Street lighting with solar panels	<b>Physical Nos. &amp; village</b>	5 nos. in Taraimal (V) 5 nos. Gerwani (V)	5 nos. in Saraipali (V) 5 nos. in Delari (V)	5 nos. in Samaruma (V) 5 nos. in Shivpuri (V)	6
		<b>Budget in Lakhs</b>	2	2	2	
					<b>Total</b>	<b>18</b>
2	<b>Education</b>					
	i). Construction of toilets in surrounding schools & its maintenance	<b>Physical Nos. &amp; village</b>	3 nos. in Higher secondary school, Taraimal Village 3 nos. Gerwani Village	3 nos. in Amidih Village 3 nos. in Shivpuri Village	3 nos. in Barpali Village 3 nos. in Delari Village	18.0
		<b>Budget in Lakhs</b>	6.0	6.0	6.0	
	ii) Sports kits for schools	<b>Physical Nos. &amp; village</b>	10 nos. in Taraimal (V) 10 nos. in Gerwani (V)	10 nos. in Amidih (V) & 10 nos. in Samaruma (V)	10 nos. in Barpali (V) 10 nos. in Delari (V)	6.0
		<b>Budget in Lakhs</b>	2.0	2.0	2.0	
					<b>Total</b>	<b>24.0</b>
3	<b>Distribution of tricycles for handicapped</b>	<b>Physical Nos. &amp; village</b>	5 nos. of tricycles in Taraimal Village 5 nos. of tricycles in Gerwani Village	5 nos. of tricycles in Samaruma Village 5 nos. of tricycles in Amidih Village	5 nos. of tricycles in Saraipali Village 5 nos. of tricycles in Barpali Village	<b>3.0</b>
		<b>Budget in Lakhs</b>	1.0	1.0	1.0	
4	<b>RWH pits in the surrounding villages &amp; De-siltation of ponds</b>	<b>Physical Nos. &amp; village</b>	1 no. in Government Primary School in Taraimal Village 1 no. at Anganwadi Kendra of Amlidih village	Increase of 1.0 m depth in storage due to De-siltation of pond in Jamadbari Village (22° 1'14.12"N, 83°19'56.25"E) & Increase of 1.0 m depth in storage due to De-siltation of pond in Shivpuri Village (22° 0'35.67"N, 83°21'48.24"E)	Increase of 1.0 m depth in storage due to De-siltation of pond in Chiraipani Village (21°58'38.27"N, 83°22'7.95"E) & Increase of 1.0 m depth in storage due to De-siltation of pond in Jhingolpara Village (22° 4'47.77"N, 83°22'56.57"E)	<b>62</b>
		<b>Budget in Lakhs</b>	2	33	27	
6	Primary Health Centre with Ambulance	<b>Physical Nos. &amp; village</b>	---	1 no. of Primary Health Centre with Ambulance facility in Gerwani Village	1 no. of Primary Health Centre with Ambulance facility in Samaruma Village	<b>100</b>
		<b>Budget in Lakhs</b>	---	50	50	

S.NO.	MAJOR ACTIVITY HEADS		YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lakhs)
			1 <sup>st</sup> Year (Rs. in Lakhs)	2 <sup>nd</sup> Year (Rs. in Lakhs)	3 <sup>rd</sup> Year (Rs. in Lakhs)	
7	Provision of drinking water facility	Physical Nos. & village	1 no. of Drinking water facility in Taraimal & Gerwani Villages	1 no. of Drinking water facility in Saraipali & 1 no. In Delari Villages	1 no. Drinking water facility in Shivpuri & 1 no. in Punjipathra Villages	33
		Budget in Lakhs	11	11	11	
<b>TOTAL (A)</b>						<b>240</b>
<b>B). Based on Public Consultation/Hearing</b>						
1.	Construction of additional classrooms in surrounding schools	Physical Nos. & village	5 nos. of Rooms (8m X 6m X3 m) in Higher Secondary School Taraimal (V)	5 nos. of Rooms (8m X 6m X3 m) in Higher Secondary School Saraipali (V)	5 nos. of Rooms (8m X 6m X3 m) in Higher Secondary School Samaruma (V)	75
		Budget in Lakhs	25	25	25	
2	For relaying of Roads / maintenance of Roads	Physical Nos. & village	700 m length of Road from the plant to Taraimal Village	---	---	35
		Budget in Lakhs	35	---	---	
3	Impart training to the local villagers for skill development. a) DISHA Centre" along with necessary infrastructure for various vocational training program for employment generation in association with National Skill Development Mission (Automobile Repair, Welding, Electrical, Computer Hardware, Soft skills like computer programs etc.)	Physical Nos. & village	Vocational training to unemployed youth 30 nos. from Taraimal Village 30 nos. from Gerwani Village 30 nos. from Saraipali Village 30 nos. from Punjipathra Village	Vocational training to unemployed youth 30 nos. from Taraimal Village 30 nos. from Gerwani Village 30 nos. from Saraipali Village 30 nos. from Punjipathra Village	Vocational training to unemployed youth 30 nos. from Taraimal Village 30 nos. from Gerwani Village 30 nos. from Saraipali Village 30 nos. from Punjipathra Village	90
		Budget in Lakhs	30	30	30	
<b>Total (B)</b>						<b>200</b>
<b>Grand Total (A+B)</b>						<b>440</b>

52.16.14 The capital cost of the expansion project is **Rs.577 Crores** and the capital cost for environmental protection measures is proposed as **Rs. 86.4 Crores**. The annual recurring cost towards the environmental protection measures is proposed as **Rs.9.63 Crores**. The employment generation from the proposed expansion project is **750 Nos.** The details of cost for environmental protection measures is as follows:

S.No	Particulars	Capital Cost (Rs.in Crores)				Recurring Cost / Annum (Rs.in Crores)
		2022-2024	2024-2026	2026-2028	Total	
1.	<b>Air Emission Management</b>	31.68	46.18	1.5	<b>79.36</b>	7.831
2.	<b>Wastewater Management</b>	0.62	0.62	0.0	<b>1.24</b>	0.214
3.	<b>Solid waste Management</b>	0.73	0.02	0.5	<b>1.85</b>	0.725
4.	Greenbelt development, RWH etc.	0.05	---	---	<b>0.05</b>	0.02
5.	Noise Management	0.2	---	---	<b>0.2</b>	0.10
6.	RWH in Plant	0.05	---	---	<b>0.05</b>	0.005
7.	Fire Safety Systems	1.0	0.5	---	<b>1.5</b>	0.15
8.	<b>Environmental Monitoring</b>					
	• CEMS	0.25	0.25	---	0.5	0.01
	• CAAQMS	0.4	0.4	0.4	1.2	0.24
	• Environment Monitoring	---	---	---	---	0.10
	• Performance monitoring of APCS	---	---	---	---	0.10
9.	<b>Occupational Health &amp; Safety</b>	0.10	0.35	---	<b>0.45</b>	0.225
	<b>Sub Total (A)</b>	<b>35.08</b>	<b>48.92</b>	<b>2.4</b>	<b>86.4</b>	<b>9.63</b>
10.	Budget for Social & Infrastructure Development Activities	2.79	1.61	---	<b>4.40</b>	----
	<b>Sub Total (B)</b>	<b>37.87</b>	<b>50.53</b>	<b>2.4</b>	<b>90.8</b>	----
11.	<b>Budget for Conservation plan ----- (C)</b>	0.335	0.179	0.056	0.57	----
	<b>GRAND TOTAL (A+B+C)</b>	<b>38.205</b>	<b>50.709</b>	<b>2.456</b>	<b>91.37</b>	----

52.16.15 Existing green belt has been developed in 51 Ha. area which is about 37.2% of the total project area of 137 Ha. with total sapling of 1,30,536 Trees. Proposed greenbelt will be developed in 1.0 Ha. Thus total of 52 Ha. area (37.9% of total project area) will be developed as greenbelt. A 10 to 25m 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 2500 saplings will be planted and nurtured in 1.0 hectares within 1 year from the date of receipt of EC as a compensatory plantation against 600 numbers of trees to be transplanted from existing green belt.

52.16.16 Summary of court case related to the project under consideration is given as below:  
Application filed before the Hon'ble National Green Tribunal (NGT), Central Zone Bench, Bhopal vide Original Application No. 55/2021 (CZ) under Section 18 (1) read with 14,15,16 and 17 of the NGT Act, 2010 on 11/07/221 by JilaBachao Sangharsh Morcha (Petitioner) vs Union of India & others (Respondents) & M/s. Singhal Enterprises Pvt. Ltd. is Respondent No. 5.

**The Issues raised are**

- i. Non-compliance of terms of conditions of Environment clearance,
- ii. Illegal disposal and illegal storage of fly ash in the green belt,



- iii. Disturbing ecology of protected area,
- iv. The plant is in operation over the land, not owned by the Company and no change of land use, without assessment of carrying capacity of the area,
- v. Withdrawal of ground water illegally without the permission of Central Ground Water Authority (CGWA) and in violation of terms of conditions of Environmental Clearance.

**Brief on application filed before the Hon'ble NGT:**

Application filed by the applicant vides no. 55/2021 (CZ) on 11/07/2021. Honorable NGT has issued Notice to M/s. Singhal Enterprises Pvt. Ltd. on 29/07/2021 to appear before the honorable NGT in person on 22/09/2021.

Honorable NGT has directed the Respondents to submit their reply within six weeks by way of E-filing portal. Further, Honorable NGT has called for a report on the matter in issue in present application from a Joint Committee consisting of following members and directed the Joint Committee to submit a factual and action taken report within six weeks:

- i. One representative from the Ministry of Environment, Forest and Climate Change.
- ii. One representative from Chhattisgarh Environmental Conservation Board.
- iii. One representative from Central Pollution Control Board.
- iv. One representative from SEIAA, Chhattisgarh.

The joint committee has visited the site on 27-28<sup>th</sup> August, 2021 and accordingly report was submitted on 20/10/2021. The observation and recommendation of the joint committee:

Observation of the Joint committee:

- i. The industry claims ownership of 137 hectares of land out of which about 74.836 hectares is in the name of M/s. Singhal Enterprises and rest of the land is in the names of Directors of the company for which industry has made resolution in the board meeting of its Directors. Copy of the same submitted to joint committee.
- ii. The industry has at present 13.106 hectare diverted land for industrial purpose and applied for diversion of 13.147 hectare and 24.69 hectare. Document related with diversion and receipt of payment of diversion fee is enclosed. The issue of diversion is related with revenue department of the state and its relevance with EC is the policy matter, hence IRO, Raipur has requested Member Secretary, IA Division on 09/09/2021 seeking guidance on the above said subject. The same shall be informed accordingly to the committee.
- iii. The committee has gone through the inspection reports of MoEF&CC dated 20/05/2017, 06.06.2018, 13.12.2020 and 02.03.2021. The report reveals about green belt development in more than 33 percent of the area. The committee has also observed during field visit that green belt has been developed in front portion of the premises as well as towards boundary wall near forest area. Plantation of new saplings were also observed in plant process area. The committee is in opinion that industry has developed required green belt as per EC condition.
- iv. Solid Waste Management was found in accordance with MoEF&CC notification dated 30<sup>th</sup>May, 2008. The industry has installed a fly ash Brick making plant of capacity 30,000 numbers per day in the premises. Kiln accretion was found being used in road construction inside the plant. Char is used in AFBC boiler. Bottom ash was found stored inside premises.

- v. The committee during visit in Forest area did not observe any fly ash dumping in forest area. The same has also been reported by the Ranger, Tamnar, Forest Department that no-fly ash has been dumped in forest area and no forest land has been encroached by the industry.
- vi. The monitoring of source emission and fugitive emission has been conducted jointly by CPCB and CECB on 27- 28<sup>th</sup> August, 2021. The results were found within prescribed limit. At the time of visit operational status of online continuous emission monitoring system and continuous ambient air quality monitoring system was also verified and found operational.
- vii. During inspection housekeeping in the plant premises was not found satisfactory and needs improvement.
- viii. The Joint Committee discussed and prepared a comprehensive report in the matter which is given below:

S No	Objections by applicant	Field status
1	<b>Ownership of Land:</b> Unit claims that the proposed land about 137 Hectares is owned by Company since inception 2000, it's not true, Khasra of proposed land obtained from Revenue Department dated 3 February 2021 clearly states that only 51.470 Hectares (38%) is owned by Company and rest 68% land is owned by other people. Company has never provided the papers of land in its name.	The industry had mentioned the ownership of 137 Hectares of land in the proposal submitted for EC to MoEF&CC. In this context the details of land as per report obtained from SDM (R), Gharghoda is as under: 1. The land registered in the name of M/s. Singhal Enterprises is about 74.836 Hectares. Out of which the mutation of 14.516 Hectares land is under process. 2. The land registered in the name of Directors of the Industry is about 62.583 Hectares (i-Shree P.D. Agrawal-15.73 ha,ii-Shree Sanjay Agrawal-35.951 Ha, iii- Shree Ajay Agrawal – 9.661 Ha,iv- Shree Sanjay & Shree Ajay Agrawal – 1.241 Ha) Hence the total land under possession of the industry is 137.469 Hect.
2	<b>Diversion of Land:</b> Unit claims that entire 137 Hectares land is diverted for industrial purpose since inception 2000, it's not true, as enquired verbal from Patwari/RI it was reported that only 13 Hectares i.e., 10% of total land is diverted. No paper related with diversion of the land 137 hectares nor any receipt of payments of diversion fees since in caption 2000 are not attached by the Company.	The industry has at present 13.106 Hectare diverted land and applied for Diversion of 13.147 Hectare and 24.769 Hectare Since, this is the policy matter, IRO, Raipur has also sent a letter to the Member Secretary, IA Division on 09/09/2021 seeking guidance on the above said subject. The same shall be informed accordingly to the committee.
3	<b>Ownership of 3 different companies/plants at same place adjoining each other:</b> Unit with mala field in tension kept Respondents 1 to 4 in dark regarding same ownership/directorship of three different companies/plants situate adjoining to each other. Company must have informed in all applications for clearances that they under same direct or ship owns two more plants adjoining to the proposed unit. No information regarding other units under same managements engaged in manufacturing of same products located adjoining to the unit provided by the company. Directors of the company had proposed expansion in all three	The issue does not have environmental relevance in the matter and moreover M/s. Singhal Enterprises is the only respondent.

S No	Objections by applicant	Field status
	companies/plants. Public hearing is organised for only one plant of Respondent No.5 rest two plants are exempt from public clearing	
4	<p><b>Verification of old lay out plan:</b> Respondent no. 5 had submitted layout plan while applying for environment clearance in 2016 stating green belt of 51 Hectare as proposed and approved by Ministry while according clearance to the unit. Layout plan submitted was not as per actual position at site. Unit has misled the respondent no. 1 to 4 by providing false lay out plan, area marked as green belt to comply the condition of clearance is used as illegal dumping yard of fly ash, Slag and other solid wastes. No verification of said lay out plan, plants/structures/green belt present in actual is done by Respondents 1to4. No area demarcated for expansion. No road sand to her structures related to housekeeping and save environment are not constructed as proposed. Housekeeping in the unit is totally mess. Entire premises is filled with Dust, Fly ash, Slag, other suspended particles. Solid Waste, Fume etc. Not a single inch of land is found clean.</p>	<p><b>i.</b> IRO Nagpur Office has inspected the plant on 20/05/2017 and the observations as follows:          “The PP has informed that green belt has been developed in the 50 ha of land in their premises. However, growth of vegetation was observed to be stunted which is likely due to stacking of emissions on the leaves of the impending with the process of photosynthesis and transpiration. The details of number of seedlings and area planted in the premises have been made available by the PP. During the inspection, it was observed that there is still scope for the plantation in the premises of PP. It was reported that from the year 2001-2002 to 2016- 2017 a total number 198900 plantation has been done out which 71151 (Approx) plants has survived. (EC no. J.11011/195/2007-IA.II (I) dated 19/02/2008 and letter dated 21/12/2010 and 23/03/2011).</p> <p><b>ii.</b> IRO Nagpur Office has inspected the plant on 06/06/2018 and the observations as follows:          “The total area of the premises of the PP is approximately 131 ha, out of which green belt development works have been reported to be maintained over an area of 50.0 ha by undertaking plantation of approximately 1,23,5000 plants. It was further observed that pursuant to the observation of the Regional Office, during its visit held in July 2017, the PP has undertaken plantation over additional area of approximately 1.0 ha wherein the PP has planted species like Ashoka, Petloforum, Casia, Amla, Karanj, etc. in their premises. It was further observed that the PP is undertaking levelling and other preparatory works for undertaking plantation during the coming monsoon season. The PP has informed that they are planning to plant nearly 5,000 trees in the coming monsoon seasons. Plantation work will be undertaken in the blank areas as well as in the form casualty replacement.</p> <p><b>iii.</b> IRO Nagpur again inspected the plant on 13/12/2020 and the observations are as follows:          “PP has developed greenbelt in 50 Ha. Out of total 137 Ha. Within the existing plant premises which is more than 33% of the total area. As on date PP has planted more than 1, 23,500 Nos of trees including some fruit bearing species and proposed to plant another 3000 Nos during upcoming monsoon. Photographs showing greenbelt in the plant premises &amp; third-party verification of plantation report was submitted by the PP.</p> <p><b>iv.</b> IRO Raipur has inspected the plant on 02/03/2021 the observation are as follows:</p>

S No	Objections by applicant	Field status
		<p>“It was informed that 50 Ha of greenbelt has already been developed out of total 137 Ha. Within the existing plant Premises. Project authorities are directed to submit the plant layout plan with earmarking the plantation done in the 33% of the plant area. IRO Raipur has issued a Monitoring of Compliance status of EC Stipulation with vide letter No. 5-34/2008 (ENV)/126 dated 10/06/2021 to PP. PP have submitted the reply to this office on 30/08/2021, which is not as per the stipulated observation made by this office.</p> <p>v. Additional information provided by the PP to the Joint Committee.</p> <p>Solid Waste Management was found in accordance with MoEF&amp;CC notification dated 30/05/2008. The industry has installed a fly ash Brick making plant of capacity 30,000 numbers per day in the premises. Kiln accretion was found being used in road construction inside the plant. Char is used in AFBC boiler. Bottom ash is found inside premises</p> <p><i>The industry should carryout detailed ground water study around bottom ash storage area in accordance with the notification. Housekeeping inside the plant premises needs to be improved.</i></p>
5	<p><b>Verification of New Lay out Plan:</b> Unit submitted new Lay out plan with application for expansion submitted on 2nd September 2020. It is totally mess. Unit does not have any fear of any authority or public. While going through said layout plan duly compared with old lay out plan it is clearly seen that area proposed for green belt (claimed as already developed Green Belt consisting 81151 tree saliva out of 208900 planted) is reduced and proposed expansion is placed/proposed over said already developed green belt. This means unit in tended to expand its plant overall ready exist green belt by removing it. This type of blunder mischief is being played by Respondents regularly since beginning of its inception. A strict lesson and penal action must be taken against them to avoid mischiefs played by respondent No. 5 and other units in locality.</p>	<p>i. IRO Nagpur Office has inspected the plant on 20/05/2017 and the observations as follows:</p> <p>“The PP has informed that green belt has been developed in the 50 ha of land in their premises. However, growth of vegetation was observed to be stunted which is likely due to stacking of emissions on the leaves of the impending with the process of photosynthesis and transpiration. The details of number of seedlings and area planted in the premises has been made available by the PP. During the inspection, it was observed that there is still scope for the plantation in the premises of PP. It was reported that from the year 2001-2002 to 2016- 2017 a total number 198900 plantation has been done out which 71151 (Approx) plants has survived. (EC NO. J.11011/195/2007-IA.II (I) dated 19/02/2008 and letter dated 21/12/2010 and 23/03/2011).</p> <p>ii. IRO Nagpur Office has inspected the plant on 06/06/2018 and the observations as follows:</p> <p>“The total area of the premises of the PP is approximately 131 ha, out of which green belt development works have been reported to be maintained over an area of 50.0 ha by undertaking plantation of approximately 1,23,5000 plants. It was further observed that pursuant to the observation of the Regional Office, during its visit held in July 2017, the PP has undertaken plantation over additional area of approximately 1.0 ha wherein the PP has planted species like</p>

S No	Objections by applicant	Field status
		<p>Ashoka, Petloforum, Casia, Amla, Karanj, etc. in their premises. It was further observed that the PP is undertaking levelling and other preparatory works for undertaking plantation during the coming monsoon season. The PP has informed that they are planning to plant nearly 5,000 trees in the coming monsoon seasons. Plantation work will be undertaken in the blank areas as well as in the form casualty replacement.</p> <p><b>iii.</b> IRO Nagpur again inspected the plant on 13/12/2020 and the observations are as follows:                      “PP has developed greenbelt in 50 ha out of total 137 Ha. Within the existing plant premises which is more than 33% of the total area. As on date PP has planted more than 1,23,500 Nos of trees including some fruit bearing species and proposed to plant another 3000 Nos during upcoming monsoon.</p> <p><b>iv.</b> IRO Raipur has inspected the plant on 02/03/2021 the observation are as follows:                      “It was informed that 50 Ha of greenbelt has already been developed out of total 137 Ha. Within the existing plant Premises. Project authorities are directed to submit the plant layout plan with earmarking the plantation done in the 33% of the plant area. IRO Raipur has issued a Monitoring of Compliance status of EC Stipulation with vide letter No. 5-34/2008 (ENV)/126 dated 10/06/2021 to PP. PP has submitted the reply to this office on 30/08/2021, which is not as per the stipulated observation made by this office.</p> <p><b>v.</b> In accordance with EC Project proponent should ensure availability of 33 percent land for green belt development and submit details of measurement for the same.</p>
6	<p><b>Disposal of Fly Ash and other Solid Waste:</b> Unit claims that 100% Fly Ash is disposed as per fly ash notification duly amended, submitted a letter of Cement plant attached in this connection but in fact the unit has not despatched any fly ash to any cement plant as it is very far from the unit and transportation is costly. Unit could not produce any documents related with transportation of Ash from plant to cement plant or other places permitted under fly ash notification duly amended. Unit disposed entire fly ash produced in nearby forest area without obtaining any permission from Respondents 1 to 4, local transporters use to lift fly ash from the unit and dump it in nearby reserve and protected forest. Three four big humps of fly ash and slag are seen in GIS and google imaginary of the plant over the area proposed for green belt. Storing or throwing of fly ash here and there in forest instead of disposal as per law is violation of all acts in</p>	<p>The Ranger, Tamnar, Forest Department has submitted report that no fly ash has been dumped in forest area and no forest land has been encroached by the industry                      During visit committee also did not find fly ash dump in the forest area.                      Fly ash utilization report submitted by project proponent total generation of fly ash in year 2019-20 &amp; 2020-21 is respectively 65148MT and 80472 MT and fly ash utilized in land filling and brick making 100% utilization has been done by project proponent utilization report submitted to CECB year 2009-10 to 2020-21.                      Observations about solid waste management have been presented in point number-04.</p>

S No	Objections by applicant	Field status
	force regarding environment conservation. Penal Action must be as certain in the matter.	
7	<p><b>Reserve and Protected Forest:</b> About 60% of area within 10 Km Radius of the unit is Reserved and Protected Forest. Toposheet attached Lot of suspended particles, ash and Fumigation impact damaged the Reserve and Protected Forest situated beside the unit and nearby. No plan to regular maintenance of forest is made by the unit. Respondents are not taking care of the Reserve and Protected Forest situated in 10 Km Radius. Entire environment of the area inclusive of forests is badly damaged by Air pollution as well a sun authorised/ illegal discharge of solid waste/ Fly ash in the area.</p>	<p>The Ranger, Tamnar Forest Department has submitted report that no fly ash has been dumped in forest area and no forest land has been encroached by the industry.</p>
8	<p><b>Carrying Capacity:</b> Unit proposed expansion of the unit unto the tune of about 36 Lac Tons per annum for which unit will require movement of about 70 lac tons material per annum. On an average about 750 Trucks per day. Area Available in the unit and roads to the plant are not adequate to take care of such heavy quantity of material. Road conditions are poor and general public are facing lot of problems of damaged roads and regular Jam over road because of unit's trucks. A detailed assessment of carrying capacity of area must be done prior to award any further expansions well as operation in present plant also. Taraimal area within 10 Kms radius has heavy traffic of trucks and all conditions of roads, environment and living standards of general public are all badly affected with heavy pollution of units situated in area. NGT vide its order dated 24.06.2021 passed in OA 104 of 2018 stipulated that carrying capacity must be ascertain in the area and long-term measures must be under taken to protect environment. No further expansion in any plant nor any new establishment must be permitted in Tamnar and Gharghoda Block until and unless proper carrying plan and environment protection measures ascertained in this heavy polluted area for living of general public in area.</p>	<p>IIT, Kharagpur has submitted it carrying capacity study report of Raigarh Region in 2018 to CECB. Remark and recommendations made in the report is as</p> <ol style="list-style-type: none"> <li>1. Regular monitoring of water quality of river, lake, ponds, tube well, underground water etc should be tested periodically through an organization of national repute and enlisted third party as notified by CPCB to ensure that toxic compounds are not present in the water bodies of Raigarh, the appropriate action plan should be taken after the review of reports.</li> <li>2. The water carrying capacity in Raigarh may continue until 2041 as predicted from model up to acceptable values. That means, in next 10 years, there may not be a problem if similar water uses and recycling pattern continues. However, the decrease in comprehensive index for water is a concern and attempts may made to improve the comprehensive index for sustainable development.</li> <li>3. In Raigarh region there are many small and medium scale sponge iron and steel industries. Sometimes fugitive emission causes the higher concentration of PM and it is essential to carry out the performance and capacity adequacy efficiency of existing pollution control devices by third party technical experts from organizations of national importance like IITs/NITs/CFTIs/CSIR Labs for minimization and provide recommendation for modification/alternation so that environment is not affected due to industrial activities.</li> <li>4. The approach road needs to be cleaned regularly and accumulation of dust on road side or plant area should be completely eliminated.</li> <li>5. Sewage drainage system is poor in few areas of Raigarh region and PHE department may be requested for appropriate delineation measures.</li> </ol>

S No	Objections by applicant	Field status
		<p>6. The concept of construction of Kelo Dam is appreciable to reserve the water. To meet the water demand and maintain the quality construction of similar dam may be planned in next 20 years.</p> <p>7. Setting-up further new industrial development should not compromise the environmental quality in coming ten years. Only industries, which will be able to install ESP as dust pollution control equipment and ETP with zero discharge concept only may be allowed to set-up.</p>
9	<p><b>Monitoring the Compliance of terms and conditions of environment clearances accorded:</b> Respondents 1 to 4 had not taken care of regular monitoring of compliance of terms and conditions of clearances only once in last 20 years conducted inspection in May 2017. Lot of irregularities found during said inspection reported vide letter of inspection committee. Unit simply replied that all irregularities were taken care off and had regularised the compliance but no further inspection to check the regularisation of irregularities pointed out had been carried out by Respondent 1 to 4. Separate detailed in section of authorised, experienced and responsible authorities with specific terms and conditions of clearance accorded to the unit must be conducted department wise so that compliance of terms and conditions of clearances and environment of the area must be maintained. Every concerned department must conduct separate detailed inspection and must verify all respective conditions.</p>	<p>i. Scientist- C of IRO Nagpur has inspected the plant on 20/05/2017 and issued a certified compliance report on 27/07/2017. Ministry has directed the IRO Nagpur office to re-inspect the plant and submit the updated certified compliance report; accordingly, IRO Nagpur has inspected the plant on 06/06/2018 and issued the updated certified compliance report on 07/06/2018.</p> <p>ii. The PP has requested IRO Nagpur to conduct the site visit and issue a certified compliance report on existing EC (J-11011/195/2007 – IA. II (I) dated 20/07/2018). Accordingly, Scientist –D of IRO Nagpur Office has conducted the site visit on 13/12/2020 and issued certified compliance report on 31/12/2020. PP has submitted the ATR to Scientist-D of IRO Nagpur office on 13/01/2021. Accordingly, Scientist-D of IRO Nagpur office has forwarded the ATR submitted by the PP to IA division, Ministry.</p> <p>iii. Scientist-C of IRO Raipur has conducted a random inspection on 02/03/2021 and issued the observation letter to PP on 10/06/2021 to submit the ATR within 30 days from the date of issuance of this letter. However, PP didn't submit the ATR in the time bound period to this office. Hence IRO Raipur has sent a Reminder letter to PP on 12/08/2021 to submit the ATR on observations made by this office. In response to the above letter issued by this office, PP has submitted the ATR dated 20/08/2021 received in this office on 30/08/2021. After analysing the ATR submitted by the PP, it was observed that out of 18 observations made by this office 11 conditions were complied, 04 conditions were partially complied or in process and 03 conditions were not complied.</p> <p>iv. The Water Resources Department, Raigarh has provided the details of water bills paid by the industry in the year 2019-20 Rs. 3593667.00 and 2020-21 Rs. 5718330.00 information received from Water Resources Department.</p> <p>v. Information received from Transport Department daily heavy vehicle (trucks) movement from Raigarh city to Punjipathra is about 2500-3000. Letter received from RTO Raigarh.</p>

S No	Objections by applicant	Field status
		<p><b>vi.</b> The Mining Department, Raigarh has provided information that no mining lease has been granted for any minerals to the industry so that no royalty is being paid by PP. Letter received from Mining Department, Raigarh.</p> <p><b>vii.</b> Regarding CSR and other activities done by PP in year 2019-20 Rs. 3372000.00 and 2020-21 is Rs. 5395000.00. Letter received from District Administration, Raigarh.</p> <p><b>viii.</b> Regarding Health and Safety measures done by PP is received from Health and Safety Department, Raigarh.</p> <p><b>ix.</b> As per information received from Industry Department, Raigarh total no. of 1026 employees are working in Industry out of them 896 belongs to C.G. State. Letter received from DTIC, Raigarh.</p>
10	ESP were not observed to be efficient as the smoke was visibly observed to be emitting from the stacks	Joint monitoring has been done by the team of CPCB, Bhopal and CECB as per emission monitoring report stack emission within standard norms. The monitoring values were also verified with OCEMS display data and found same. The monitoring report and list of air pollution control devices installed.
11	Examination of the instant level of emissions as available on online portal accessed in the office of the PP, revealed the same above average level.	Online Continuous Monitoring report of 27 - 28 <sup>th</sup> August, 2021 is shown the PM concentration in stack emission within prescribed limit.
12	Measures installed by the PP to control fugitive emission needs to be further strengthen as the entire premises of the PP was observed to be laden with the dust.	The fugitive emission monitoring was done at four locations by joint team of CPCB and CECB on 27/08/2021 and found fugitive emission within prescribed norms as per MoEF&CC notification dated 30/05/2008.
13	Considerable secondary emissions were observed in the premises;	
14	Supporting details regarding activities where fly ash is being utilized has not been made available by the PP.	The report onward provided to IRO, Nagpur and the same has been incorporated in the report of year 2018.
15	No details pertaining to the number of seedlings and area planted in the premises has been made available by the PP;	<p><b>i.</b> IRO Nagpur Office has inspected the plant on 20/05/2017 and the observations as follows:</p> <p>“The PP has informed that green belt has been developed in the 50 ha of land in their premises. However, growth of vegetation was observed to be stunted which is likely due to stacking of emissions on the leaves of the impending with the process of photosynthesis and transpiration. The details of number of seedlings and area planted in the premises has been made available by the PP. During the inspection, it was observed that there is still scope for the plantation in the premises of PP. It was reported that from the year 2001-2002 to 2016- 2017 a total number 198900 plantation has been done out which 71151 (Approx) plants has survived. (EC NO. J.11011/195/2007-IA.II (I) dated 19/02/2008 and letter dated 21/12/2010 and 23/03/2011.</p>



S No	Objections by applicant	Field status
		<p><b>ii.</b> IRO Nagpur Office has inspected the plant on 06/06/2018 and the observations as follows:                      “The total area of the premises of the PP is approximately 131 ha, out of which green belt development works have been reported to be maintained over an area of 50.0 ha by undertaking plantation of approximately 1,23,5000 plants. It was further observed that pursuant to the observation of the Regional Office, during its visit held in July 2017, the PP has undertaken plantation over additional area of approximately 1.0 ha wherein the PP has planted species like Ashoka, Petloforum, Casia, Amla, Karanj, etc. in their premises. It was further observed that the PP is undertaking levelling and other preparatory works for undertaking plantation during the coming monsoon season. The PP has informed that they are planning to plant nearly 5,000 trees in the coming monsoon seasons. Plantation work will be undertaken in the blank areas as well as in the form casualty replacement.</p> <p><b>iii.</b> IRO, Nagpur again inspected the plant on 13/12/2020 and the observations are as follows:                      “PP has developed greenbelt in 50 Ha. Out of total 137 Ha. Within the existing plant premises which is more than 33% of the total area. As on date PP has planted more than 1, 23,500 Nos. Of trees including some fruit bearing species and proposed to plant another 3000 Nos. During upcoming monsoon. Photographs showing greenbelt in the plant premises &amp; third-party verification of plantation report was submitted by the PP.</p> <p><b>iv.</b> IRO Raipur has inspected the plant on 02/03/2021 the observation are as follows:                      It was informed that 50 Ha of greenbelt has already been developed out of total 137 Ha. Within the existing plant Premises. Project authorities are directed to submit the plant layout plan with earmarking the plantation done in the 33% of the plant area.” IRO Raipur has issued a Monitoring of Compliance status of EC Stipulation with vide letter No. 5-34/2008 (ENV)/126 dated 10/06/2021 to PP. PP have submitted the reply to this office on 30/08/2021, which is not as per the stipulated observation made by this office.</p>
16	Details of expenditure incurred in the environment protection measures has not been made available by the PP;	Details of expenses for Environmental Protection measures for the April 2017-21 is Rs. 40433506.
17	Occupational health surveillance of the workers has not been made available by PP	Project Proponent has submitted the occupational health surveillance data.
18	No Data on the air quality monitoring is recorded;	The ambient air quality monitoring done by third party M/s Enviro 1 analysts & engineers pvt.ltd.
19	Details of data on the AAQ collected by CECB and CPCB has not been made available by the PP;	Mumbai (NABET accredited and MOEF (Government of India) approved} in factory

S No	Objections by applicant	Field status
		premises on dated 21.11.2020 and 05.07.2021 Ambient Air Quality is under prescribed limit.
20	Details of monitoring of noise level has not been made available;	The Noise Level Monitoring done by third party M/s. Enviro Analysts & Engineers Pvt. Ltd, Mumbai (NABET accredited and MoEF, Government of India approved) in factory premises on dated 21/11/2020 and 05/07/2021 Ambient Noise Level is under prescribed limit.
21	Details of expenditure incurred in the environment safeguard has not been made available by the PP,	PP has submitted the details of expenses for Environmental Protection measures for the April 2017-21 is Rs. 40433506.
22	No arrangements were observed to display the data RSPM, SO <sub>2</sub> and NO <sub>x</sub> outside the premises;	One CAAQMS was found installed and operational and arrangement for display of the data has been done on the main gate of the industry.
23	Stack height of the boiler was observed to be below 120 meters;	It seems typographical error as prescribed height of stack in Consent to Operate is 30 m i.e. 120 ft.

- Honourable NGT hearing was conducted on 18/01/2022.
  - **The Original Application No. 55 of 2021 along with I.A. No. 44/2021 stands disposed of finally with the following directions.**
  - **Honourable NGT directed the Singhal Enterprises to strictly comply with the recommendations submitted by the Joint Committee and also direct the State Pollution Control Board to regularly monitor the status of the compliance and in case of any non-compliance of the directions, necessary action be taken according to law.**

52.16.17 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No. 139; List of ACOs with their Certificate no. NABET/EIA/1922/RA0149 valid till 22/03/2022, Rev. 18, January 05, 2022].

#### **Certified Compliance report from RO**

52.16.18 The Status of compliance of earlier EC was obtained from Integrated Regional Office (IRO), Raipur vide letter no. 5-34/2008 (ENV)/ 126 dated 10/06/2021 on the basis of site inspection on 02/03/2021. Project proponent has submitted action taken report to IRO, Raipur vide letter dated 20/08/2021. A site inspection was carried out on 27/08/2021 by RO, Raipur. PP applied for closure report vide letter dated 05/11/2021. Comments on the ATR submitted by PP obtained from RO, Raipur on 21/12/2021. The detail is given as below:

S.No.	Observations made in CCR dated 10/06/2021	Corrective action taken by PP	Comments of RO dated 21/12/2021
i.	Project authorities are directed to submit the detailed ESC expenditure along with six monthly compliance reports to this office <b>(Specific Condition -I)</b> .	The expenditure details of ESC have been submitted to IRO, Raipur. An amount of Rs.90,16,780/- has been spent in the year May 2018 to March 2020 for ESC/CER expenditures. The six-monthly compliance report of EC granted to PP for the period of January 2021 to June 2021 report has already been submitted to IRO, Raipur through	PP has submitted the comprehensive ESC details for the period 01/04/2019 to 31/03/2020. However, for the details of ECS for the period 01/04/2020 to 31/03/2021 has not been provided by PP.

S.No.	Observations made in CCR dated 10/06/2021	Corrective action taken by PP	Comments of RO dated 21/12/2021
		email on 16/08/2021.	
ii.	Project authorities are directed to submit a copy of the letter submitted to Chief Conservator of Forest and physical & financial targets of the implement the wildlife conservation plan shall be submitted to is office ( <b>Specific Condition —III</b> ).	PP has given letter to Chief Conservator of Forest to adjust the amount of Rs. 74,97,881/- already PP has deposited to the Department for diversion of Forest land for laying 133 KV Transmission line. Since PP has cancelled that proposal and requested the Department to Refund the amount and out of which Rs. 65 Lakhs to be adjusted for implementation of Wild life Conservation Plan.	The PP has submitted a letter to PCCF, and the same is under consideration.
iii.	Project authorities are directed to carry out the monitoring of stack, ground water, noise levels once in a month, effluent Quality twice in a month respectively as per stipulated condition and reports shall be submitted to Ministry's Regional Office, Raipur ( <b>Specific Condition -IV</b> ).	PP is regularly monitoring stack emissions, Effluent, ground water and noise levels as per stipulation. The latest report has been submitted to IRO, Raipur.	PP has submitted the stack emission report (No. 8), Ambient Air quality report (4 locations), fugitive emission report (4 locations), Noise monitoring report (4 locations), Ground water monitoring report (4 locations), DM effluent and cooling Tower blow down water sample reports conducted by third party for the month of 05/07/2021 has been submitted and it was analyzed that all the parameters are within standards.
iv.	Project authorities are directed to submit detailed report on reasons for dumping the huge quantity of Dolo char waste and fly ash the inside plant premises and time taken to 100% utilization of the same submitted to this on quarterly basis ( <b>Specific Condition -V</b> ) & ( <b>General Condition -VIII</b> ).	All dolochar generated from DRI plant is being utilized in the FBC power plant. Fly ash generated from the ESP of FBC boiler is being used in PP's own brick making plant as well as given local brick manufacturers. Left over Bottom ash is disposed onto the land and properly levelled and then soil layer has been kept on the top it. Greenbelt also has been developed over the fly ash area. Accretion slag is used in road construction inside the plant premises.	The industry has installed a fly ash brick making plant of capacity 30,000 numbers per day in the premises. Kiln accretion was being used in road construction inside the plant. Char is used in AFBC boiler, Bottom ash is found inside premises.
v.	Project authorities are directed to submit the plant layout plan with earmarking the plantation done in the 33% of the plant area ( <b>General Condition -I</b> ).	The plant layout earmarking the plantation developed in the 37% of the plant area has been submitted. Greenbelt has been developed in <b>51 Ha</b> .	PP has submitted the layout plan of the plant of year 2016. However, PP got expansion in 2018, from the layout plan

S.No.	Observations made in CCR dated 10/06/2021	Corrective action taken by PP	Comments of RO dated 21/12/2021
			submitted by PP it was not cleared that whether the green belt was developed in 33% area of the plant.
vi.	Project authorities are directed to submit the detailed expenditure made towards capital cost and recurring cost/annum (for past two financial years) for environmental pollution control measures to implement the condition stipulated by the Ministry of Environment and Forests and its implementation schedule to the Regional Office of this Ministry at Raipur ( <b>General Condition -II</b> ).	The detailed expenditure made towards capital cost and recurring cost/annum for the period from 01/04/2017 to 23/03/2021 for environmental pollution control measures have been submitted to IRO, Raipur.	The detailed expenditure made towards capital cost for the period 01/04/2017 to 23/03/2021 has been provided.
vii.	Project authorities are directed to install the AAQ as per stipulation condition and 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. ATR in this regard may be submitted this office on quarterly basis to Regional Office of MoEF&CC, Raipur ( <b>General Condition -III</b> ).	PP has already installed the continuous ambient air quality monitoring station and connected to CPCB online servers. A photograph showing the same has been submitted to IRO, Raipur. Monthly reports of stack emission are also submitted to IRO, Raipur.	It was observed that one AAQS has been found installed and operational and arrangement for display of the data has been done at main gate of the industry.
viii.	Project authorities are directed to submit the water balance sheet which ensures that the industry is being maintained the zero effluent discharge and conduct the ground water mentoring in and around areas (at least 4 locations) of where the char waste, sludge crushing area and fly ash is being disposed and the monthly summary reports of the same shall be submitted to this office ( <b>General Condition -IV</b> ).	The water balance sheet has been submitted. The ground water analysis reports carried out near the char dump area, near fly ash area., near slag crushing area, near weigh bridge. All parameters are within the IS: 10500 specifications.	Water balanced sheet prepared by the PP has been submitted. Ground water monitoring Near Weigh Bride, Char Dump area, near fly ash area and near slag crush unit has been conducted through third party in the month of July, 2021 and the reports of the same has been provided and it was observed that the parameters are within the limits.
ix.	It was also observed that Solid wastes like, ESP dust, Fly ash, Dolochar, slag, Bag Filter dust, coal fines etc were found observed in almost all the units which show that the air pollution control devices are not function properly. PA has been directed to install the bag filters at all the raw material handling unit which are connected to Kilns and take appropriate action for reducing	We have installed 03 New Bag Filters in each of the raw material handling systems which are connected to Kilns. All the solid waste such as ESP dust, slag, bag filter dust is being disposed off in environment-friendly manner. Solid waste management plan is maintained as given below:	It was observed that new bag filters have been installed by the PP. The industry has installed a fly ash Brick making plant of capacity 30,000 numbers per day in the premises. Kiln accretion was being used in road construction inside the plant. Char is used in AFBC boiler.

S.No.	Observations made in CCR dated 10/06/2021	Corrective action taken by PP	Comments of RO dated 21/12/2021
	the solid waste where are disposed in open areas, ATR in this submitted to this office on quarterly basis ( <b>General Condition —V</b> ).	1.Ash from DRI is used in own brick manufacturing as well as given to other brick manufacturers. 2.The Reason for accumulation of dolochar is the FBC boiler was under maintenance. Now there is no dolochar accumulation in the premises. The entire dolochar is being completely used in FBC boiler as fuel. 3. Kiln Accretion slag is used in road construction inside the plant premises.	Bottom ash is found inside premises.
x.	After analyzing the noise level monitoring report (Sampling date 911.2020) it has been observed that the noise level result at the location near TG building is found to be 74.1 dB(A) (day) which is almost exceeds the prescribed limits, PA has been asked to clarify the same and submit ATR to this office ( <b>General Condition -XX</b> ).	Silencers have been provided to reduce the noise levels during steam blowing. Sometimes the noise level might be in the range of 74 dBA because of sudden Power fluctuation which is within the permissible limit of 75 dBA.	Silencers has been provided to control the noise level by the PP. However. Noise monitoring report submitted by the PP for the month of July, 2021 was analyzed and it was observed that at the same location i.e. near TG building is found 74.3 dB(A) (day) time.
xi.	Project authorities are directed to upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically [ <b>General Condition —XXV (d)</b> ].	Noted & agreed.	Assured to comply
xii.	Project authorities are directed to install a display board at the main gate of the plant to display the criteria pollutants level namely; PM <sub>2.5</sub> , PM <sub>10</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) and upload on the website of the company also [ <b>General Condition —XXV (2)</b> ].	We have already provided a display board at the main gate of the plant to display the pollutant levels of PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) and also uploaded the same on the website of the company.	It was observed that display board has been installed at the main gate of the plant by the PP.
xiii.	Project authorities are directed to submit the details of date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work to this office [ <b>General Condition —XXV (h)</b> ].	CTE has been obtained from CECB on 26/10/2018 & CTO on 14/12/2018 for Rolling Mill & 18 MW FBC power plant.	PP informed that CTE was obtained from CECB on 26/10/2018 and CTO was obtained from CECB on 14/12/2018.
xiv.	Project authorities are directed to submit time bound action plan on to reducing the Particulate emission from the stacks shall be less than 30	We have replaced the existing bag which are connected with 4x8 MT Induction Furnaces & 4x10 MT Induction Furnaces to	PP has installed fiber glass bag filter to achieve PM below 30 mg/ Nm <sup>3</sup> .

S.No.	Observations made in CCR dated 10/06/2021	Corrective action taken by PP	Comments of RO dated 21/12/2021
	mg/Nm <sup>3</sup> and installing fiber glass to all the bag filters to achieve above emission norms on quarterly basis to this office (EC dated 06/03/2019).	achieve the Particulate emission below 30 mg/Nm <sup>3</sup> .	
xv.	Heavy fugitive emission was observed from the conveyor belts of the boiler and transferring points in this regard ATR shall be submitted to this office.	Covers of conveyers have been replaced to reduce the fugitive emission. We have replaced the existing bag which is connected with 4x8 MT Induction Furnaces & 4x10 MT Induction Furnaces to achieve the Particulate emission below 30 mg/Nm <sup>3</sup> . Fugitive emission monitoring report shows the emission within the prescribed limits.	Fugitive emission report for the month of July, 2020 submitted by the PP has been analyzed and it was observed that PM is within the limit.
xvi.	Project authorities are directed to submit the Fly ash utilization report to this office.	Report of fly ash utilization of latest month has been submitted.	Fly ash utilization report prepared by the PP for the month of July, 2021 has been submitted.
xvii.	Uploading six monthly progress reports and monitoring reports on the web site of the company may be ensured.	Noted &complying	Six monthly compliance report for the period April, 2021 has been received by this office.
xviii	Regular submission of six-monthly progress reports in soft copies may be ensured as the same will be displayed on the website of the Ministry in pursuance of the EIA notification, 2006 Next date of submission of six-monthly compliance report is 1 <sup>st</sup> week of December, 2021.	Noted &submitted.	Assured to Comply.

52.16.19 The proponent had earlier applied for Environment Clearance vide proposal no. IA/CG/IND/88614/2018 dated 27<sup>th</sup> December 2021 and the proposal was considered in 51<sup>st</sup> REAC meeting held on 11-12<sup>th</sup> January 2022 wherein the Committee recommended the proposal to be returned in present form due to the shortcomings.

52.16.20 The proponent has again applied vide proposal no. IA/CG/IND/252503/2020, dated 21<sup>st</sup> January 2022 with revised EIA Report addressing the observations of the EAC as mentioned below:

<b>Point No. i</b>	<b>The project proponent has uploaded the application for grant of EC wrongly against the previous EC granted on 6/3/2019 instead of the ToR accorded on 19/09/2020.</b>
Reply	The proponent has rectified and submitted the revised application against ToR accorded on 19/09/2020.
<b>Point No. 2</b>	<b>The traffic assessment study reveals that the level of service with existing traffic load is poor which is expected to be poorer after commencement of the proposed project. PP has not provided tangible action plan/management plan to address the said issue. Details regarding the carrying capacity of the road as per IRC guidelines have not been submitted.</b>

<p>Reply</p>	<p>Details regarding the carrying capacity of the road as per IRC guidelines are furnished in Pg. No. 4.28 of CHAPTER # 4 of Revised Final EIA report.</p> <p>The existing plant site is well connected by SH # 1 (Ambikapur to Raigarh ) is adjacent to the plant which is capable of absorbing additional truck movement due to transportation.</p> <table border="1"> <thead> <tr> <th>Particulars</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>Traffic load study period</td> <td>December 2020</td> </tr> <tr> <td>Baseline Traffic load (PCU/day )</td> <td>14737</td> </tr> <tr> <td>Additional traffic load during operation of the expansion project (PCU/day)</td> <td>2222</td> </tr> <tr> <td><b>Total traffic load during operation of existing and proposed expansion project</b></td> <td><b>16959</b></td> </tr> <tr> <td><b>Traffic capacity as per the IRC 106 : 1990 for highways (PCU/day)</b></td> <td><b>30,000</b></td> </tr> </tbody> </table> <p>Level of Service (LOS) of the Road as per IRC</p> <table border="1"> <thead> <tr> <th>V/C</th> <th>LOS</th> <th>Performance</th> </tr> </thead> <tbody> <tr> <td>0.0 – 0.2</td> <td>A</td> <td>Excellent</td> </tr> <tr> <td>0.2 – 0.4</td> <td>B</td> <td>Very Good</td> </tr> <tr> <td><b>0.4 – 0.6</b></td> <td><b>C</b></td> <td><b>Good</b></td> </tr> <tr> <td>0.6 – 0.8</td> <td>D</td> <td>Fair/ Average</td> </tr> <tr> <td>0.8 – 1.0</td> <td>E</td> <td>Poor</td> </tr> <tr> <td>1.0 &amp; Above</td> <td>F</td> <td>Very Poor</td> </tr> </tbody> </table> <p>The Level of Service (LOS) of the Road = 16,959 / 30,000 = 0.56 As per the above the LOS of the ROAD is categorised under ‘C’, which implies “GOOD”. Hence the existing road is capable of taking the additional traffic load.</p>	Particulars	Details	Traffic load study period	December 2020	Baseline Traffic load (PCU/day )	14737	Additional traffic load during operation of the expansion project (PCU/day)	2222	<b>Total traffic load during operation of existing and proposed expansion project</b>	<b>16959</b>	<b>Traffic capacity as per the IRC 106 : 1990 for highways (PCU/day)</b>	<b>30,000</b>	V/C	LOS	Performance	0.0 – 0.2	A	Excellent	0.2 – 0.4	B	Very Good	<b>0.4 – 0.6</b>	<b>C</b>	<b>Good</b>	0.6 – 0.8	D	Fair/ Average	0.8 – 1.0	E	Poor	1.0 & Above	F	Very Poor
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1.0 & Above	F	Very Poor																																
<p>Point No. 3</p>	<p><b>PP submitted that 600 nos. of tree to be translocated from existing green belt area. To compensate this, PP reported that they will be planting 3000 trees in 1.0 ha in addition to the existing land. PP shall provide the information details (type, height, age, etc.) of trees to be translocated. Recalculate the total land under green belt area after translocating the 600 trees from existing green belt and the same needs to be furnished. However, as per the CPCB norms, only 2500 trees can be planted in one hectare. Therefore, the PP should explore additional area or explain how they will plant 3,000 trees.</b></p>																																	
<p>Reply</p>	<p>Project Proponent has proposed to Translocate the 600 nos. of Plants &amp; proposed to develop additional plantation of 1900 nos. i.e. total 2500 nos. which will be developed in an additional area of 1.0 Ha. <b>Hence the Total Greenbelt area will be 52 Ha.</b></p> <p>Details of type, height, age, etc. of trees to be translocated are furnished below</p> <table border="1"> <thead> <tr> <th>Scientific name</th> <th>Common name</th> <th>GBH in Cm</th> <th>Height in m</th> <th>Approx. Age</th> </tr> </thead> <tbody> <tr> <td>Casuarina equisetifolia</td> <td>Casuarina</td> <td>18 to 34</td> <td>10 to 18</td> <td>3 to 5</td> </tr> <tr> <td>Anthocephalus indica</td> <td>Kadamb</td> <td>33 to 51</td> <td>5 to 9</td> <td>5 to 7</td> </tr> <tr> <td>Azadirachta indica</td> <td>Neem</td> <td>27 to 35</td> <td>4 to 6</td> <td>7 to 10</td> </tr> <tr> <td>Saraca asoca</td> <td>Ashok</td> <td>16 to 44</td> <td>7 to 10</td> <td>4 to 6</td> </tr> <tr> <td>Delonix regia</td> <td>Gulmohar</td> <td>16 to 30</td> <td>5 to 10</td> <td>5 to 6</td> </tr> </tbody> </table>	Scientific name	Common name	GBH in Cm	Height in m	Approx. Age	Casuarina equisetifolia	Casuarina	18 to 34	10 to 18	3 to 5	Anthocephalus indica	Kadamb	33 to 51	5 to 9	5 to 7	Azadirachta indica	Neem	27 to 35	4 to 6	7 to 10	Saraca asoca	Ashok	16 to 44	7 to 10	4 to 6	Delonix regia	Gulmohar	16 to 30	5 to 10	5 to 6			
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<b>Point No. 4</b>	<b>PP submitted in document that granulated slag will be sold to road contractors and cement plants. PP shall provide copy of Memorandum of Understanding to this effect.</b>																														
Reply	PP confirms that granulated slag from BF will be given to M/s. ADHIRAJ CEMENTS. Willingness letter is submitted by proponent.																														
<b>Point No. 5</b>	<b>Incremental Ground Level Concentration for SO<sub>2</sub> and NO<sub>x</sub> are reported to be high. No additional mitigation measures are proposed in this regard.</b>																														
Reply	<p>Now PP is considering</p> <ul style="list-style-type: none"> <li>• Sulphur content in LDO/LSHS proposed as fuel in Pellet plant &amp; Reheating Furnace &lt; 0.4% (by mass)</li> <li>• Maximum Sulphur content in Indian &amp; imported coal proposed in Sponge iron plant is considered from 0.5% &amp; 0.8% (by mass) respectively.</li> <li>• All transport vehicles will have PUC certification.</li> </ul> <p>The following are the revised Net resultant GLCs.</p> <p style="text-align: center;"><b>Net Resultant GLCs</b></p> <table border="1"> <thead> <tr> <th>Item</th> <th>PM<sub>10</sub> (µg/m<sup>3</sup>)</th> <th>SO<sub>2</sub> (µg/m<sup>3</sup>)</th> <th>NO<sub>x</sub> (µg/m<sup>3</sup>)</th> <th>CO (µg/m<sup>3</sup>)</th> </tr> </thead> <tbody> <tr> <td>Maximum baseline conc. in the study area</td> <td>88.2</td> <td>22.8</td> <td>35.1</td> <td>1495</td> </tr> <tr> <td>Maximum predicted incremental rise in concentration during operation of the ENTIRE proposal (unimplemented units as per earlier E.C. &amp; present expansion) by SEPL</td> <td>3.2</td> <td>9.8</td> <td>8.3</td> <td>Nil</td> </tr> <tr> <td>Maximum predicted incremental rise in concentration due to <b>Vehicular Emissions from the ENTIRE proposal</b> (unimplemented units as per earlier E.C. &amp; present expansion) by SEPL</td> <td>1.5</td> <td>Nil</td> <td>6.4</td> <td>3.9</td> </tr> <tr> <td><b>Net resultant concentrations during operation of ENTIRE proposal</b> (unimplemented units as per earlier E.C. &amp; present expansion) by SEPL</td> <td>92.9</td> <td>32.6</td> <td>49.8</td> <td>1498.9</td> </tr> <tr> <td><b>National Ambient Air Quality Standards</b></td> <td><b>100</b></td> <td><b>80</b></td> <td><b>80</b></td> <td><b>2000</b></td> </tr> </tbody> </table>	Item	PM <sub>10</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>x</sub> (µg/m <sup>3</sup> )	CO (µg/m <sup>3</sup> )	Maximum baseline conc. in the study area	88.2	22.8	35.1	1495	Maximum predicted incremental rise in concentration during operation of the ENTIRE proposal (unimplemented units as per earlier E.C. & present expansion) by SEPL	3.2	9.8	8.3	Nil	Maximum predicted incremental rise in concentration due to <b>Vehicular Emissions from the ENTIRE proposal</b> (unimplemented units as per earlier E.C. & present expansion) by SEPL	1.5	Nil	6.4	3.9	<b>Net resultant concentrations during operation of ENTIRE proposal</b> (unimplemented units as per earlier E.C. & present expansion) by SEPL	92.9	32.6	49.8	1498.9	<b>National Ambient Air Quality Standards</b>	<b>100</b>	<b>80</b>	<b>80</b>	<b>2000</b>
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<b>Point No. 6</b>	<b>Action plan to address the issues raised during public hearing is not in conformity to the MoEF&amp;CC O.M. dated 30/09/2020.</b>																														
Reply	Revised Action plan to address the issues raised during public hearing is submitted by proponent.																														
<b>Point No. 7</b>	<b>Data (Land and AAQ modelling results) reported in the EIA report and Form- 2 are not in consonance with each other.</b>																														
Reply	PP has updated the Land details & AAQ modelling and the data in EIA report and in Form- 2 are in consonance with each other.																														



<b>Point No. 8</b>	<b>There is a ground water usage for the domestic activity. Details regarding the same and the approval of the Competent Authority has not been made available.</b>
Reply	<b>No Groundwater usage is envisaged for Domestic activity.</b> Water required for domestic purpose will be met from Chuikansa Nallah (a tributary of Kelo river). Permission for drawl of water from Water Resources Department of Government of Chhattisgarh has allocated for a quantity of 5.42 MCM (14,850 KLD) per year vide letter dt.23 <sup>rd</sup> June 2008. A copy of the Water Permission is enclosed in the Revised Final EIA report as Annexure - 1.
<b>Point No. 9</b>	<b>PP has claimed that they have their own brick plant to consume fly ash and the ash from the pellet plant. The details of the brick plant are not available in the documents. It has also been mentioned that fly ash shall be given to nearby brick industry.</b>
Reply	PP is operating Existing brick manufacturing plant of 30,000 Bricks/day capacity. The same has been incorporated in the Plant Configuration Table in Chapter # 1 of Revised Final EIA report. The Fly ash from expansion project will be given to near by Brick making units.
<b>Point No. 10</b>	<b>ToR point # 9 pertaining to Corporate Environment Policy has not been addressed.</b>
Reply	Revised Corporate Environment Policy is furnished in Revised Final EIA report.
<b>Point No. 11</b>	<b>Taraimal Village and Taraimal Reserved Forest is located at 0.80 kms. in SE direction from project boundary. Mitigation/conservation measures to be adopted in this regard has not been elucidated in the EIA report.</b>
Reply	<b>Mitigation/conservation measures proposed</b> <ul style="list-style-type: none"> <li>➤ PP confirm that they have already developed <b>30 m</b> wide greenbelt towards Taraimal Forest situated adjacent to plant in Western side &amp; Southern Side. Plant layout showing the same is submitted by the proponent.</li> <li>➤ Taraimal village is in South East direction to the plant. However, there is another industry is situated adjoining to the plant Boundary in SE direction Between SEPL &amp; Taraimal Village.</li> <li>➤ All environmental protection measures such as ESPs (with high efficiency Rigid discharge electrodes), Bag filters (PTFE membrane type), covered conveyers, dust suppression systems, pucca internal roads (designed for 16 MSA as per IRC - 37), mechanical dust sweepers will be provided and operated duly ensuring compliance with the norms.</li> <li>➤ Now PP is considering Sulphur content in LDO/LSHS proposed as fuel in Pellet plant &amp; Reheating Furnace &lt; 0.4% (by mass) and considering Maximum Sulphur content in Indian &amp; imported coal proposed in Sponge iron plant is considered from 0.5 &amp; 0.8% (by mass).</li> <li>➤ Interlocking system will be provided to ESPs and whenever the particulate emission is exceeding the norms, the raw material feed to the unit will stop. Consequently there will be no production in the unit till ESP is rectified.</li> <li>➤ Net resultant GLCs after expansion will be within the NAAQS.</li> <li>➤ All transport vehicles will be with PUC certification.</li> </ul> <p><b>With all the aforementioned environment protection measures there will not be any adverse impact on Taraimal Village and Taraimal Reserved Forest due to the proposed expansion project.</b></p>
<b>Point No. 12</b>	<b>Out of total 137 ha project land about 74.8 ha land is in the name of company and about 62.5 ha land is in the name of company directors. PP shall be provided the valid lease document of 137 ha in the name of company only.</b>

Reply	Total land available for the plant is 137 Ha. Out of this <b>74.836 Ha.</b> is registered in the name of Singhal enterprises Pvt. Ltd. and for the remaining land of <b>62.583 Ha.</b> Long-term lease deed (30 years) has been executed between the <b>Directors of the company</b> (individuals) & <b>Singhal Enterprises Pvt. Ltd.</b> Registered Lease deed of the same is submitted by proponent.
<b>Point No. 13</b>	<b>PP shall give an undertaking that there is no any other company operating adjoining to the project under the same ownership.</b>
Reply	PP confirm that M/s. Singhal Enterprises Pvt. Ltd. (SEPL) is operating the plant in 137 Ha. of Land. There are 2 more Industries M/s. Shree Shyam Ispat Pvt. Ltd. & M/s. Singhal Energy Pvt. Ltd. adjoining to SEPL. All three units are different entities operating with different Permissions.
<b>Point No. 14</b>	<b>There are partially complied conditions as per comments on the ATR submitted by PP obtained from RO, Raipur on 21/12/2021. PP shall be provided the action taken report by PP and final closure report from RO, Raipur.</b>
Reply	Action taken report dated 21/01/2022 submitted to IRO, Raipur on 2 nos. of partially complied conditions is submitted by proponent.
<b>Point No. 15</b>	<b>IA- Monitoring Cell vide letter 29/11/2021 sought for an Action taken report from the proponent on the observations made by the Joint Committee constituted by Hon'ble NGT and in the IRO monitoring report. The response submitted by the proponent in this regard, have not been made available in the EIA report.</b>
Reply	PP has submitted Action taken report dated 06/12/2021 submitted to IA Monitoring Cell in reply to their letter dated 29/11/2021 on the observations made by the Joint Committee constituted by Hon'ble NGT and in the IRO monitoring report.
<b>Point No. 16</b>	<b>A court case is pending before Hon'ble NGT, Central Zone Bench, Bhopal. PP informed that the case is listed for hearing on 18/01/2022. The outcome of the said case shall be brought on record by the proponent.</b>
Reply	<b>Honourable NGT hearing was conducted on 18/01/2022.</b> The Original Application No. 55 of 2021 along with I.A. No. 44/2021 stands <b>disposed of finally</b> with the following directions. Honourable NGT directed the Ms/. Singhal Enterprises to strictly comply with the recommendations submitted by the Joint Committee and also direct the State Pollution Control Board to regularly monitor the status of the compliance and in case of any non-compliance of the directions, necessary action be taken according to law. A copy of Honourable NGT Order is submitted by proponent.

52.16.21 During the meeting, the written submissions made by the proponent are given as below.

<b>Point # 1</b>	<b>Regarding change in LOS from the earlier proposal and present proposals</b>
Reply # 1	PP has considered IRC 73 guidelines for traffic assessment study, now we have considered IRC 106 (latest guidelines) for traffic assessment study. Traffic capacity as per the IRC 106 is 1500 PCU / Hr. OR 30,000 PCU / day (considering 20 hour of traffic)
<b>Point # 2</b>	<b>Confirmation on designing of Internal Road (i.e. connecting exit point of State Highway to Storage Yard within the premises) for 20 MSA capacity</b>
Reply # 2	PP will design the Internal roads connecting exit point of State Highway to Storage yard within the premises for 20 MSA capacity
<b>Point # 3</b>	<b>Confirmation on providing Bell mouth type entry at the Main gate of the plant</b>
Reply # 3	PP will provide Bell Mouth type entry at the main gate of the plant

<b>Point # 4</b>	<b>Confirmation regarding plantation of additional plants, for 600 no. of trees to be translocated @ of 1:5 or norms of State Forest Department, which ever is higher, shall be followed</b>
Reply # 4	PP will plant additional 3000 no.s of plant within the plant premises, for 600 no.s of trees to be translocated @ of 1:5 or norms of State Forest Department, whichever is higher, will be followed. With this the greenbelt will increase from 51 Ha. to 52.25 Ha.
<b>Point # 5</b>	<b>Justification regarding the difference in GLCs mentioned in Form – 2 &amp; EC ppt. (presented during 51<sup>st</sup> REAC meeting)</b>
Reply # 5	PP confirm that incremental GLCs mentioned in EIA, Form – 2 & EC presentation with respect to PM <sub>10</sub> , SO <sub>2</sub> & NO <sub>x</sub> are in concurrence. However, in EIA & Form – 2, we have considered with GLC pertaining to present proposal along with unimplemented units of earlier EC, where as in the EC presentation, PP have considered the GLC pertaining to only present expansion proposal. Hence the difference.
<b>Point # 6</b>	<b>Revised Corporate Environment Policy</b>
Reply # 6	PP has submitted the revised the Corporate Environment Policy, by including, GM will report directly to Director (Technical).

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

52.16.22 The Committee noted the following:

- i. The Committee noted that the EIA/EMP report for the expansion project is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
- ii. The Committee also deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.
- iii. The Committee deliberated upon the certified compliance report of RO and action taken report submitted by PP with respect to the compliance status of all the existing EC and found its satisfactory.
- iv. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

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

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

**A. Specific Conditions**

- i. The project proponent shall abide by all orders and judicial pronouncements, made from time to time by the Hon'ble National Green Tribunal in Original Application No. 55 of 2021 along with I.A. No. 44/2021.
- ii. Rejects from coal washery shall only be used either in the captive power plant (or) in the Thermal Power Plants meeting emission standards.
- iii. Internal roads shall be designed for 20 Million Standard Axle. Entry gate shall have Bell Mouthed Entry.
- iv. Solid waste utilization
  - PP shall install a fly ash brick making plant.
  - PP shall recycle/reuse 100 % solid waste generated in the plant.
  - Used refractories shall be recycled as far as possible.
- v. Sinter Plant shall be equipped with Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant.
- vi. Blast Furnace shall be equipped with dry gas cleaning plant, stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.
- vii. Submerged Arc Furnace shall be of closed type with 4th hole extraction system.
- viii. 85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil or BF gas.
- ix. Dust emission from stacks shall be less than 30 mg/Nm<sup>3</sup>.
- x. 14850 KLD water shall be drawn from Kelo river. No ground water abstraction is permitted.
- xi. Green Belt shall be developed in 33 % of total land with tree density of 2500 trees per ha. (or 1000 trees per acre) all along the periphery of the project site. This shall include development of green belt with a width of 30 m within the project site towards Taraimal reserve forest and Village Taraimal. In addition to this, 600 trees are to be translocated after prior permission from the concerned competent authority. Additional 3000 trees will be planted in the area of translocation covering 1.25 Ha land thus the total green belt shall be 52.25 Ha as committed.
- xii. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.
- xiii. The recommendations of the approved Site-Specific Wildlife Conservation Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.

**B. General conditions**

**I. Statutory compliance:**

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

**II. Air quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous emission monitoring system at

- process stacks to monitor stack emission as well as four Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
  - iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
  - iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
  - v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
  - vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
  - vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
  - viii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

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

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30<sup>th</sup> May 2008; G.S.R 277 (E) dated 31<sup>st</sup> March 2012 (applicable to IF/EAF); 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. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- iv. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31<sup>st</sup> March 2012 (applicable to IF/EAF) as amended from time to time.
- v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

**IV. Noise monitoring and prevention**

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

**V. Energy Conservation measures**

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

**VI. Waste management**

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

**VII. Green Belt**

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

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

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

**IX. Environment Management**

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

**X. Miscellaneous**

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

- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

52.17 Expansion of Cement Plant with Increase of Clinker Production from 0.165 MTPA to 3.00 MTPA and Cement from 0.252 MTPA to 2.00 MTPA (OPC/PPC/PSC/Composite Cement/GGBS) along with installation of 12 MW Waste Heat Recovery Power Plant by **M/s. Shiva Cement Limited** located at Village Telighana, P.O. Bringatoli, Kutra, **District Sundargarh, Odisha**. [Online Proposal No. IA/OR/IND/250109/2010, File No. J-11011/84/2008- IA II (I)] – **Environment Clearance – regarding**.

52.17.1 M/s. Shiva Cement Limited, has made an online application vide proposal no. IA/OR/IND/250109/2010 dated 21/01/2022 along with copy of EIA/EMP report, Form-2 and certified EC Compliance report seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(b) Cements plants under Category “A” of the schedule of the EIA notification, 2006 and appraised at Central level.

**Details submitted by Project proponent**

52.17.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	ToR Validity
13/11/2020	Standard ToR was issued by the MoEF&CC	Terms of Reference	21/11/2020	20/11/2024

52.17.3 The project of M/s. Shiva Cement Limited located at Telighana Village, P.O. Bringatoli, Kutra, District Sundargarh, Odisha is for expansion of Cement Plant with Increase of Clinker Production from 0.165 MTPA to 3.00 MTPA and Cement from 0.252 MTPA to 2.00 MTPA (OPC/PPC/PSC/Composite Cement/GGBS) along with installation of 12 MW Waste Heat Recovery Power Plant in two phases as below.

**INCREASE OF PRODUCTION, (MTPA)**

	Present Capacity	Capacity After Expansion
Clinker	0.165*	#3.0
Cement (OPC/ PPC/ GGBS/ PSC/ Composite Cement)	0.252*	2.0
Waste Heat Recovery power generation (MW)	-	12.0

Note: \*After implementation of existing EC, the old Unit of 0.165 MTPA clinker and 0.252 MTPA Cement will be dismantled as it’s an inefficient plant. The proposed new plant will be energy and environmentally efficient.  
#Out of 3.0 MTPA, 2.0 MTPA clinker will be sent to Split Grinding units

52.17.4 Environmental site settings

S. No	Particulars	Details	Remarks												
i.	Total land	<p>Land Area: 28.68 ha</p> <p>Existing land belonging to SCL is 28.68 ha and the project expansion of cement plant will be executed within the existing land.</p> <p>Land use:</p> <table border="1"> <thead> <tr> <th>S. No</th> <th>Details</th> <th>Before Expansion</th> <th>After Expansion</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Built up area</td> <td>5.19</td> <td>10.41</td> </tr> <tr> <td>2</td> <td>Storage (Limestone, Coal/Petcoke and correctives)</td> <td>0.00</td> <td>2.35</td> </tr> </tbody> </table>	S. No	Details	Before Expansion	After Expansion	1	Built up area	5.19	10.41	2	Storage (Limestone, Coal/Petcoke and correctives)	0.00	2.35	
S. No	Details	Before Expansion	After Expansion												
1	Built up area	5.19	10.41												
2	Storage (Limestone, Coal/Petcoke and correctives)	0.00	2.35												



S. No	Particulars	Details				Remarks	
		3	Roads area	1.00	3.00		
		4	Parking area	1.00	2.80		
		5	Existing Greenbelt – Plant area	6.12	3.29		
		6	Existing Greenbelt – Colony area				1.93
		7	Existing Greenbelt – Truck area				0.90
		8	Proposed Greenbelt Plant area		-		3.50
			Area of Colony	2.43 (Greenbelt + Buildings)	0.50 (Buildings area conversion to greenbelt)		
		9	Vacant Area	12.94	0.00		
			<b>TOTAL AREA</b>	<b>28.68</b>	<b>28.68</b>		
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	<p>Existing land belonging to SCL is 28.68 Ha and the project expansion of cement plant will be executed within the existing land.</p> <p>However, 29.63 Ha of land will be required for setting up of railway siding and 9.23 Ha land for Overland Belt Conveyor.</p> <p>SCL will commission railway siding and Limestone belt conveyor after acquiring the required land.</p> <p>Acquisition status: SCL has approached IPICOL for the land of 43.7 Ha (107.95 acres). 34.47 Ha (85.15 acres) for railway siding and 9.23 Ha (22.80 acres) for Overland Belt Conveyor.</p> <p>IPICOL vide letter No. IPICOL/SW/SCL-Exp./1 dated 08/06/2021 recommended acquisition/alienation and allotment of a Total of 107.95 acres of land in favour of SCL by IDCO to set up the facilities.</p> <p>SCL has submitted the necessary documents to IDCO in response to its letter no IDCO/P&amp;A/LAE/8157/2021/1455 dated 15.07.2021 for filling the acquisition and the lease proposal with appropriate authority.</p> <p>Administrative approval from the Deptt. of Industries is awaited.</p>					-

S. No	Particulars	Details	Remarks
iii.	Existence of habitation & involvement of R&R, if any.	<p>Existing land belonging to SCL is 28.68 ha and the project expansion of cement plant will be executed within the existing land.</p> <p>However, 29.63 Ha of land will be required for setting up of railway siding and 9.23 Ha land for Overland Belt Conveyor.</p> <p>The actual additional land requirement for the proposed expansion is 29.63 Ha (73.22 acres). However, due to the existence of some part plots at the boundary of the required land, it is required to be acquired the total plot as the land owners do not sell part plots. Hence SCL is bound to purchase the full plots and therefore the total land applied for acquisition is 85.15 acres.</p> <p>9.23 Ha (22.80 Acres) of land will be acquired for over land belt conveyor of 8.7 km length. The corridor width of the conveyor is 12 m. The land is Scheduled Land and SCL proposes to acquire the land through Govt of Odisha. Project affected families are 171 nos. Land and R&amp;R cost is Rs. 18.50 Crore and Cost of OLBC is Rs. 126 Crore. Total project cost for OLBC is Rs. 144.5 Crore.</p>	
iv.	Latitude and Longitude of the project site	<p>Latitude: 22° 13' 48.91" N – 22° 13' 26.31" N &amp; Longitude: 84° 24' 39.72" E - 84° 25' 29.08" E -</p>	-
v.	Elevation of the project site	280 m AMSL	-
vi.	Involvement of Forest land if any.	No Forest Land Involved (Letter obtained from Divisional Forest Officer, Sundargarh District, Odisha vide No. 5520/4F(Misc)/2021 dated 06/11/2021).	-
vii.	Water body exists within the project site as well as study area	<p>No water Bodies exists in project area</p> <p><b>Study area</b> 1.Sapai Nadi - 9.5 km, WSW 2.Lohranga Nadi - 10.0 km, S 3.Daku Nala - 5.0 km, W 4.Nakti jor - 3.5 km, SE 5.Jharia Nala - 8.0 km, NE</p>	River is at 9.5 km
viii.	Existence of ESZ/ ESA/ national park/	Nil	-

S. No	Particulars	Details	Remarks
	wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area		

52.17.5 The existing project was accorded Environmental Clearance by MoEF&CC vide letter no. J-11011/84/2008-IA-II (I) dated 23/05/2011 for expansion of Cement Plant from 0.115 MTPA to 0.825 MTPA clinker and from 0.132 MTPA to 1.05 MTPA Cement production. M/s. SCL obtained Extension of validity of the existing EC for 3 years i.e., up to 22<sup>nd</sup> May 2021 vide MoEF&CC letter no: J-11011/84/2008-IA-II (I), dated 15/06/2018, and the validity has further been extended up to 22/05/2022 vide MoEF&CC notification S.O. 221 (E) dated 18/01/2021 due to Covid 19 pandemic. Consent to Operate from OSPCB has also been obtained vide letter No. 3713, IND-I-CON-119 dated 12/03/2021 and valid up to 31/03/2022 for the Phase-I.

52.17.6 Implementation status of the existing EC:

Sl. No.	Facilities	Units	As per EC dated 23/05/2011	Implementation Status as on January, 2022	Production as per CTO
1	Clinker	MTPA	0.825	1) 0.165 (implemented)- Unit -I 2) 0.66 MTPA (under implementation) Unit-II	0.165
2	Cement (OPC/ PPC/ GGBS/ PSC/ Composite Cement)	MTPA	1.05	1) 0.252 (implemented)- Unit -I 2) 0.798 MTPA (under implementation) Unit-II	0.252

The proponent has further submitted that the ongoing construction activities envisaged in the existing EC dated 15/06/2018, valid up to 22/05/2022 are likely to be completed by March 2022 and accordingly Consent to Operate application will be submitted in March 2022 before commissioning of the project. No construction activities will be undertaken beyond 22/05/2022 until fresh Environment Clearance is obtained.

52.17.7 The unit configuration and capacity of existing and proposed unit are given as below:

Particulars	Present Capacity	Capacity After Expansion
Clinker	0.165*	#3.0
Cement (OPC/ PPC/ GGBS/ PSC/ Composite Cement)	0.252*	2.0
Waste Heat Recovery power generation (MW)	-	12.0
Note: *After implementation of existing EC, the old Unit of 0.165 MTPA clinker		

Particulars	Present Capacity	Capacity After Expansion
and 0.252 MTPA Cement will be dismantled as it's an inefficient plant. The proposed new plant will be energy and environmentally efficient.		
#Out of 3.0 MTPA, 2.0 MTPA clinker will be sent to Split Grinding units		

52.17.8 The details of the raw material requirement for the proposed expansion cum proposed project along with its source and mode of transportation is given as below:

S. No.	Raw material	Existing requirement (TPA)	Total requirement after proposed expansion (TPA)	Source	Distance /Transportation
1	Limestone	172,500	31,00,000	Captive Mine	12 km (by road/ OLBC)
2	Steel Slag	0	9,00,000	Bhushan JSW, Jharsuguda	85 KM (By Road )
3	Laterite/ Clay	4,600	2,00,000	Lanjibera/ Kutra	12 km (by road)
4	Coal* (imported)	28,750	360,000	Paradeep Port	460 km (by rail)
5	Coal* (Indian)	34650	480,000	SECL, Korba (Chhattisgarh)	270 km (by rail)
6	Pet Coke*	0	260,000	IOCL, Odisha	460 km (by rail)
7	Alternate Fuel	0	33,000	Different sources (by road)	
8	BF Slag	56,760	820,000	Rourkela	60 km (by road)
9	Gypsum	6,600	85,000	Paradeep Phosphates Ltd.	490 km (by road)
10	Fly Ash	5,280	200,000	Rourkela/ Jharsuguda	60 km / 85km (by road)

*Note : All material will be transported by Road initially for about 2.5 years after obtaining Environmental Clearance*

*\*Coal and Pet Coke can be used in any combination depending on process & quality requirements*

*+Sulphur content of the limestone varies from 0.20 to 0.40 % as SO<sub>3</sub> (as S - 0.08 to 0.16 % (Source : Shiva Cement Ltd)*

52.17.9 The water requirement of the plant after expansion is 1990 m<sup>3</sup>/day of which fresh water requirement is 1792 m<sup>3</sup>/day. About 198 m<sup>3</sup>/day of treated waste water will be used to meet the water requirements of plantation and dust suppression. SCL has obtained permission for withdrawal of 688 m<sup>3</sup>/day water from the CGWA vide letter No CGWA/NOC/IND/REN/1/2021/6576 dated 20/07/2020 and valid up to 19/07/2023. The additional 1104 m<sup>3</sup>/day of water will be sourced from the mine pit after laying of water pipeline along the 9 km long OLBC corridor. Entire water requirement for the industrial consumption, except drinking and domestic, will be met from the mine pit.

52.17.10 The existing peak power requirement of the cement plant is 5 MW which is met from the state grid. Additional power requirement will be 39 MW and the same will be sourced from the grid & 12 MW WHRS through a dedicated 132 kV overhead grid line.

52.17.11 Baseline Environmental Studies

Period	Post Monsoon Season, 2020 (October'2020, November'2020 and December'2020)					
AAQ parameters at 08 Locations	PM <sub>2.5</sub> = 6.0 to 37.0 µg/m <sup>3</sup> PM <sub>10</sub> = 21.0 to 80.0 µg/m <sup>3</sup> SO <sub>2</sub> = 3.0 to 18.0 µg/m <sup>3</sup> NO <sub>x</sub> = 9.0 to 31.0 µg/m <sup>3</sup> CO: less than 1 ppm					
AAQ modelling (Incremental GLC)	<b>Impact of plant and transportation:</b> PM <sub>10</sub> = 4.59 µg/m <sup>3</sup> - 0.50 km - SSW PM <sub>2.5</sub> = 2.21 µg/m <sup>3</sup> - 0.50 km - SSW SO <sub>2</sub> = 1.58 µg/m <sup>3</sup> - 1.5 km - SSW NO <sub>x</sub> = 9.60 µg/m <sup>3</sup> - 1.5 km - SSW CO = 1395.41 µg/m <sup>3</sup> - 0.1 km - on transportation route <b>Model used : AERMOD – Version 9.7</b>					
Ground water quality at 08 locations	pH = 6.28 – 7.38 Total Hardness = 102.75-636.27 mg/l Chlorides = 7.94-134 mg/l Fluoride = 0.09-0.5 mg/l Heavy Metals (Zinc) = 0.02-0.1831 mg/l					
Surface water quality at 07 Locations	Fresh Samples Collected pH: 7.41 to 7.78; DO: 5.1 to 6.1 mg/l; BOD: 02 to 05 mg/l; COD from 10 to 22 mg/l					
Noise Levels At 08 Locations	49.9 to 71.4 dB (A) for the day time 40.5 to 62.7 dB (A) for the Night time.					
<b>Traffic assessment study Findings</b>						
➤ <b>Traffic study carried out at two locations</b>						
1) Near project Site-State Highway (SH-10), BIJU EXPRESS WAY connecting Sambalpur–Rourkela Highway:						
• Type of Road: Arterial - 4 lane divided (2 way) road						
• PCU limit: 3600 PCU per hour						
2) Near mine site at Kutra Road connecting SH-10 (Sambalpur – Rourkela Highway) to Ranchi.						
• Type of Road: Arterial - 2 lane undivided (one way) road						
• PCU limit: 1500 PCU per hour						
➤ <b>Traffic impacts done in two phases</b>						
• Phase – 1						
• Phase – 1+2						
Particulars	Details			Remarks		
	SH-10-Towards Rourkela	Kutra road	SH-10-Towards Sundergarh	SH-10-Towards Rourkela	Kutra road	SH-10-Towards Sundergarh

<b>Traffic Load Study Period</b>	10-06-2020, 08:00 AM to 10-06-2020, 08:00 PM	10-06-2020, 08:00 AM to 10-06-2020, 08:00 PM	10-06-2020, 08:00 AM to 10-06-2020, 08:00 PM	Connecting Sambalpur Rourkela Highway	Connecting Sambalpur Rourkela Highway to Captive Mine	Connecting Sambalpur Rourkela Highway
<b>Traffic Load (Baseline) (PCU/Hr) Max</b>	1616 PCU's/hr during 08:00-09:00 AM	444PCU's/hr during 09:00-10:00 AM.	1616 PCU's/hr during 08:00-09:00 AM	LOS: C (Good)	LOS: B (Very Good)	LOS: C (Good)
<b>Additional Traffic Load During Operation Of Project (PCU/Hr) Max</b>	72 PCU/Hr	0	24 PCU/Hr	Maximum trucks which would add to the existing traffic will be 18 trucks / hour (72 PCU/Hr)	0	Maximum trucks which would add to the existing traffic will be 6 trucks / hour (524PCU/Hr)
<b>Total Traffic Load During Operation Of Existing And Proposed (PCU/Hr) Max</b>	1688 PCU/Hr	444 PCU/Hr	1640 PCU/Hr	LOS: C (Good)	LOS: B (Very Good)	LOS: C (Good)
<b>Traffic Capacity As Per The IRC 106:1990 For Highways (PCU/Hr)</b>	3600 PUC per hour	1500 PUC per hour	3600 PUC per hour	IRC-106:1990 Guide line		

➤ No change in the Level of Service (remained at “B” and “C”) of the roads due to additional traffic from SCL.

➤ **EMP MEASURES**

- Closed trucks will be employed for transport of Materials/Products
- Trucks Pollution Under Control (PUC) will be employed
- Plantation of local species has already been taken up along the road on either side
- Monitoring of trucks to ensure compliances such as covering of trucks by tarpaulin, spillage on roads etc.
- The existing road connecting SCL plant to SH-10 is being widened and concreted (as per IRC 37 & 58) at a cost of Rs 6.50 crores

➤ **PARKING FACILITIES:**

SCL has earmarked an area of 3.70 Ha for parking facility with following

- 0.80 Ha Area for roads and free movement of trucks
- 1.70 Ha area for 500 – 600 vehicles (@ 30 m<sup>2</sup> /truck)
- 0.90 Ha for greenbelt around the parking area
- 0.30 Ha for facilities to truck drivers

All facilities, such as canteen, toilets, rest rooms, etc. will be provided for truck drivers. Separate office building equipped with all communication and other infrastructure will be provided to the transporters.	
Flora and fauna	<ul style="list-style-type: none"> <li>• Nearest Forest - Dahijira R.F. – 3.0 km, ENE</li> <li>• There are no Schedule-I species presented in study area.</li> <li>• Authenticated List of Flora and Fauna by Divisional Forest Officer, Sundargarh District, Odisha</li> </ul>

52.17.12 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

Sl. No	Type Of Waste	Source Name	Quantity	Treatment before disposal	Mode Of Disposal	Agreement Details For Disposal
<b>Solid Waste</b>						
1	Solid Waste	Cement Plant	No solid waste will be generated	Dust collected from Pollution control Equipment will be recycled back to the process		
<b>Hazardous Waste</b>						
1	Spent Oil	Cement Plant	15 kl/Annum	None	Containers	Authorized Recycler
2	Waste grease	Cement Plant	06 TPA	None	Containers	Authorized Recycler

52.17.13 Public Consultation:

Details of advertisement given	15/07/2021 - Times of India.” (English News Paper) 14/07/2021 - Samabad (Oriya News Paper)
Date of public consultation	26/08/2021
Venue	Ambabagicha ground, Telighana Village, under Kutra Block of Sundargarh District, Odisha State.
Presiding Officer	Addl. District Magistrate (ADM) Sundargarh District.
Major issues raised	<ol style="list-style-type: none"> <li>1. Land and displacement</li> <li>2. Environment &amp; pollution</li> <li>3. Groundwater depletion and water scarcity -</li> <li>4. Dedicated Approach Road</li> <li>5. Local Employment, Proper wages and Safety of workers</li> <li>6. Covid-19 Pandemic</li> <li>7. Peripheral Development</li> </ol>

**Action plan as per MoEF&CC O.M. dated 30/09/2020**

**(A) PUBLIC HEARING COMMITMENTS AND ACTION PLAN AND BUDGET**

Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	
Issue of displacement will be there	As there are no houses/ settlement in the land proposed to	Physical Target	-	-	-	
		Budget: Rs.	-	-	-	-

Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	
	be acquired, there will be no displacement of people	Lakh				
Company should discuss with the local inhabitants in Panchayat level for consensus.	Company had a meeting with Sarpanch, Kandeimunda in presence of ADM, Sundargarh and Tehasildar Kutra on 23-08-2021. The Sarpanch demanded to comply with their requirement in the areas of pollution control, local employment and peripheral development	Physical Target: Env. & pollution Control: SCL will install high efficiency pollution control systems for control of air, water and noise pollution and will strictly comply with the pollution norms of SPCB and MoEF				
		Budget :	Included in EMP cost			-
		Physical Target: Local Employment – There is a potential for employment to approx. 500 people for the proposed expansion in 2 phases. Local will be preferred and employment will be given based on qualification and eligibility				
		Budget: Rs. Lakh	-	-	-	-
		Physical target: Peripheral development will be undertaken by SCL in the following areas: - Livelihood - Education - Health & sanitation - Rural development				
Budget: Rs. Lakh	SCL will spend the allocated budget for various peripheral development activities in a span of 3 years. Year wise and activity wise budget allocation is detailed in subsequent points			-		
Regarding increase in level of pollution, Poisonous gas emission, respiratory illness, Cement Dust deposits over houses and in agricultural lands, Los of soil fertility and crop productivity, water and noise pollution etc.	<ul style="list-style-type: none"> <li>Adequate control measures like installation of ESP, Bag filters, dust suppression system, fume extraction system, sprinklers &amp; stacks of adequate height at relevant places will be installed.</li> <li>Air borne dust shall be controlled by mobile water tanker inside the plant premises.</li> <li>Maintenance and performance monitoring of air pollution control equipment shall be done at regular intervals.</li> <li>All roads shall be paved on which movement of raw</li> </ul>	Physical Target:	The physical targets for the entire activities shall be achieved in 3 years			
		Budget:	Included in EMP cost.			-



Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	
	<p>materials or products will take place inside the plant premises.</p> <ul style="list-style-type: none"> <li>No waste water will be discharged outside the plant area. The plant is designed as a zero discharge plant. The entire wastewater will be recirculated and recycled.</li> <li>Domestic waste water will be treated in STP and the treated water will be used for plantation.</li> <li>The equipment shall comply with the Statutory limit of 85 dB(A) (at 1 m. from the source).</li> <li>Noise Reduction Systems will be provided.</li> <li>Thick greenbelt will be developed around the periphery</li> </ul>					
Regarding ground water depletion and water scarcity in the locality due to drawl of ground water by company.	The fresh water requirement of the plant after expansion is 1800 m3/day. For phase-1, 688 m3/day water will be sourced from bore wells and for phase-II, the additional 1112 m3/day of water will be sourced from the mine pit after laying of water pipeline.	Physical target:	Rooftop rainwater harvesting within plant premises. This includes roof tops of CCR, stores, admin, workshop, packing plant and residential buildings as well as groundwater recharge of surface runoff.	Construction of a) 2 check dams in village Telighana and Kandeimunda b) deepening/ renovation of 2 ponds in Kandeimunda and Kutra c) Construction of Roof top RWH structures in 5 govt offices and school buildings		
		Budget: Rs 50 Lakh	Included in EMP cost	Rs. 50 Lakh		<b>Rs. 50 Lakh</b>
	Supply of drinking water during summer	Physical target:	Drinking water supply through tankers in 3 villages, i.e. Telighana, Kutra and			

Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	
			Kandeimunda as per requirement. Water supply will be continued even after 3 years and will also be extended to other villages based on their needs.			
		Budget: Rs. 18 Lakh	Rs. 6 Lakh	Rs. 6 Lakh	Rs. 6 Lakh	<b>Rs. 18 Lakh</b>
	Development of drinking water facility	Physical target:	Bore well construction and provision of solar pumps (2 nos each in village Telighana, Kutra and Kandeimunda)			
		Budget: Rs. 30 Lakh	Rs. 10 Lakh	Rs. 10 Lakh	Rs. 10 Lakh	<b>Rs. 30 Lakh</b>
	Utilization of mine pit water to conserve groundwater	Physical target:	Laying of water pipeline from Khatkurbahal mine to plant for carrying mine pit water			
		Budget:	Included in project cost			-
Regarding construction of dedicated road from State Highway to plant	The existing road is the only road connecting our plant to SH-10. The company proposes for widening and concreting of this road	Physical target:	Widening and concreting of approx. 1.5 km road will be completed by July 2022		-	
		Budget: Rs. 650 Lakh	Rs. 650 Lakh		-	<b>Rs. 650 Lakh</b>
Regarding employment to local people	Top most priority will be given to the local people based on their academic qualification and eligibility. In addition, skill development (SD) for unemployed local youths through National Skill Development Corporation and Odisha Skill Development Authority. Construction of SD Centre with the necessary infrastructure	Physical target:	Construction of Skill Development Centre/ Vocational training centre building with 6 AC rooms near plant premises. Installation of 20 nos of sewing machines, 10 nos of computer systems, 10 nos of machines for making hand craft items along with necessary raw materials, organizing 6 workshops annually for practical training, provision of qualified trainers, approved course contents, independent 3 <sup>rd</sup> party assessment, equipment, machinery and necessary consumables/ raw materials based on the need of the local people			
		Budget:	Rs. 30 Lakh	Rs. 60 Lakh	Rs. 60 Lakh	<b>Rs. 150 Lakh</b>
Proper wages to Local labours,	Wages will be paid strictly as per statutory norms	Physical target:	-	-	-	
		Budget:	-	-	-	-
Regarding proper safety measures to be taken for workers to be deployed in company.	Company will strictly comply with all safety measures in accordance with State Factory Rules and other applicable health and safety rules	Physical target:	All safety measures related to plant and machinery have been incorporated in plant design. Other measures such as provision of safe workplace, hand rails, toe guards, safe platforms, proper insulation, provision of sensors for equipment safety, required safety gadgets to workers, appointment of safety officers (in each shift), job safety analysis, regular safety training, ensuring good housekeeping in plant premises, regular health checkup of workers, provision of first			

Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	
			aid and a health center within the premises and implementation of Safety Management System in line with ISO 45001			
		Budget:	Included in project and EMP cost			-
Regarding peripheral development	Construction of hospital in the area	Physical target:	Construction of 20 bed hospital with doctors, paramedical staff, minor OT, Emergency, Pathology lab, gynaecology and other required facilities near plant in village Telighana			
		Budget:	-	Rs. 150 Lakh	Rs. 150 Lakh	<b>Rs. 300 Lakh</b>
	Village infrastructure development	Physical target:	Construction of 400 Mtr CC road along with drainage (Backside of colony to Telighana village)	Construction of 800 Mtr CC road along with drainage (Road leading from plant backside to Telighana village)	Construction of 1 km CC road along with drainage (Road leading from plant gate to Kandeimunda village)	
		Budget: Rs. 125 Lakh	Rs. 60 Lakh	Rs. 95 Lakh	Rs. 120 Lakh	<b>Rs. 275 Lakh</b>
	Sanitation (public toilets)	Physical target:	Construction of public toilets 5 nos each in village Telighana, Kandeimunda, Bringatoli and Kutra. Total 20 nos.			
		Budget: Rs. 15 Lakh	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh	<b>Rs. 15 Lakh</b>
	Development of building infrastructure, playground, class rooms, library facilities and providing computers in the Local schools	Physical target:	Construction of 4 extra rooms in govt school, village Telighana	Development of play ground in Kutra High School and providing sports kits to students	Computer labs and 2 nos of smart boards in village schools of Telighana and Kandeimunda	
		Budget: Rs. 32 Lakh	Rs. 12 Lakh	Rs. 10 Lakh	Rs. 10 Lakh	<b>Rs. 32 Lakh</b>
	Electrification through Solar LED street lighting in villages	Physical target:	10 nos of solar street lights in Kutra village	10 nos of solar street lights in Telighana village	10 nos of solar street lights in Kandeimunda village	
		Budget: Rs. Lakh	Rs. 7 Lakh	Rs. 7 Lakh	Rs. 7 Lakh	<b>Rs. 21 Lakh</b>
		<b>Total budget:</b>				<b>Rs. 1541 Lakh</b>

**(B) DETAILED ACTION PLAN WITH PHYSICAL TARGETS FOR NEED BASED ACTIVITIES**

Need based activities	Particulars	Year of implementation		
		1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year
<b>Supporting health, nutrition and sanitation</b>	Physical target	Providing nutritious diet package to pregnant women and new mothers for their baby's physical and mental health, providing support for timely vaccination		
	Budget (Rs. 9 Lakh)	Rs. 3 Lakh	Rs. 3 Lakh	Rs. 3 Lakh
	Physical target	Arranging 2 health camps in a year for elderly persons. One camp for eye check-up and free cataract surgery whereas another camp for general health check-up including blood, urine and other tests.		
	Budget (Rs.15 Lakh)	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh
	Physical target	Distribution of sanitary napkins to girls and women.		
	Budget (Rs. 3 Lakh)	Rs. 1 lakh	Rs. 1 lakh	Rs. 1 lakh
<b>Renovation and augmentation of infrastructure</b>	Physical target	Repairing of existing tube wells	Hand pump Installation – 2 nos	Hand pump Installation – 2 nos
	Budget (Rs.3 Lakh)	Rs. 1 lakh	Rs. 1 lakh	Rs. 1 lakh
	Physical target	Repair & maint, of 1 km road .n the village	Repair & maint, of 1 km road .n the village	Repair & maint, of 1 km road .n the village
	Budget (Rs. 30 Lakh)	Rs. 10 Lakh	Rs. 10 Lakh	Rs. 10 Lakh
	Physical target	Supply of furniture and 2 computers in 2 village schools	Supply of medicines in CHC, Kutra	
	Budget (Rs.15 Lakh)	Rs 5 Lakh	Rs 5 Lakh	Rs 5 Lakh
<b>Support to children in education and sports</b>	Physical target	Distribution of school bags, books, bicycles, stationery items to 50 students	Sponsoring 30 candidates for ITI training (fee & other educational expenses)	Providing sports kits to children (25 nos) and supporting them to participate in various sports tournaments etc.
	Budget (Rs. 17 Lakh)	Rs 2 Lakh	Rs 10 Lakh	Rs 5 Lakh

Need based activities	Particulars	Year of implementation		
		1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year
	Physical target	Scholarships to 10 meritorious students every year		
	Budget (Rs. 6 Lakh)	Rs 2 Lakh	Rs 2 Lakh	Rs 2 Lakh
Facilitate carrier oriented programs to make youth eligible for various job opportunities	Physical target	Vocational training for self-employment in the field of auto mechanic, electrician, drill operator, loader operator, Maintenance Crew, excavator operator, HEMM Mechanic etc.		
	Budget (Rs. Lakh)	Covered in Public Hearing related issues		
	Physical target	Financial assistance to 10 students from PAFs towards coaching for competitive examinations		
	Budget (Rs. 15 Lakh)	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh
Sustainable livelihood	Physical target	Organizing driving and vehicle maintenance workshops for PAFs (2 sessions in a year)		
	Budget (Rs.6 Lakh)	Rs. 2 Lakh	Rs. 2 Lakh	Rs. 2 Lakh
	Physical target	Training to PAFs through experts in the field of agriculture & livestock through workshop (2 sessions in a year)		
	Budget (Rs. 6 Lakh)	Rs. 2 Lakh	Rs. 2 Lakh	Rs. 2 Lakh
	Physical target	Training to PAFs for papad making, sanitary napkin making, sewing training through workshop by area expert (4 sessions in a year)		
	Budget (Rs. 15 Lakh)	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh
		<b>Total budget Rs. 140 Lakh</b>		

52.17.14 The capital cost of the project is Rs. 2194.50 Crores and the capital cost for environmental protection measures is proposed as Rs. 294.90 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.14.505 Crores. The employment generation from the proposed project/ expansion is 500 (locals will be preferred). The details of cost for environmental protection measures is as follows:

S No	Description of Item	Capital Cost (Rs. Crore)	Recurring Cost per annum (Rs. Crore)
1.	Air Pollution Control	224.5	13.5
2.	Wastewater Management	1.0	0.06
3.	Energy Conservation Measures	10.15	0.06
4.	Solid Waste Management	30.2	0.02
5.	Rehabilitation and Resettlement (Land Oustees)	25.17	0.08
6.	Greenbelt development	0.70	0.20
7.	Rainwater Harvesting Structures	0.30	0.03
8.	Environmental monitoring	2.88	0.555

S No	Description of Item	Capital Cost (Rs. Crore)	Recurring Cost per annum (Rs. Crore)
	<b>Total</b>	<b>294.90</b>	<b>14.505</b>

- 52.17.15 M/s. SCL has developed greenbelt in an area of 6.12 ha in the cement plant complex and balance 4.0 Ha will be developed in the next two years. SCL has acquired 0.58 Ha of land in southern direction of the plant which will be developed under greenbelt making the total greenbelt area of the plant to 10.70 Ha (37 %). A 20-100 m wide greenbelt, consisting of at least 3 tiers around plant boundary is/will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species are/will be planted with a density of 2500 trees per hectare. Total no. of 25302 saplings will be planted and nurtured in 10.12 hectares in 02 years.
- 52.17.16 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 52.17.17 Name of the EIA consultant: M/s. B.S. Envi Tech Pvt. Ltd. [S.No. 146, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/RA 0174 Valid upto 16/11/2022; Rev. 18, January 05, 2022].

**Certified compliance report from Regional Office:**

- 52.17.18 The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide letter no. 106-678/16/EPE issued by MoEF&CC, dated 18/02/2021 in the name of M/s. Shiva Cement Limited. The Action taken report regarding the partially/non-complied condition was submitted to Regional officer MoEF&CC, Bhubaneswar on 27/02/2021 & 25/06/2021. Compliance Report Recertified by Integrated Regional Office, Bhubaneswar Vide letter No: 106-678/16/EPE dated 28/06/2021. The details of the observations made by RO in the report dated 28/06/2021 along with its re-assessment / present status as furnished by the PP is given as below.

Sl. No	Non-compliances (Observation made during monitoring on 15/01/2021)	Corrective action taken (Action taken report submitted by the project proponent on 27/02/2021 and 25/06/2021)	Present status	Remarks
1	As per GSR 826 (E) dated 16th November, 2009, PAs also need to monitor O3, Pb, CO, NH3, CgHg, Ba., As, Ni and submit the results to the Regional Office of MoEF&CC, Bhubaneswar (Specific condition No.iii)	Ambient Air Quality Monitoring is being carried out for the parameters PM10, PM2.5, SO2, NO2 & CO by NABL accredited third party on regular basis and results are shared to MoEF&CC during six monthly compliance report submission. However, as observed, PP has started periodic monitoring of Pb, NH3, CftHg, Ba., As, Ni parameters and the results of the monitoring carried out on 20-02-2021 are attached.	Being complied	From reports submitted by PAs, it is observed that they have analyzed parameters such as O3, Pb, CO, NH <sub>3</sub> , CgHe, BaP, As, Ni at four locations Main Gate, Office Area, Kiln Area, Colony Area. The parameters are within the stipulated standard.

Sl. No	Non-compliances (Observation made during monitoring on 15/01/2021)	Corrective action taken (Action taken report submitted by the project proponent on 27/02/2021 and 25/06/2021)	Present status	Remarks
2	PAs need to conduct fugitive emission monitoring regularly in other locations such as coal mill, packing section, crushing section and submit the monitoring data to the Regional Office of MoEFCC at Bhubaneswar. During monitoring thick layer of fines were observed in the packing area and beside the cement silo indicating poor condition of the existing dust emission control system. Similarly thick layer of dust were found deposited on the ground in the primary crusher and secondary crusher area, coal mill area indicating poor condition of the dust control system. (Specific condition No.iv)	Fugitive emission monitoring in coal mill, packing and crushing section has been started and the monitoring results are attached. PP checked all the bag filters in packing and cement silo section and the faulty bags have been replaced and now the dust extraction has been considerably improved as indicated by the fugitive emission results shown. In addition, PP has taken actions to further improve the housekeeping in the primary crusher & secondary crusher area. A dedicated team has been assigned with the responsibility to oversee the housekeeping in critical /dust prone areas on regular basis.	Being complied	From the reports submitted by projects its is observed PAs have monitored fugitive emission in coal mill, cement packing section and crushing section. Further, they have informed that faulty bags have been replaced in the packing and cement silo section. They have also assured to take action actions to improve the housekeeping in the primary crusher and secondary crusher area.
3	PAs need to submit details e.g., amount generated and amount reused for raw mill dust, coal dust, clinker dust and cement dust from pollution control devices. (Specific condition No.ix)	On an average 3500 kg/hr of dust is collected in bag filters and the entire dust is automatically recirculated in the system.	Being complied	PAs have informed that 3500 kg/hr (average) dust is collected in the bag filters and the entire dust is recirculated in the system.
4	PAs need to intimate the total area that has been developed as green belt until now with year wise plantation and action plan for covering the 25.42 acres under green belt as mentioned in the EC. (Specific condition No.xii)	Green belt is already developed in 13acres' areas inside the plant premises. The year wise green belt development details till date is attached. Action plan for covering 25.42 acres under green belt is attached.	Assured to comply	As per the report submitted by projects, it is observed that from 2013-14 to 2020-21, 13.11 acres have been planted. For the remaining land (12.3 acres), they have assured to take plantation like: year 2021-22 : 1.8 acre, year 2022-23 : 2.0 acre, year 2023-24: 2.5 acre, year 2024-25: 3.0 acre, 2025-26: 3.0 acre.
5	Separate budget for implementing the public hearing commitments need to submitted to the Regional Office along with an implementation plan. Further they also need to give details of the	Separate budget for implementing the public hearing commitments is attached. Details of the development carried out towards education, health care, livelihood, women empowerment, sanitation from 2011 -2020 are attached.	Being complied	PAs have submitted action plan for ESC activities that includes education, infrastructure development, promotion of sports, skill development, drinking water supply, health care, livelihood promotion rural development, project

Sl. No	Non-compliances (Observation made during monitoring on 15/01/2021)	Corrective action taken (Action taken report submitted by the project proponent on 27/02/2021 and 25/06/2021)	Present status	Remarks
	development earned for education, health care, livelihood, women empowerment, sanitation etc. from 2011-2020 along with supporting documents. (Specific condition No.xiv)			management and environmental promotion for 2021-22 to 2027-28. They have also provided details of the development carried out for education, health care, livelihood, women empowerment, sanitation etc. from 2011-2020.
6	Details of the time bound action plan needs to be submitted immediately to the Regional Office. PAs need to provide details of the activities undertaken under "improving living conditions, promoting social development, addressing environmental issues, rural development, Swachh Bharat mission, promotion of education, environment promotion, livelihood promotion, project management cost" along with supporting documents. (Specific condition No.xv, General condition No.vii)	Execution of the project started w.e.f. Oct'2020. Time bound action plan for undertaking the peripheral development is attached. Details of the activities undertaken under Improving Living Conditions, Promoting Social development, rural development, swachh Bharat mission, promotion of education, Livelihood promotions during last 4 years are attached.	Being complied .	PAs have submitted action plan for activities under ESC from 2021-22 to 2027-28. PAs have provided information with respect to activities undertaken under "improving living conditions, promoting social development, addressing environmental issues, rural development, Swachh Bharat mission, promotion of education, environment promotion, livelihood promotion" from 2017-18 to 2020-21.
7	PAs have not provided any information with respect to corporate environmental policy. The same should be submitted to the Regional Office. (Specific condition No.xvii)	The copy of the Corporate Environment Policy is attached.	Being complied .	PAs have submitted a copy of the corporate environment policy to this office.
8	PAs need to conduct ambient air quality monitoring in four locations instead of three. (General condition No.iii)	One more Ambient Air Quality Monitoring Station has been added & now monitoring of 4 locations has been started. The monitoring results of four locations are attached.	Being complied .	PAs have submitted AAQ monitoring report from four locations: Main Gate, Office Area, Kiln Area, Colony Area. The parameters are within the stipulated standard.
9	Poor housekeeping was observed. Thick layers of dust were observed in different areas of the project particularly in the packing area, cement silo, crushing area (primary and secondary crushing area), coal mills, dust deposition in number of places from the conveyer	Although housekeeping is earned out on regular basis throughout the plant area. However, in recent past, due to non-availability of sufficient labour due to Covid-19situation, the housekeeping of plant was affected and during monsoon, the accumulated cement/ clinker dust deposited in some areas.	Being complied .	As per the photographic evidence submitted by PAs vide letter No.SCL/600-09/2020-21/27 dated 25.06.2021, it is observed that PAs are maintaining good housekeeping inside the plant area and they have also informed that they have a dedicated housekeeping team for maintaining good housekeeping.



Sl. No	Non-compliances (Observation made during monitoring on 15/01/2021)	Corrective action taken (Action taken report submitted by the project proponent on 27/02/2021 and 25/06/2021)	Present status	Remarks
	belt. (General condition No.vi)	Now, the housekeeping is done on regular basis in all the areas. Proper SOPs are being followed to maintain a good housekeeping inside the plant areas and a dedicated housekeeping team has been put in place for maintaining good house-keeping inside the plant premises.		
10	PAs need to provide a separate environmental management cell with full-fledged laboratory facilities to carry out various management and monitoring functions under the control of Senior Executive. (General condition No.ix)	Shiva Cement has a well structured Environment Management Cell staffed with qualified personnel at site supported by team at Head Office in Mumbai. However, after commissioning of the project, SCL will further strengthen the Environment Management Cell. Organization structure of Environment Management Cell is attached. SCL is engaging the services of NABL, MoEF&CC & OSPCCB recognized laboratory to carry out the regular environment monitoring.	Assured to comply.	PAs have submitted a copy of the organization structure of Environmental Management Cell. Further they have informed that they do not have a full-fledged laboratory since they have engaged an NABL accredited agency for carrying out environmental monitoring. They have assured to set up environmental lab after commissioning of the expansion project.
11	PAs need to clarify whether occupational health cost come under environment management. (General condition No.x)	Yes, the Occupational Health cost comes under Environment Management budget. Review of Acton Taken	Being complied .	PAs have submitted that occupational health cost comes under Environment Management budget.
12	PAs also need to inform the date of financial closure and final approval of the project by the concerned authorities. (General condition No.xiii)	Final approval of the project :27.11.2019 Date of financial closure of the project is 27.11.2019 Start of project execution (land development work): 22-10.2020.	Being complied .	PAs have submitted the date of financial closure and final approval of the project by the concerned authorities to this office.
13	PAs may inform whether they have workshop in their mining site and whether the waste water is properly collected, treated so as to confirm to the standards prescribed under GSR 422 (E) dated 19.05.1993 and 31 <sup>st</sup> December, 1993 or as amended. (General condition No.xv)	Presently we do not have any workshop in mining areas and therefore no waste water is generated. However, after expansion of mines, workshop will be provided and trade effluent will be treated as prescribed under GSR 422 (E) dated 19.05.1993 and 31 <sup>st</sup> December, 1993 or as amended.	Assured to comply.	PAs have informed that there is no workshop in the mining area. They further submitted that after expansion of mines, workshop will be provided and trade effluent will be treated as prescribed under GSR 422 (E) dated 19.05.1993 and 31 <sup>st</sup> December, 1993 or as amended.

Sl. No	Non-compliances (Observation made during monitoring on 15/01/2021)	Corrective action taken (Action taken report submitted by the project proponent on 27/02/2021 and 25/06/2021)	Present status	Remarks
14	PAs also need to inform the date of financial closure and final approval of the project by the concerned authorities. (General condition No.xvii)	Final approval of the project: 27.11.2019 Date of financial closure of the project is 27.11.2019. Start of project execution (land development work): 22-10.2020.	Being complied	PAs have submitted the date of financial closure and final approval of the project by the concerned authorities to this office.
15	Although six monthly compliance report has been uploaded in the company's website. copy of the Environment clearance letter has not been uploaded in their website: www.shivacement.com. The same needs to be uploaded at the earliest. (General condition No.xix)	Environment clearance letter has been uploaded in the company web site i.e. <a href="http://www.shivacement.com">www.shivacement.com</a> . May please refer the following link: <a href="https://shivacement.com/wp-content/uploads/2021/02/Environment-Clearance-SCL_compressed.pdf">https://shivacement.com/wp-content/uploads/2021/02/Environment-Clearance-SCL_compressed.pdf</a> .	Being complied	EC was available in the link: <a href="https://shivacement.com/wp-content/uploads/2021/02/Environment-Clearance-SCL_compressed.pdf">https://shivacement.com/wp-content/uploads/2021/02/Environment-Clearance-SCL_compressed.pdf</a> .

52.17.19 The proponent had earlier applied for Environment Clearance vide proposal no. IA/OR/IND/233908/2010 dated 03/12/2021 and the proposal was considered in 49<sup>th</sup> REAC meeting held on 16-17<sup>th</sup> December, 2021 wherein the Committee recommended the proposal to be returned in present form due to the shortcomings.

52.17.20 The proponent has again applied vide proposal no. IA/OR/IND/250109/2010, dated 21<sup>st</sup> January 2022 with revised EIA Report addressing the observations of the EAC as mentioned below:

S.No.	Observation of EAC made during 16-17 <sup>th</sup> December, 2021	Compliance	Reference in Revised EIA Report
i	Project proponent has obtained EC on 23/05/2011 for the existing project and the only part of the facility has been implemented and the remaining is reported to be under implementation. However, the validity period of the EC got expired on 22/05/2021. As per MoEF&CC notification S.O. 221 (E) dated 18/01/2021, the period between 1/04/2020 to 31/03/2021 shall not be considered for the purpose of calculation of EC validity period. In view of this, PP shall not undertake the	SCL will comply with the directions of the Honorable EAC.  The ongoing construction activities vide EC No. J-11011/84/2008-IA-II (I), dated 15-06-2018, valid upto 22-05-2022 are likely to be completed by March 2022 and accordingly Consent to Operate application will be submitted in March 2022 before commissioning of the project. No construction activities will be undertaken beyond 22/05/2022 until fresh Environment Clearance is obtained.	Chapter – 1 Para – 1.3.1 Table – 1.3 Page no. 18

S.No.	Observation of EAC made during 16-17 <sup>th</sup> December, 2021	Compliance	Reference in Revised EIA Report
	implementation of remaining project activity beyond 22/05/2022.		
ii	Land required for the proposed expansion project is not under the possession of proponent. No credible document has been submitted in this regard.	<p>Existing land belonging to SCL is 28.68 Ha and the project expansion of cement plant will be executed within the existing land.</p> <p>However, 29.63 Ha of land will be required for setting up of railway siding and 9.23 Ha land for Overland Belt Conveyor.</p> <p>SCL will commission railway siding and Limestone belt conveyor after acquiring the required land.</p> <p>The EIA Report is revised considering the existing resources <b>(without additional land)</b>.</p>	Chapter – 1 Para – 1.1 Page no – 2
iii	Land requirement stated in the IPICOL letter dated 8/06/2021 is not in consonance with the land requirement for the proposed expansion project.	The actual additional land requirement for the proposed expansion is 29.63 Ha (73.22 acres). However, due to the existence of some part plots at the boundary of the required land, it is required to be acquired the total plot as the land owners do not sell part plots. Hence SCL is bound to purchase the full plots and therefore the total land applied for acquisition is 85.15 acres.	-
iv	Rain Water Harvesting calculations have not been given in the EIA report.	The rainwater harvesting calculations indicated that the plant and mines together has potential of capturing about 2,09,288 m <sup>3</sup> /annum from 1st year which will be subsequently increased to 5,79,021 m <sup>3</sup> /annum of rainwater by the end of 5th year. The details are furnished in the Revised EIA Report	Chapter – 4 Para – 4.4.3 Page no 176 - 178
v	Mode of transport of limestone from mines to the plant site is reported to be by conveyor. However, Right of Way for conveyor route and its acquisition status has not been made available.	<p>9.23 Ha (22.80 Acres) of land will be acquired for over land belt conveyor of 8.7 km length. The corridor width of the conveyor is 12 m. The land is Scheduled Land and SCL proposes to acquire the land through Govt of Odisha. Project affected families are 171 nos. Land and R&amp;R cost is Rs. 18.50 Crore and Cost of OLBC is Rs. 126 Crore. Total project cost for OLBC is Rs. 144.5 Crore.</p> <p><b>Acquisition status:</b> SCL has approached IPICOL for the land of 43.7 Ha (107.95 acres). 34.47 Ha (85.15 acres) for railway siding and 9.23 Ha (22.80 acres) for Overland Belt Conveyor).</p> <p>IPICOL vide letter No. IPICOL/SW/SCL-Exp./1 dated 08/06/2021 recommended acquisition/alienation and allotment of a Total of 107.95 acres of land in favour of SCL by IDCO to set up the facilities.</p> <p>SCL has submitted the necessary documents to IDCO in response to its letter letter no IDCO/P&amp;A/LAE/8157/2021/1455 dated 15.07.2021 for filling the acquisition and the lease proposal with appropriate authority.</p>	Chapter – 2 Para – 2.9.1 Page no. 69

S.No.	Observation of EAC made during 16-17 <sup>th</sup> December, 2021	Compliance	Reference in Revised EIA Report
		Administrative approval from the Deptt. of Industries is awaited.  The alignment of the conveyor is shown in the Revised EIA Report	
vi	Interlinked project status neither mentioned in the EIA report nor in the presentation made before the EAC.	<p>The plant will be supported by the following two captive Limestone mines.</p> <p><b>Mine – 1: Expansion of existing Limestone Mine:</b> Khatkurbahal Limestone &amp; Dolomite Mine (ML Area-72.439 ha) with Expansion in Production Capacity from 0.3475 MTPA to 1.50 MTPA</p> <p><b>Status of Environmental Clearance:</b> The Terms of Reference (Proposal No. SIA/OR/MIN/37895/2019) has been issued by the SEIAA, Odisha vide letter No. File No.37895/23-MINB1/03-2020 dated 14-08-2020. Public Hearing for this expansion project has been conducted on 24-08-2021 and SEAC meeting for EC was held on 07.12.2021. SEAC has asked some clarifications which have been submitted.</p> <p><b>Mine – 2: Proposed Limestone Mine (Khatkurbahal (North) Block, Area: 156.43 ha)</b> with production capacity of Limestone 1.6 MTPA located at Villages Khatkurbahal &amp; Phalsakani, Tehsil Kutra, District Sundargarh, Odisha.</p> <p><b>Status of Environmental Clearance:</b> The Terms of Reference has been granted by the MoEF&amp;CC vide letter No. F.No. J-11015/47/2020-IA. II (M) dated 19-11-2020. PH for this expansion project was conducted on 24-08-2021 and EAC meeting for EC was held on 30.11.2021. EAC has raised ADS. Regarding the ToR condition for OLBC, SCL has applied for ToR amendment seeking relaxation of 2.5 years for OLBC commissioning after start of mining operations. ToR meeting scheduled on 27-01-2022 before non-coal mining committee.</p> <p>Both the mines are adjacent to each other and are located at about 12 km distance from the plant. Total limestone requirement for 3 MTPA clinker is 3.1 MTPA. Steel Slag of 0.90 MTPA and 0.20 MTPA of clay/ laterite will be used as additional raw material for 3.0 MTPA clinker production.</p>	Chapter -1, Para – 1.4 Page No- 19
vii	Performance measurement frequency for Pollution Control Devices (PCDs) is not included.	Performance measurement of Pollution control equipment will be taken up once in six months. The same is included in the Revised EIA Report. An amount of Rs 10 Lakhs per annum is allocated for the same under EMP recurring cost	Chapter – 6, Table – 6.1, Page No. 199
viii	PP also proposed expansion in colony. Impact assessment for same not incorporated	SCL has dropped the proposal of expansion of the colony. Considering employee welfare related to infrastructure such as school, hospital, shopping,	Chapter – 2 Para – 2.9.7 Page no. 80

S.No.	Observation of EAC made during 16-17 <sup>th</sup> December, 2021	Compliance	Reference in Revised EIA Report
	with EIA report.	railway connectivity etc. it has been decided to facilitate accommodation to employees at Rajgangpur town and as such, the existing colony is also proposed to be dismantled.	
ix	PP need to be given clarification for higher NO <sub>x</sub> value.	<p>Higher NO<sub>x</sub> values in baseline are due to transport of heavy vehicles on the unpaved road from plant to SH-10. There is slow movement of vehicles on this road which contributes to rise in NO<sub>x</sub> levels.</p> <p>The road is currently being widened and constructed by SCL and the road is designed by the deptt. of PWD Govt. of Odisha.</p> <p>In addition, the presence of sponge iron units, existing cement plant and material transport from limestone and dolomite mines also contribute to rise in NO<sub>x</sub> levels.</p> <p>SCL has proposed the following measures for NO<sub>x</sub> reduction:</p> <ol style="list-style-type: none"> <li>1. <b>High Efficiency Pre-heater cyclone</b> – The plant is a single string, 5 stage Pre-heater (PH) system with In-Line Calciner (ILC) having new generation high efficiency cyclones with low-pressure drop, having a separation efficiency of upto 95 % for the top most cyclone before the gas leaving the pyro section. About 40 % fuel shall be fired in the kiln and the balance 60 % fuel shall be fired in the Pre-calciner (PC). The efficient PH circuit reduces dust loss thereby reducing unnecessary fuel firing into the system hence support in controlling NO<sub>x</sub> generation at source itself</li> <li>2. <b>PREPOL Calciner AS-MSC (Air Separate - Multi-Stage Combustion)</b> – This calciner design is specifically selected to cope up with challenges of NO<sub>x</sub> emission. Base concept behind this design is to allow combustions in calciner to take place under controlled sub-stoichiometric zone and defined temperature window to reduce NO<sub>x</sub> emission. This feature of NO<sub>x</sub> reduction takes place in PREPOL Calciner by adopting either of the three points stated below or in combination of any or all – <ul style="list-style-type: none"> <li>- Tertiary air split</li> <li>- Fuel split</li> <li>- Meal split</li> </ul> <p>The PREPOL AS-MSC enables split feeding of fuel, air and raw meal into calciner in order to reduce NO<sub>x</sub> emission which is achieved by specific control of the combustion process in the calciner. Desired reducing zone is generally created by fuel and tertiary air split whereas temperature window is created by meal split.</p> </li> <li>3. The <b>refractory</b> selected for the system is to reduce radiation losses and offer high durability. This</li> </ol>	Chapter – 4 Para – 4.2.8 Page no. 153

S.No.	Observation of EAC made during 16-17 <sup>th</sup> December, 2021	Compliance	Reference in Revised EIA Report
		<p>would reduce fuel firing requirement leading to less NO<sub>x</sub> generation.</p> <p>4. The kiln system is designed with latest generation state of the art <b>Cooler, Polytrack 8T-5-3R-B which with its high recuperation efficiency</b> of more than 72% will support us in reducing fuel requirement thereby controlling NO<sub>x</sub> generation in Kiln and calciner, both.</p> <p>5. Similarly, modern <b>Multi Channel Burner</b> emphasize on proper air-fuel mix to minimize NO<sub>x</sub> emissions to the atmosphere. Modern technology burner along with dosing systems (fuel and kiln feed), emissions monitoring and kiln control systems are considered in the project to minimize gaseous emissions from combustion processes (e.g. NO<sub>x</sub>, CO, SO<sub>2</sub>)</p>	
x	<p>Construction of the plant is proposed in two phases. The land for second phase is not yet available.</p>	<p>SCL is implementing the existing EC granted vide letter no. J-11011/84/2008-IA-II (I), dated 15-06-2018 which is valid upto 22<sup>nd</sup> May, 2022. The ongoing construction activities are likely to be completed by March 22 and no construction will be undertaken beyond 22-05-2022.</p> <p>SCL has revised the proposal per EAC appraisal. The proposed expansion will be implemented within the existing area of 28.68 Ha. SCL will commission railway siding and Limestone belt conveyor after acquiring the required land of 29.63 Ha and 9.23 Ha respectively</p>	-
xi	<p>Surface water quality results have been reported wrongly with respect to BoD parameter. Fresh analysis of surface water sampling needs to be carried out.</p>	<p>Fresh surface water samples are collected. BOD values are in the range of 02 to 05 mg/l. The analysis reports of fresh surface water samples collected are furnished in the Revised EIA Report</p>	<p>Chapter – 3 Para – 3.3.4 Page No. 95 Annexure - 3B Page No. 513 - 527</p>
xii	<p>No information has been furnished with respect to co-processing of hazardous waste and monitoring of dioxins and furans.</p>	<p>SCL has conducted a study in nearby area (upto 250 km radius) on the availability of high calorific value hazardous waste that can be co-processed in cement kiln. Information was also obtained from CII database. As per available details, only spent solvent is available at Jharsuguda in moderate quantities which we may use in the kiln.</p> <p>The quantities of other hazardous waste generated by the industries are very small/ negligible.</p> <p>Inventory of hazardous and non-hazardous waste available in the area is enclosed.</p> <p>SCL also proposes to use non-hazardous wastes such as rice husk, groundnut shell etc. which are abundantly available in the nearby area. Refuse Derived Fuel (RDF) has also been considered for use as alternate fuels in the Kiln which will minimize GHG emission as well as also contribute towards efficient</p>	<p>Chapter – 4 Para – 4.2.10 Page no. 165 And Chapter – 6 Table – 6.1 Page no. 199</p>

S.No.	Observation of EAC made during 16-17 <sup>th</sup> December, 2021	Compliance	Reference in Revised EIA Report
		<p>management of solid waste in local area.</p> <p>SCL will make provision for firing of hazardous waste as and when available in substantial quantities. Monitoring of dioxins and furans will be carried out in accordance with CPCB guidelines, dated 23-02-2010 when Hazardous waste is fired.</p> <p>Details are provided in the Revised EIA Report.</p>	
xiii	<p>For the initial two years, nearly 5 MTPA lime stone is proposed to be transported (19.2 km) by road. The impact assessment for the same has not been carried out.</p>	<p>The impact assessment on air quality is re-estimated considering 3.1 MTPA of limestone transport from mines to the plant. Steel Slag of 0.90 MTPA and 0.20 MTPA of clay/ laterite will be used as additional raw material for clinker production.</p> <p>In addition to above 4.2 MTPA, about 5.62 MTPA of other material transport i.e. clinker, cement and other raw material are also considered for cumulative impact assessment considering transportation by road</p>	<p>Chapter – 4 Para – 4.2.1-4.2.7 Page no. 144 - 152</p>
xiv	<p>Google map of the site shows dense plantation in the plant area proposed. Status of this land is not clear.</p>	<p>The proposed land is private agriculture land where only about 35 % of the area is under cultivation with paddy and pulses like arhar &amp; moong while the remaining area is lying vacant. Approx. 550 nos of trees are existing in the area. The details of trees are as follows:</p> <p>Neem 97 nos, Teak wood 83 nos, Jamun 32 nos, Mango 16 nos, Karanja 35 nos, Areca Palm 28 nos, others 259 (babool, date palm, simel, sirisa etc.)</p> <p>The land, after the acquisition, will be used for laying railway siding and it will be ensured that only the bare minimum number of trees falling under the proposed railway siding area are cut with due permission from the concerned DFO and the remaining trees are preserved. As part of the compensatory plantation which is proposed to be done adjacent to the railway siding area, the company will plant 3 times the number of trees cut/cleared.</p>	-
xv	<p>PP has not provided the continuous AAQ station in the existing cement plant even after the lapse of 10 years.</p>	<p>The plant since inception in 1985 by M/s IPI-SP, the company's working was not satisfactory resulting in high financial loss. The losses continued and the company was declared sick in 1992 and was referred to the BIFR, Govt. of India. BIFR reviewed the case and finally took the case for amalgamation of this sick unit with Shiva Cement Ltd. In the year 1997. The plant was inoperative for a long time and finally it re-started its production in the year 1998 with 0.115 MTPA clinker capacity.</p> <p>In the year 2007, SCL entered into JV agreement with ACC but due to financial crisis caused by dissociation of ACC, the company was again in financial crisis. Finally, in 2017, JSW Cement took over the management control of the company through equity</p>	<p>Annexure – 1B Page No. 361</p>

S.No.	Observation of EAC made during 16-17 <sup>th</sup> December, 2021	Compliance	Reference in Revised EIA Report
		<p>purchase agreement with revival proposal of this unit which is currently being implemented.</p> <p>SCL have already planned to install 3 nos of CAAQMS for the ongoing project and the same will be installed within 6 months, i.e. by June'22.</p> <p>Undertaking of SCL is enclosed in the Revised EIA Report</p>	

### Observations of the Committee

52.17.21 The EAC noted the following:

- i. Plant layout needs to be altered to accommodate clinker grinding unit, cement packaging unit and loading facility and cement storage and transportation facility. This will increase green belt to 33 % minimum. At present the Plant area does not have space for green belt. Only 3.29 ha land shall be available (11% only). The green belt shown on the eastern side of the plant is only a avenue plantation and not a green belt.
- ii. Revised plant will result in change the chimney locations and AAQ modelling has to be revisited accordingly.
- iii. Telighana village is only 630 m south from the project site. Control measures to be adopted in this regard has not been furnished.
- iv. 3750 trucks shall ply per day inside the factory.
- v. Time frame for installation of overhead belt conveyor has not been committed by the proponent. In view of this, there is no clarity on the installation of overhead belt conveyor.
- vi. Alternatives for limestone transportation in the absence of dedicated over head belt conveyor has not been submitted.
- vii. Action plan to address the issues raised during public hearing is not in consonance with the MoEF&CC O.M. dated 30/9/2020.
- viii. It is mentioned that 1104 KLD water shall be sourced from mine pit. No details of the pipe route have been furnished.
- ix. Project proponent has not submitted the time bound action plan to comply with the non-compliances observed by RO in the certified compliance report.
- x. There is a discrepancy regarding the land requirement for railway siding stated in the EIA report vis-à-vis land to be acquired from IPICOL.

### Recommendations of the Committee

52.17.22 In view of the foregoing and after deliberations, the Committee recommended that proposal to be returned in its present form to address the technical shortcomings enumerated at para no. 52.17.21 and submit the revised application as per the provisions of EIA Notification, 2006.



52.18 Establishment of an Asbestos Corrugated Cement Sheet Manufacturing Plant of 1,20,000 TPA capacity by **M/s. Sahyadri Industries Limited (SIL)** located at Jashoda Village, Balasore Tehsil, **Balasore District, Odisha** [Online Proposal No. IA/OR/IND/252105/2022; File no: IA-J-11011/16/2022-IA-II(IND-I)] – **Prescribing of Terms of Reference– regarding.**

52.18.1 M/s. Sahyadri Industries Limited (SIL) has made an online application vide proposal no. IA/OR/IND/252105/2022 dated 19/01/2022 in prescribed format (Form-1), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 4(c) Asbestos milling and asbestos based products under Category “A” of the schedule of the EIA Notification, 2006 and appraised at central level.

**Details submitted by Project proponent**

52.18.2 The project of M/s. Sahyadri Industries Limited located Jashoda Village, Balasore Tehsil, Balasore District, Odisha is for establishing an Asbestos Corrugated Cement Sheet Manufacturing Plant of 1,20,000 TPA capacity.

52.18.3 Environmental site settings:

S.No.	Particulars	Details										
i.	Total Land	22.58 Ha. (55.8 Acres) [Private Land]  [Land Use: Agricultural land]										
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Land acquisition is under process.										
iii.	Existence of habitation & involvement of R & R, if any	No habitation exists in project site; Hence no R & R is involved.										
iv.	Latitude and Longitude of the project site	Latitude and Longitude of the project site: <table border="1"> <thead> <tr> <th>S.NO</th> <th>LONGITUDE &amp; LATITUDE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>21°35'47.81"N, 87° 1'59.83"E</td> </tr> <tr> <td>2</td> <td>21°35'59.36"N, 87° 2'3.26"E</td> </tr> <tr> <td>3</td> <td>21°35'52.97"N, 87° 2'24.28"E</td> </tr> <tr> <td>4</td> <td>21°35'42.26"N, 87° 2'20.40"E</td> </tr> </tbody> </table>	S.NO	LONGITUDE & LATITUDE	1	21°35'47.81"N, 87° 1'59.83"E	2	21°35'59.36"N, 87° 2'3.26"E	3	21°35'52.97"N, 87° 2'24.28"E	4	21°35'42.26"N, 87° 2'20.40"E
S.NO	LONGITUDE & LATITUDE											
1	21°35'47.81"N, 87° 1'59.83"E											
2	21°35'59.36"N, 87° 2'3.26"E											
3	21°35'52.97"N, 87° 2'24.28"E											
4	21°35'42.26"N, 87° 2'20.40"E											
v.	Elevation of the project site	4 m to 5 m AMSL										
vi.	Involvement of Forest land, if any	No Forest land is involved in the project site.										
vii.	Water body exists within the project site as well as study area	<b>Project site:</b> There are no water bodies present in the plant area. No streams are passing through the plant site.  <b>Study area:</b> <table border="1"> <thead> <tr> <th>Water Body</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Panchpara Nala</td> <td>1.5 Kms.</td> <td>NE</td> </tr> </tbody> </table>	Water Body	Distance	Direction	Panchpara Nala	1.5 Kms.	NE				
Water Body	Distance	Direction										
Panchpara Nala	1.5 Kms.	NE										

S.No.	Particulars	Details		
		Seasonal Stream	0.65 Kms.	NEE
		Kaonra Nala	4.85 Kms.	S
		Huluhulia Nala	8.7 Kms.	SSW
		Burhabalanga River	10.7 Kms.	S
		Few ponds exist within the study area.		
viii.	Existence of ESZ/ESA/National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. if any within the study area	<b>Study area: Nil</b>  <b>List of Reserved and protected forests:</b> Purunia RF – 5.7 Kms. (NW) Patharasahi RF – 7.5 Kms. (NWW) Banuasahi RF – 7.8 Kms. (NW) Thakuratota RF – 9.5 Kms. (NW) Barhaguma RF – 9.5 Kms. (NW)		

52.18.4 The unit configuration and capacity of proposed project is given as below:

Name of product	Production capacity
Asbestos Cement Corrugated & its accessories	1,20,000 TPA

52.18.5 The details of the raw material requirement for the proposed project along with its source and mode of transportation is given as below:

S.No.	Raw Materials	Quantity (in TPA)	Source	Distance (in Kms.)	Mode of transportation
1	Asbestos Fibre*	7,700	Imported from Konimpex Ltd, Poland; Sama Minarco Ltd, Brazil	250	By Ship up to the Kolkata, then by road (Closed containers)
2	Cement-OPC	42,600	Ramco Cement, Bubhaneshwar; J K Laxmi Cement, Odisha; Jaipur Cement, Chandia, Odisha; Shree Cement, Ghantikhala, Odisha	100 to 230	By Road (Closed containers)
3	Fly Ash	26,400	NTPC, Talcher; Jindal Steel, Angul; GMR TPP, Dhenkanal	250	By road (in Closed containers)
4	Pulp	3,700	Kharagpur/Jamshedpur/Bhubhaneshwar/Raipur	150	By Road (Covered Trucks)

Note: \*Chrysotile fibre is imported, packed in impervious HDPE bags. Fibre bags are stored in a separate go-down with further safety measure of total enclosure. Blue Asbestos Fibre will not be used.

52.18.6 Water required for the proposed project will be 310 KLD, and will be sourced from Ground Water. The permission for drawl of groundwater will be obtained from IPICOL/ SGWB / CGWA will be obtained.

52.18.7 Power required for the proposed project will be 900 KVA and same will be sourced from the State Grid.

- 52.18.8 The capital cost of the project is Rs.96.76 Crores and Capital Cost for Environment Protection Measures is proposed as Rs. 6.5 Crores. The employment generation from proposed project will be 200 nos. through direct employment and 200 nos. through indirect employment.
- 52.18.9 It has been reported by PP that, there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.
- 52.18.10 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S No 139, NABET Certificate no. NABET/EIA/1922/RA 0149 and valid upto 22/03/2022; Rev. 18, January 05, 2022].
- 52.18.11 Proposed Terms of Reference (**Baseline data collection period: 1<sup>st</sup> March, 2022 to 31<sup>st</sup> May, 2022**):

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
<b>A. Air</b>			
a. Meteorological parameters	1	On hourly basis for one season	<ul style="list-style-type: none"> <li>• Wind Speed</li> <li>• Wind Direction</li> <li>• Temperature</li> <li>• Relative Humidity</li> <li>• Rainfall</li> </ul>
a. AAQ parameters	8	24 hourly Twice a week for 3 months (One Season)	Parameters to be Monitored: <ul style="list-style-type: none"> <li>• Asbestos Fibre Count</li> <li>• PM10,</li> <li>• PM2.5</li> <li>• SO<sub>2</sub>,</li> <li>• NO<sub>x</sub>,</li> <li>• CO</li> </ul>
<b>A. Noise</b>	8	On hourly basis for 24 Hrs. at each station	Parameters to be Monitored: <ul style="list-style-type: none"> <li>• Day equivalent</li> <li>• Night equivalent</li> </ul>
<b>B. Water</b>			
a. Ground Water	8	One sample at each of the locations	Parameters will be Monitored: as per IS: 10500
a. Surface Water	5	One sample at each of the locations	Parameters will be Monitored: as per BIS: 2296
<b>C. Land</b>			
a. Soil quality	8	One sample at each of the locations	Parameters will be Monitored: Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
a. Land use	--	--	LU map will be prepared by concerned FAE for study area
<b>D. Biological</b>			
a. Aquatic	--	Once in Season	---
a. Terrestrial	--	Once in Season	---
<b>E. Socio economic parameters</b>	--	Once in Season	Social Impact Assessment will be carried out by concerned FAE for study area
<b>F. Traffic Density</b>	--	Once in Season	Vehicular traffic study will be carried out at Transportation route.

**Observations of the Committee**

52.18.12 The Committee noted the following:

- i. The instant proposal is for seeking ToR for undertaking EIA study for Establishment of an Asbestos Corrugated Cement Sheet Manufacturing Plant of 1,20,000 TPA capacity by M/s. Sahyadri Industries Limited (SIL) located at Jashoda Village, Balasore Tehsil, Balasore District, Odisha.
- ii. Village Agamauda is located at a distance of 1 Km.

**Recommendations of the Committee**

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

- i. Action plan to limit the total dust in the work area shall not exceed 2 mg/Nm<sup>3</sup>.
- ii. Action plan to limit the asbestos fiber level in the work area shall not exceed 0.1 fiber /cc.
- iii. PPEs approved for asbestos workers by OSHA ( V-90 P2) shall be used by operators in bag cutting and mixing areas.
- iv. Regular health checkup (twice a year for employees above 45 years and once a year for less than 45 years) shall be carried on employees as per Factory Act requirement.
- v. Action plan to limit the dust emission from all the stacks below 30 mg/Nm<sup>3</sup> shall be furnished.
- vi. Action plan for fugitive emission control in the plant premises shall be provided.
- vii. Action plan for green belt development covering 33% of the project area all along the periphery of the project site with a density of 2500 trees per hectare shall be submitted. Locally growing tree species should be planted in the Green belt. This shall include 30-meter-wide green belt development within the project area towards Agamauda village.
- viii. Action plan for rain water harvesting shall be submitted.
- ix. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

52.19 Proposed expansion of Induction Furnace and installation of Ferro Alloys plant, Foundry and Rolling Mill by **M/s. N.N. Ispat Pvt. Ltd.** in the existing plant area at village

Diwandighi, P.O. & Mouza Mirzapur, Palitpur Road, **P.S. & District Burdwan, West Bengal**. [Online Proposal No. IA/WB/IND/252518/2022; File no: J-11011/280/2012-IA-II(I)] – **Extension of validity of Environment Clearance – regarding.**

52.19.1 M/s. N.N. Ispat Pvt. Ltd. has made online application vide proposal no. IA/WB/IND/252518/2022 dated 21/11/2022 along with Form 6 and sought for extension of validity of Environment Clearance accorded by the Ministry vide letter no. J-11011/280/2012-IA-II(I) dated 05/02/2015.

**Details submitted by the project proponent**

52.19.2 M/s. N.N. Ispat Pvt. Ltd. was granted Environment Clearance by the Ministry vide letter No. J-11011/280/2012-IA-II(I) dated 05/02/2015 for a project titled “Proposed expansion of Induction Furnace and installation of Ferro Alloys plant, Foundry and Rolling Mill in the existing plant area at village Diwandighi, P.O. & Mouza Mirzapur, Palitpur Road, P.S. & District Burdwan, West Bengal” under the provisions of EIA Notification, 2006.

52.19.3 After obtaining the EC, the company decided to implement the project in Phases. Consent to Establish was obtained from West Bengal Pollution Control Board vide Consent Letter Memo. No 281-2N-11/ 2011(E) Dated 16/04/2015. Out of the total facilities as mentioned in the EC, the company has been able to install part of the facilities and is under operation presently. The remaining units are yet to be implemented. However, the implementation of the entire project could not be completed as per the EC within the stipulated time-frame of 7 years from the date of the issue of EC letter, mainly due to the Covid situation, tough market conditions and sluggish economy during the period. Therefore, project proponent has requested to extend the validity of Environmental Clearance dated 05/02/2015 for another three years i.e. till 04/02/2025 for implementation of the remaining units.

52.19.4 The details of progress of implementation of the project facilities as per EC dated 05/02/2015 is given as below:

Sl. No.	Name of the Units	Prior to EC dated 05/02/2015	As per EC dated 05/02/2015	Implemented and under Operation	Not Implemented
1.	Induction Furnaces	2x8T (48000 TPA Ingot)	Addl. 2x15T (90000 TPA Liq. steel)	2x8 T + 2x15 T (1,38,000 TPA Billets)	-
2.	LRF	-	90000 TPA Liq. steel		
3.	CCM	-	90000 TPA Billets		
4.	Rolling Mill	-	1,20,000 TPA Structural Steel (Angels, Channels, TMT etc.)	1,20,000 TPA Structural Steels (Angels, Channels, TMT etc.)	-

Sl. No.	Name of the Units	Prior to EC dated 05/02/2015	As per EC dated 05/02/2015	Implemented and under Operation	Not Implemented
5.	Ferro Alloy Plants	-	2x9 MVA Submerged Arc Furnaces  (Ferro Manganese - 20,460 TPA or Silico Manganese - 14,850 TPA or Ferro Silicon - 6,600 TPA)		2x9 MVA Submerged Arc Furnaces  (Ferro Manganese - 20,460 TPA or Silico Manganese - 14,850 TPA or Ferro Silicon - 6,600 TPA)
6.	Foundry Consisting of Cupola Furnace	-	2x5 T (21,500 TPA Cast Iron)	-	2x5 T (21,500 TPA Cast Iron)
7.	Induction Furnace	-	2x3 T (18,000 TPA Ductile Iron)	-	2x3 T (18,000 TPA Ductile Iron)
8.	Green Sand Plant	-	2x20 TPH (72,000 TPA Mould)	-	2x20 TPH (72,000 TPA Mould)
9.	Sand Reclamation Plant	-	2x10 TPH (80,000 TPA fresh sand)	-	2x10 TPH (80,000 TPA fresh sand)

#### Observations of the Committee

52.19.5 The Committee noted the following:

- i. EC was given on 5/2/2015 for Proposed expansion of Induction Furnace and installation of Ferro Alloys plant, Foundry and Rolling Mill in the existing plant area at village Diwandighi, P.O. & Mouza Mirzapur, Palitpur Road, P.S. & District Burdwan, West Bengal”.
- ii. Part of the facilities got implemented within the validity period and the remaining facilities are yet to be implemented.
- iii. Proponent also requested to drop the Foundry Consisting of Cupola Furnace facility from the EC.
- iv. Implementation got delayed due to Covid situation, tough market conditions and sluggish economy during the period.
- v. Three years of extension in validity is requested.

#### Recommendations of the Committee

52.19.6 In view of the foregoing and after deliberations, the Committee recommended to extend the validity of Environment Clearance for a period of three years beyond 4/02/2022, i.e., from 5/02/2022 to 4/02/2025 subject to stipulation of environmental safeguards prescribed

in the EC dated 5/02/2015. Further, the Committee also requested to drop the Foundry Consisting of Cupola Furnace facility from the EC dated 05/02/2015.

52.20 Sponge Iron Plant (4x100 TPD), Induction furnace (2x12T+1x12T), Rolling Mill (90,000 TPA) and 18 MW power plant [6 MW WHRB, 2 MW Coal char based and 10 MW Coal based] of **M/s. Jharkhand Ispat Private Limited** located at Hesla, P.O. Argada, **District Ramgarh, Jharkhand** [Online Proposal No. IA/JH/IND/236898/2020, File No. J-11011/41/2013-IA-II(I)]– **Environment Clearance as per S.O. 804(E) dated 14/03/2017 – regarding.**

52.20.1 M/s. Jharkhand Ispat Private Limited has made an online application vide proposal no. IA/JH/IND/236898/2020 dated 15/11/2021 along with copy of EIA/EMP report, Form – 2 and Certified compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and attracts provisions of S.O. 804 (E) issued by MoEF&CC dated 14/03/2017 for the projects under Violation.

52.20.2 The aforesaid proposal was recommended for grant of ToR by the EAC – Violation and accordingly ToR was accorded on 9/11/2020. The proposal for EC is being appraised by the sectoral EAC. With the prior consent of the Chairman, EAC – Industry 1 sector, Shri K. Gowrappan, Environment Expert has been co/opted for appraisal of the instant proposal consideration. However, he could not attend the meeting and his comments/views on Damage Assessment and Remediation Plan was received by email on 16/12/2021.

**Details submitted by Project proponent**

52.20.3 The details of the ToR are furnished as below:

<b>Date of Application</b>	<b>Consideration</b>	<b>Details</b>	<b>Date of Accord</b>	<b>ToR Validity</b>
PP made online application dated 25/04/2018 to (Industry-1). Later on, PP requested the MoEF&CC on 27/11/2019 to transfer the proposal made in EAC (Industry-1) to EAC (Violation) as ‘Lateral Proposal Entry’ as per MoEF&CC Office Memorandum dated 09/09/2019.	31 <sup>st</sup> EAC (Violation) held on 28 <sup>th</sup> Feb, 2020, 33 <sup>rd</sup> EAC (Violation) held on 18-19 <sup>th</sup> May, 2020, 36 <sup>th</sup> meeting of EAC (Violation) held on 21.09.2020	Terms of Reference recommended	09/11/2020	08/11/2024

52.20.4 The project of M/s. Jharkhand Ispat (P) Ltd (JIPL) located in village-Hesla, P.O. -Argada, Ramgarh District, Jharkhand is for enhancement of Production of Sponge Iron from 0.06 to 0.12 million tons per annum (MTPA), Production of 0.108 MTPA Billets, production of 0.09 MTPA Rolled products along with 18 MW Captive Power Plant (WHRB – 6 MW & AFBC – 12 MW).

52.20.5 Environmental Site Settings:

S No	Particulars	Details	Remarks																											
1	Total land	14.38 ha [Private:14.38 ha]	Land Use: Industrial																											
2	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014.	The existing units is installed in 25.54 Acres (10.34 Ha.) of land which is owned by JIPL. Company has taken adjacent land area of 10 Acres (4.04 Ha.) on 30 years lease. Thus, the total land after expansion will be 14.38 ha and total land is under possession of JIPL.																												
3	Existence of habitation & involvement of R&R, if any.	<b>Project Site:</b> Nil <b>Study area:</b> <table border="1"> <thead> <tr> <th>Habitation</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Argada Vilage</td> <td>0.08 km</td> <td>NW</td> </tr> <tr> <td>MahuwaTand</td> <td>0.26</td> <td>East</td> </tr> </tbody> </table>	Habitation	Distance	Direction	Argada Vilage	0.08 km	NW	MahuwaTand	0.26	East	No R&R is involved.																		
Habitation	Distance	Direction																												
Argada Vilage	0.08 km	NW																												
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4	Latitude and Longitude of all corners of the project site.	<table border="1"> <thead> <tr> <th>Point</th> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>23<sup>o</sup>39'00.0"N</td> <td>85<sup>o</sup>27'48.8"E</td> </tr> <tr> <td>B</td> <td>23<sup>o</sup>38'53.5"N</td> <td>85<sup>o</sup>27'42.8"E</td> </tr> <tr> <td>C</td> <td>23<sup>o</sup>38'50.3"N</td> <td>85<sup>o</sup>27'45.0"E</td> </tr> <tr> <td>D</td> <td>23<sup>o</sup>38'44.0"N</td> <td>85<sup>o</sup>27'39.4"E</td> </tr> <tr> <td>E</td> <td>23<sup>o</sup>39'46.1"N</td> <td>85<sup>o</sup>27'54.3"E</td> </tr> <tr> <td>F</td> <td>23<sup>o</sup>38'51.2"N</td> <td>85<sup>o</sup>27'55.5"E</td> </tr> <tr> <td>G</td> <td>23<sup>o</sup>38'53.5"N</td> <td>85<sup>o</sup>27'52.9"E</td> </tr> <tr> <td>H</td> <td>23<sup>o</sup>38'57.4"N</td> <td>85<sup>o</sup>27'54.9"E</td> </tr> </tbody> </table>	Point	Latitude	Longitude	A	23 <sup>o</sup> 39'00.0"N	85 <sup>o</sup> 27'48.8"E	B	23 <sup>o</sup> 38'53.5"N	85 <sup>o</sup> 27'42.8"E	C	23 <sup>o</sup> 38'50.3"N	85 <sup>o</sup> 27'45.0"E	D	23 <sup>o</sup> 38'44.0"N	85 <sup>o</sup> 27'39.4"E	E	23 <sup>o</sup> 39'46.1"N	85 <sup>o</sup> 27'54.3"E	F	23 <sup>o</sup> 38'51.2"N	85 <sup>o</sup> 27'55.5"E	G	23 <sup>o</sup> 38'53.5"N	85 <sup>o</sup> 27'52.9"E	H	23 <sup>o</sup> 38'57.4"N	85 <sup>o</sup> 27'54.9"E	
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5	Elevation of the project site	335 m above mean sea level																												
6	Involvement of Forest land, if any	No involvement of Forest land.																												
7	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	<b>Project Site:</b> No water bodies within the project site. <b>Study area</b> <table border="1"> <thead> <tr> <th>Water Body</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>River Damodar</td> <td>0.3 km</td> <td>South</td> </tr> </tbody> </table>	Water Body	Distance	Direction	River Damodar	0.3 km	South	HFL Details for the Site: The project site level is 335 meters above MSL which is higher than the HFL (316.68 meters) of River Damodar reported on 09/1976 at G&D Site, CWC, Naisarai, Ramgarh Cantt as per Letter obtained from Dept of Water Resources, CWC,																					
Water Body	Distance	Direction																												
River Damodar	0.3 km	South																												



S No	Particulars	Details	Remarks
			Damodar Division.
8	Existence of ESZ/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil. However, following forests are existing in the study area: PF at 5.0km (SW), PF at 5.5km (NNE), PF at 8.4km (South), PF at 9.2 km (NNW).	

52.20.6 Chronology of exiting NOC/ Clearances:

S No	Date	NOC/ Clearance	Detail
1.	31/07/2003	NOC*	Issued by Jharkhand State pollution Control Board (JSPCB) for Sponge Iron Plant: 200 MT/day (DRI Kiln: 2x100 TPD)
2.	06/11/2006	NOC**	Issued by JSPCB for another Sponge Iron unit: 200 MT/day (DRI Kiln: 2x100 TPD) and MS Billets: 240 TPD (IF: 2x12 T with Billet Caster)
3.	24/12/2011	CTO	Issue by JSPCB for Sponge Iron/ 4x100 TPD, M.S. Billet/240 TPD.
4.	10/12/2012	CTO*** renewal	Issued for Sponge Iron Plant: 200 MT/day (DRI Kiln: 2x100 TPD).
5.	10/10/2020	CTO renewal	Issued for Sponge Iron Plant: 200 MT/day (DRI Kiln: 2x100 TPD) and valid up to 30/09/2021.

**Note:** \* As the project cost was less than 100 Cr., the environmental clearance as per EIA Notification, 1994 was not required.

\*\* PP has been committed Violation under EIA Notification 14<sup>th</sup> September, 2006. CTO was granted till 31/12/2011.

\*\*\* JSPCB directed to PP to give clarification in person to Member Secretary as to why the application for grant of CTO for 2x100 TPD sponge Iron Plant and 240 TPD MS Billets plant installed during 2006 should not be revoked. Thereafter, JSPCB granted CTO only for operation of 2x100 TPD Sponge Iron Plant, installed during the year 2013.

52.20.7 After revoked the facilities under violation by JSPCB during CTO renewal, PP sought for Environment Clearance for the following:

- M/s. Jharkhand Ispat Private Limited submitted application on 11/01/2013 for grant of ToR to Obtaining Environmental clearance for the enhancement of sponge iron production from 60,000 TPA to 120,000 TPA and production of 72,000 TPA MS Billets through already installed 2x100 TPD DRI Kiln and 2x12T Induction Furnace under violation; and for the proposed 1x12T Induction furnace for production of 36,000 TPA MS Billets along with installation of additional 300 TPD Rolling Mill

for production of 90,000 TPA TMT bars along with 18MW Captive Power Plant (12MW AFBC & 6 MW WHRB), under expansion.

- Proposal was considered in 7<sup>th</sup> Re-EAC (Industry) held on 04/04/2013 and as the proposal was for violation, MoEF&CC vide letter dated 12/06/2013 directed PP to submit compliance as per OM dated 12/12/2012. Accordingly, PP submitted the Board resolution and credible action to MoEF&CC on 04/01/2014.
- Proposal was considered in 31<sup>st</sup> Re-EAC (Industry) held on 08/01/2015 and again considered on 1<sup>st</sup> meeting of EAC held on 20/11/2015 and ToR for the project was recommended, subsequently MoEF&CC granted the ToR on 08/01/2016.
- After conducting the public hearing on 06/05/2017 final EIA submitted on 25/04/2018. EDS was issued by MoEF&CC dated 17/01/2019 mentioned “the proposal is involved violation under the provisions of EIA notification, 2006. Therefore, PP was requested to make application under violation after issue of such notification for dealing of violation proposals”. The proposal is delisted from Ministry’s website on 07/06/2019.
- PP requested MoEF&CC to relist the proposal and transfer the same to the violation committee as ‘lateral Proposal Entry’, as per MoEF&CC Office Memorandum dated 09/09/2019.
- Proposal was considered in 33<sup>rd</sup> meeting of EAC (Violation) held on 18/05/2020. committee recommended to submit the duly signed hard copy of the following documents:
  - a) Revised Form/1 and PFR having details of Violation.
  - b) Year/wise production detail s including total cost of the project, prior to September, 2006.
- PP submitted the sought documents by EAC (Violation) to MoEF&CC on 08/09/2020.
- Proposal was considered in 36<sup>th</sup> meeting of EAC (Violation) held on 21-22<sup>nd</sup> September, 2020. The EAC, after detail deliberation appraised the instant proposal and confirmed the case to be of violation of the EIA Notification, 2006 and recommended for issuing the ToR. Accordingly, MoEF&CC granted the ToR on 09/11/2020.

52.20.8 The unit configuration and capacity of existing and proposed project is given as below:

Sl. No	Project Details	Existing Installed Units				Proposed Units		Total (Existing + Proposed)	
		Non/Violating		Violating Units		Unit	Prod. (TPA)	Unit	Prod. (TPA)
		Unit	Prod. (TPA)	Unit	Prod. (TPA)				
1.	Sponge Iron Plant	2x100 TPD	60,000	2x100 TPD	60,000	--	--	4x100 TPD	120,000
2.	Induction Furnaces	--		2x12T		1x12T		3x12T	
3.	Billet Caster			2strands 6/11m	72,000	1strand 6/11m	36,000	3strand 6/11m	108,000
4.	Rolling Mill	--		--		300 TPD	90,000	300 TPD	90,000
5.	Captive Power Plant AFBC Boiler WHRB	--		--		1 4	12 MW 6 MW	1 4	12 MW 6 MW

52.20.9 The details of the raw material requirement for the proposed project along with its source and mode of transportation is given as below:

Sl. No.	Item	Requirement MT per Year				Source	Mode of Transport (Distance w.r.t. plant)
		Existing (Non/Violating Units)	Existing (Violating Units)	Proposed	Total		
1.	Iron Ore	102,000	102,000	--	204,000	Arya Iron & Steel Co. Pvt. Ltd., Odisha	170 km by Rail 10 km from Railway Siding (Barkhakhana)
2.	Coal	84,000	84,000	70,000	238,000	CCL, Saunda	18 km by Rail 10 km from Railway Siding (Barkhakhana)
3.	Dolomite	3,000	3,000	--	6,000	Local Market	50 km by Road
4.	Scrap/ Revert Scrap	--	16,500	8,250	24,750	Local Market	20 km by Road

52.20.10 Existing water requirement for Non/violating unit: 170 KLD, and Violating unit: 406 KLD, Proposed: 2330 KLD. Total after Expansion: 2906 KLD. Thus, the make-up water requirement for the project is estimated of 2,906 KLD. Permission for drawl of 0.65MGD (2955KLD) from Damodar River has been obtained from Damodar Valley Corporation vide letter no MRO/Tariff Cell/JIPL/66 dated 04/02/2019.

52.20.11 Existing – 10.5 MW (Non-Violating – 0.8 MW & 9.7 MW for violating Units) Proposed – 7.5 MW (Expansion) Total after expansion: 18.00 MW, which will be met from Captive Power Plant. Prior to commissioning of CPP additional power will be sourced from Damodar Valley Corporation (DVC) and JBVNL.

52.20.12 Baseline Environmental Studies:

Period	01/10/2020 to 31/12/2020
AAQ parameters at 8 locations (min and max)	PM <sub>2.5</sub> = 32.6 to 56.5 µg/m <sup>3</sup> PM <sub>10</sub> = 61.4 to 95.8µg/m <sup>3</sup> SO <sub>2</sub> = 8.2 to 36.8 µg/m <sup>3</sup> NO <sub>2</sub> = 12.8 to 54.8 µg/m <sup>3</sup> CO = 0.66 to 1.45 mg/m <sup>3</sup>
Incremental GLC level	PM <sub>10</sub> = 2.08µg/m <sup>3</sup> (at 0.4 km in West) PM <sub>2.5</sub> = 0.83 µg/m <sup>3</sup> (at 0.4 km in West) SO <sub>2</sub> = 1.08 µg/m <sup>3</sup> (at 0.4 km in West) NO <sub>x</sub> = 0.55µg/m <sup>3</sup> (at 0.4 km in West)
Ground water quality at 8 locations	pH: 7.15 to 7.62, Total Hardness: 185 to 235 mg/l, Chlorides: 50.0 to 61.0 mg/l, Fluoride: 0.22 to 0.38 mg/l, Heavy metals are within the limits
Surface water quality at 8 locations	pH: 7.42 to 7.68; DO: 4.61 to 5.20 mg/l BOD: 6.0 to 10.0 mg/l COD: 24.0 to 30.0 mg/l
Noise levels	45.1 to 69.9 dB(A) for the day time and

Leq (Day and Night)	34.9 to 56.6 dB(A) for the Night time																																	
Traffic assessment study findings	<p>Traffic study has been conducted at SH-2 and Major District Road (MDR)-106 which are approximately 0.5 and 3.5 km from the plant site.</p> <p>Transportation of raw material, fuel &amp; finished product will be done 100% by road.</p> <p>Existing PCU is 2000.5 PCU/day on MDR-106 and 3591 PCU/day on SH-2. Existing level of service (LOS) is:</p> <table border="1"> <thead> <tr> <th>Road</th> <th>V (Volume in PCU/Day)</th> <th>C (Capacity in PCU/Day)</th> <th>Existing V/C Ratio</th> <th>LOS</th> </tr> </thead> <tbody> <tr> <td>MDR</td> <td>2000.5</td> <td>15000</td> <td>0.13</td> <td>A</td> </tr> <tr> <td>SH-2</td> <td>3591</td> <td>15000</td> <td>0.24</td> <td>B</td> </tr> </tbody> </table> <p>PCU load after proposed project will be <b>2135.5 PCU/Day</b> (2000.5+135) on MDR-106 and <b>3726 PCU/Day</b> (3591+135) on SH-2. level of service (LOS) will be:</p> <table border="1"> <thead> <tr> <th>Road</th> <th>V (Volume in PCU/Day)</th> <th>C (Capacity in PCU/Day)</th> <th>Existing V/C Ratio</th> <th>LOS</th> </tr> </thead> <tbody> <tr> <td>MDR</td> <td>2135.5</td> <td>15000</td> <td>0.14</td> <td>A</td> </tr> <tr> <td>SH-2</td> <td>3726</td> <td>15000</td> <td>0.25</td> <td>B</td> </tr> </tbody> </table> <p><b>Note:</b>M/s. Jharkhand Ispat Pvt Ltd has submitted an application to East Central Railways, Barkakana vide letter dated 24/08/2021 for starting the work for construction of common user railway siding. In future, on completion of the work, the material will be transported by Railways. This will help in reducing the existing vehicular traffic on MDR-106 for transportation of Raw Material and Product.</p>				Road	V (Volume in PCU/Day)	C (Capacity in PCU/Day)	Existing V/C Ratio	LOS	MDR	2000.5	15000	0.13	A	SH-2	3591	15000	0.24	B	Road	V (Volume in PCU/Day)	C (Capacity in PCU/Day)	Existing V/C Ratio	LOS	MDR	2135.5	15000	0.14	A	SH-2	3726	15000	0.25	B
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Flora and fauna	There is no Schedule-1 Species of Fauna and Endangered Flora species present in the study area.																																	

52.20.13 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

SN	Type of Waste	Source Name	Quantity in TPA			Treatment Before Disposal	Mode of Disposal	Agreement Details for Disposal
			Non/Violating	Violating	Proposed			
1.	Dolochar	DRI Kiln	15,000	15,000	--	--	In/House AFBC Boiler	<u>MOU with Inland Power</u>
2.	Dedusting Dust	DRI Kiln	11,040	11,040	--	--	Sold to Sinter Plant	<u>MOU with NarsinghIspat</u>
3.	Wet Scrapper Sludge	DRI Kiln	1,800	1,800	--	--	Non/hazardous. Land filling	-
4.	Slag	Induction Furnace	--	11,000	5,500	Metal recovery approx. 10%	Remaining slag, crushed and used as aggregate	--

SN	Type of Waste	Source Name	Quantity in TPA			Treatment Before Disposal	Mode of Disposal	Agreement Details for Disposal
			Non/Violating	Violating	Proposed			
5.	Sludge	Venturi Scrubber	--	2,200 (In dry condition)	1,100 (In dry condition)	--	Sold to Sinter Plant	MOU with Narsingh Ispat
6.	Scale	CCM	--	500	250	--	Sold to Sinter Plant	MOU with Narsingh Ispat
7.	Mill Scales	Rolling Mill	--	--	600	--	Sold to Sinter Plant	MOU with Narsingh Ispat
8.	Fly-ash from WHRB	CPP	--	--	27500	--	Sold to Cement Plant	MOU with Durga Cement
9.	Fly/ash from AFBC	CPP	--	--	41500	--	Sold to Cement Plant	MOU with Durga Cement
10	Bottom Ash from AFBC	CPP	--	--	10500	--	Sold to Brick kiln manufacturing	--

52.20.14 Public Consultation:

Details of advertisement given	01/04/2017
Date of public consultation	06/05/2017
Venue	Panchayat Bhawan, Village and P.O. Marar, Ramgarh District, Jharkhand
Presiding Officer	Additional Collector
Major issues raised	i. Plantation ii. Employment to Locals and adequate wages, iii. Agriculture affected due to pollution iv. Pollution Control Measures, v. Medical Facility and Safe Drinking Water.

**Action plan as per MoEF&CC O.M. dated 30/09/2020:**

SNo	Activities	Amount in INR		
		1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Total
<b>1</b>	<b>Community Development</b>			
	Installation of one number of bore/well based on Solar Pump C:\Users\HP\OneDrive\Desktop\49 EAC\I\NOC Borewell.pdf system along with water storage Tank each in Village Hesla and Mahuatand, District: Ramgarh	3,068,360 [Complete installation of bore/well having pump based on Solar power and water storage tanks]	--	30,68,360

SNo	Activities	Amount in INR		
		1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Total
	Greenbelt of 15m width, covering an area of 0.45 ha. will be developed along the periphery of the village Argada, District: Ramgarh, Jharkhand	450,000.00 [Greenbelt Development along the periphery of Argada Village]	--	4,50,000
<b>2</b>	<b>Health Development</b>			
	Establishment of 16 Bedded Hospital with advance medical facilities with affordable and quality services in village & P.O Marar, District: Ramgarh	4,278,631 [Civil work for two floor building]	8,222,479 [Hospital equipment, Lift, Furniture, Electrification, Air Conditioner, etc]	1,25,01,110
<b>Grand Total in INR</b>				<b>16,019,470.0</b>

52.20.15 Existing capital cost of project was 54.12 Cr. (Non/violating + Violating). The capital cost of the proposed project is Rs. 186.63 Crores (after proposed expansion total capital cost of the project is Rs 240.75 Crores) and the capital cost for environmental protection measures along with the budget of activities to address Public Hearing Issues is proposed as Rs. 5.7011 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 0.475 Crores. The employment generation from the proposed project / expansion is 394 Nos. The details of cost for environmental protection measures are as follows:

Sl. No.	Description of Item	Existing (Rs. in lakhs)	
		Capital Cost	Recurring Cost/Year
1	Air Pollution Control/ Noise Management	259.32	15.5
2	Water Pollution Control	68.0	6.0
3	Solid Waste / Hazardous Waste Management	4.0	1.5
4	Environmental Monitoring and Management	11.0	11.0
5	Green Belt Development	49.60	2.0
6	OH & S	18.0	11.5
7	Addressal of Public Consultation concerns	160.19	//
<b>Total</b>		<b>570.11</b>	<b>47.5</b>

52.20.16 Existing green belt has been developed in 1.54 ha area which is about 10.7 % of the total project area of 14.38 ha with total sapling of 2000 trees (@ 1298 trees/ha). Proposed greenbelt will be developed in 4.22 ha which is about 29.3 % of the total project area. Thus, the total of 5.76 ha area (40 % of total area) will be developed as greenbelt. A 3 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 14400 saplings will be planted and nurtured in 5.76 hectares in three years.

52.20.17 Summary of violation under EIA, 2006 furnished below:

**Company has installed 2x100TPD DRI Kiln and 2x12T Induction Furnace after obtaining NOC from JSPCB on 06.11.2006 and is operating the same till date, without obtaining prior Environmental Clearance as per EIA Notification 2006.** The Damage Assessment was carried out for violation period for Construction and Operation Phase. The total amount to be spent on Remediation plan and Natural Resource Augmentation Plan and Community Resource Augmentation Plan will be Rs.562.235 Lakhs. This plan will be implemented in three years after obtaining all necessary clearances. Detail are given as below:

**Yearly Budget for implementation of Remediation Plan**

SNo	Environment Component	Activity Description	Total Budgetary Provision in Rs.			
			1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total
1	Land Environment	1.Assistance to farmers by providing seedlings, manure and Bio-fertilizers to villagers of Hesla and Maraar= <b>Rs.46,000/-</b> 2.Providing one tractor (Make Mahindra) with hydraulic trolley and Rotavator to be provided to each Nagar panchayat of village Hesla and Maraar = <b>Rs.34,00,000/-</b> 3.Providing Bundmaker, Ridger, plough for agriculture purpose to villagers of Hesla and Maraar= <b>Rs.4,24,500/-</b>	<b>19,35,250</b> (Providing Tractor, Bundmaker, Ridger, Plough and Seedlings, manure in Nagarpanchayat of Hesla)	<b>19,35,250</b> (Providing Tractor, Bundmaker, Ridger, Plough and Seedlings, manure in Nagar panchayat of Maraar)	--	<b>38,70,500</b>
2	Air Environment	1. Providing four E-Rickshaw (4-seater, Make: Mac Auto) with charger for public transport in each Barkakana, Maraar, Phulsarai and Argada villages = <b>Rs25,00,000/-</b> 2. Solar stove, solar street light & solar fan in Argada & Hesala village= <b>Rs.13,78,000/-</b>	<b>12,50,000</b> (Providing 4E-Ricksaweach in Barkakana and Maraar villages)	<b>12,50,000</b> (Providing 4E-Ricksaweach in Phulsarai and Argada villages)	<b>13,78,000</b> (Solar stove, solar street light & solar fan in Argada & Hesala village)	<b>38,78,000</b>
3	Water Environment	1.Drinking water plant (10nos.) including bore well with solar power with water cooler including RO & UV in Argada & Hesala village- <b>Rs1,50,00,000/-</b>	<b>1,68,00,000</b> (Drinking water plant (10 nos) including borewell with solar power with water cooler including RO & UV in Argada & Hesala village)	<b>1,02,00,000</b> (Renovation of Ponds (Includes Cleaning /desiltation, concrete Lining) and construction	<b>69,63,000</b> (Construction of Covered Drainage system along with sewage pit within village Hesla & Sewage	<b>3,39,63,000</b>

SNo	Environment Component	Activity Description	Total Budgetary Provision in Rs.			
			1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total
		2. Sewage treatment plant in village Hesla <b>Rs 50,00,000/-</b> 3. Rain water harvesting pit (@Rs.3lakhs/location) at Panchayat office of Hesla, Argada, Barkakana, Manuan, Maraar and Phulsarai villages= <b>Rs.18,00,000/-</b> 4. Renovation of Ponds (Includes Cleaning/desiltation, concrete Lining) and construction of wharf and platforms in pond located in each of Argada, Hesla, Manuan, and Maraar villages (Rs.2,500,000x4 +200,000) = <b>Rs.1,02,00,000/-</b> 5. Construction of Covered Drainage system along with sewage pits within village Hesla = <b>Rs.19,63,000/-</b>	& Rainwater Harvesting pit at Panchayat office of Hesla, Argada, Barkakana, Manuan, Maraar and Phulsarai villages)	of wharf and platforms in pond located in each of Hesla, Argada, Hesla, Manuan, and Maraar villages)	treatment plant in Hesla)	
4	Noise Environment	1. Providing ENT clinic along with Doctor in Hesla and Argada villages= <b>Rs 4,86,000/-</b> 2. Distribution of Hearing aids to the needed Sr. Citizens of the Hesla, Maraar and Argada villages @ 1000x500 person = <b>Rs.5,00,000/-</b>	<b>4,86,000</b> (Providing ENT specialist Clinic along with Doctor in Hesla and Argada villages)	<b>5,00,000</b> (Distribution of Hearing Aids to the needed Sr. Citizens of the Hesla, Maraar and Argada villages)	--	<b>9,86,000</b>
5	Biological Environment	1.Funds for conservation of fauna in Phulsarai Protected Forest to the District Office= <b>Rs.6,10,000/-</b>	<b>6,10,000</b> (Funds for conservation of fauna residing in Naisarai Protected forest)	--	--	<b>6,10,000</b>
<b>Total</b>			<b>2,10,81,250</b>	<b>1,38,85,250</b>	<b>83,41,000</b>	<b>4,33,07,500</b>

**Natural Resource Augmentation Plan along with budget**

Sl. No.	Proposed Activities	Budget (Rs.)			
		1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total



1	Installation of Biodegradable waste converter (Make: Reddonatura, Capacity: 75kg/day) in Argada, Manuan and Hesla village	10,00,000 (Argada)	10,00,000 (Manuan)	10,00,000 (Hesla)	30,00,000
2	Cattle food processing plant with veterinary hospital at Hesla villages	10,00,000	5,00,000	--	15,00,000
3	Biogas plant in Manuan, Barkakana and Maraar village	8,00,000 (Manuan)	8,00,000 (Barkakana)	8,00,000 (Maraar)	24,00,000
<b>Total</b>		<b>28,00,000</b>	<b>23,00,000</b>	<b>18,00,000</b>	<b>69,00,000</b>

**Community Resource Augmentation Plan along with budget**

S. No.	Proposed Activities	Budget (Rs.)			
		1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total
1.	Oxygen plant at Hesla village	30,00,000	30,00,000	16,000	60,16,000

Summary

S.No.	Activity proposed	Year 1	Year 2	Year 3	Total (in Lakhs)
a.	Damage remediation plan	2,10,81,250	1,38,85,250	83,41,000	433.07500
b.	Natural Resources Augmentation plan	28,00,000	23,00,000	18,00,000	69
c.	Community Resources Augmentation plan	30,00,000	30,00,000	16,000	60.16
<b>Total</b>					<b>562.23500</b>

**Violation aspect:**

In compliance to the specific ToR No. i, the SPCB has undertaken credible action against M/s.JIPL under the provisions of Environment (Protection) Act, 1986, by filing a court case no. 255 of 2021 before the Hon'ble District Court of Ramgarh.

52.20.18 Summary of court cases related to the project are furnished given as below:

Detail	Case 1	Case 2	Case 3
Name of the court	High Court of Jharkhand, Ranchi	District Court of Ramgarh	District Court of Hazaribagh
Name of the Sub/court	--	Chief Judicial Magistrate, Ramgarh	Chief Judicial Magistrate, Hazaribagh
Case No.	W.P.(C) No. 1125 of 2014	Complaint case No. 255/2021	Complaint case No. 331/2013
Orders / Directions of the court, if any and its relevance with the	The writ is pending for final disposal. Meanwhile Hon'ble High Court has passed interim order on 24/03/2014 for stay on clause no. 27 of Consent	Case has been filed on 25/03/2021 to initiate credible action against the project proponent and next hearing date is scheduled 07/10/2022.	Case has been filed on 21/12/2013 to initiate credible action against the project proponent and next hearing date is scheduled 28/01/2022.

Detail	Case 1	Case 2	Case 3
proposed project	to Operate of JSPCB dated 10/12/2012, allowing the PP to operate the expanded part of unit.		
Case Details	Writ petition filed against clause no. 27 of Consent to Operate issued by Jharkhand State Pollution Control Board on 10/12/2012 asking the unit to stop the operation of expanded part (2x100TPD DRI Kiln and 240TPD Billet Plant)	Case has been filed for the offence committed u/s 15 of Environment (Protection) Act, 1986 cognizance u/s 19 of Environment (Protection) Act, 1986 in compliance of MoEF&CC TOR letter J/11011/41/2013/IA.II(I) dated 09/11/2020	Case has been filed for the offence committed u/s 15 of Environment (Protection) Act, 1986 cognizance u/s 19 of Environment (Protection) Act, 1986 in compliance of MoEF&CC letter J/11011/41/2013/IA.II(I) dated 12/06/2013

52.20.19 Name of the EIA consultant: M/s. Vardan EnviroNet [S.No. 41 in List of ACOs with their Certificate no. NABET/EIA/1922/RA 0166; valid up to 06/11/2022, Rev. 16, November 15, 2021].

**Certified Compliance report from Jharkhand State Pollution Control Board**

52.20.20 The Status of compliance of earlier CTO was obtained from Jharkhand State Pollution Control Board vide letter no. 476 dated 05/04/2021 in the name of M/s. Jharkhand Ispat Private Limited. As per inspection report of JSPCB, the PP is complying with the prescribed CTO conditions except management of dolochar generated from DRI kilns.

52.20.21 M/s. Jharkhand Ispat Private Limited has earlier made an online application vide proposal no. IA-JH/IND/212892/2020 dated 03/06/2021. The proposal was considered in 40<sup>th</sup> meeting of the Re/constituted EAC (Industry-I) held on 15-16<sup>th</sup> July, 2021 wherein the Committee recommended the proposal to be returned in its present form to address the technical deficiencies.

52.20.22 M/s. Jharkhand Ispat (P) Ltd again made an online application vide proposal no. IA/JH/IND/236898/2020 dated 15/11/2021. The proposal was considered in 49<sup>th</sup> meeting of the Re/constituted EAC (Industry-I) held on 16 - 17<sup>th</sup> December, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee (EAC during 16 - 17<sup>th</sup> December, 2021)**

52.20.23 The Committee noted the following:

- i. The proposal was accorded ToR on 9/11/2020 as per the provisions contained under S.O. 804 (E) dated 14/03/2017. As per para 13(3) of the said notification, no consent to operate or occupancy certificate will be issued till the project is granted the environmental clearance for the units under violation.

- ii. Violation aspect involved in the instant proposal is “PP had installed 2x100TPD DRI Kiln and 2x12T Induction Furnace without obtaining prior Environmental Clearance as per EIA Notification 2006”.
- iii. As per the information made available by the proponent i.e. page no.13 of the final EIA report and slide no. 40 of the presentation, the aforementioned units which are under violation are being operated continuously by the proponent without obtaining requisite environment clearance which is not in conformity to the provisions contained under S.O. 804 € dated 14/03/2017. Further, as per the undertaking submitted by the proponent, it has been stated that the violating units are not under operation. Thus, conflicting statements have been made by the proponent and EIA consultant regarding the operation of the violating units since grant of ToR and misled the EAC as well as the Ministry deliberately with a malafide intention to obtain EC.
- iv. The court cases reflected at para no. 52.20.18 are not given in s.no. 37 of Form 2 except case no. 255 of 2021.

**Recommendations of the Committee (EAC during 16 - 17<sup>th</sup> December, 2021)**

52.20.24 In view of the foregoing and after detailed deliberations, the committee recommended to defer the proposal and sought following additional information from the proponent.

- i. Details regarding operation of the violating units namely 2x100TPD DRI Kiln and 2x12T Induction Furnace since from the date of grant of CTE dated 6/11/2006 to till date.
- ii. Explanation shall be submitted by the proponent as well as the EIA consultant for suppressing the information in Form 2 regarding the ongoing court cases as reflected at para no. 52.20.18.
- iii. Explanation shall be submitted by the consultant regarding suppression of information regarding the operation of violating units at the time of grant of Terms of Reference accorded on 9/11/2020 under the provisions of S.O. 804 (E) dated 14/03/2017.
- iv. Action plan for the utilization of dolochar generated from the DRI kiln shall be submitted.

52.20.25 The ADS was raised by the Ministry on 28/12/2021 as per the recommendations of EAC. The proponent submitted the reply to the ADS vide letter dated 06/01/2022 uploaded on PARIVESH on 15/01/2022 as follows:

S. No.	Additional Detail Sought	Reply
i.	Details regarding operation of the violating units namely 2x100TPD DRI Kiln and 2x12T Induction Furnace since from the date of grant of CTE dated 6/11/2006 to till date	Detailed status of operation of the violating units, i.e. 2x100TPD DRI Kiln and 2x12T Induction Furnace since from the date of grant of CTE dated 6/11/2006 to till date is provided with ADS reply submitted to MoEFCC. The violating units were operating in compliance of court order of Hon’ble High Court of Jharkhand [W.P.(C) No. 1125 of 2014] dated 24.03.2014. The court order is still prevailing. Further as per Additional details/Clarifications sought by MOEF&CC, JIPL has already informed via email dated 21.12.2021, that 2x100 TPD DRI Kiln (Kiln 3 & 4) was in

S. No.	Additional Detail Sought	Reply
		continuous operation till March, 2021 and the 2x12T Induction Furnace along with CCM was in operation till November, 2021 on the basis of Jharkhand High Court Stay Order.
ii.	Explanation shall be submitted by the proponent as well as the EIA consultant for suppressing the information in Form 2 regarding the ongoing court cases as reflected at para no. 49.12.8.	<p>Kindly refer to various instances in the EIA report wherein the consultant has mentioned that the violating units are in operation.</p> <ol style="list-style-type: none"> <li>1. Para No. 1 (details of violation) of Form-2 reads “Company has installed 2x100 TPD DRI Kiln and 2x12 Ton Induction Furnace after obtaining NOC from JSPCB on 06.11.2006 <b>and is operating the same till date, without obtaining prior Environmental Clearance as per EIA Notification 2006</b>”.</li> <li>2. Para no. 2.6.2.1 at page 25 of the EIA report reads “<b>Four numbers of 100 TPD each rotary kiln is producing 120,000 MT of sponge iron annually considering 300 working days.</b>”</li> <li>3. Para 2.6.2.2 at page 28 of the EIA report reads “<b>Two nos. 12T induction furnaces (each with two crucibles and a common power supply) are in operation through which production of 72000 TPA MS Billets is done.</b>”</li> <li>4. Para 11.2.2.2 at page 248 again reproduces the above-mentioned facts that the 2x100 TPD DRI Kilns and 2x12 T induction furnace are in operation</li> <li>5. It is most pertinent here to mention here that as per para no. 13.3 at page 281 of EIA report, i.e. economic benefits derived which is reproduced here “<b>Jharkhand Ispat Pvt. Ltd has been in operation since 2003. The violation units (2x100 TPD DRI Kilns, 2x12T Induction furnaces with 2 strand 6/11m billet casters) were installed in the year 2006 and production from DRI unit started on 2012 and Billet production started on 2006 and is continued till date. The Violation units are still in operation as per the High court stay order [W.P.(C) No. 1125 of 2014] dated 24.03.2014 on Clause No. 27 of CTO dated 10/12/2012.</b>” All relevant section of EIA mentioned above are provided with ADS reply submitted to MoEFCC.</li> <li>6. In Form-2, Under the heading of Court Cases, Since the Multiple Entries of Court cases is not possible while uploading the EC Application, therefore only the latest Court Case dated 25.03.2021 (Credible Action U/s 15 of E(P) Act, 1986) was uploaded.</li> <li>7. Further, in the presentation (Slide 40) made to EAC (Industry-1), it is clearly mentioned that the violating units are in operation on the basis of stay order from the High Court.</li> <li>8. Email sent to the Ministry as well as EAC on dated 10<sup>th</sup> December 2021 contains a brief write up about the project. It contains the details of the ongoing court cases against the project proponent and clearly mentions that W.P.(C) No.</li> </ol>

S. No.	Additional Detail Sought	Reply
		<p>1125 of 2014 is pending for final disposal and as per this court order the PP is allowed to operate the violating units.</p> <p>From the above clarifications, it is clear that no information has been suppressed about the status of operation of the unit. The details of the ongoing court cases have been mentioned in the presentation made before the EAC as well as the Brief summary sent via email dated 10<sup>th</sup> December 2021.</p>
iii.	Explanation shall be submitted by the consultant regarding suppression of information regarding the operation of violating units at the time of grant of Terms of Reference accorded on 9/11/2020 under the provisions of S.O. 804 € dated 14/03/2017	<p>Kindly refer to following instances in the Terms of Reference application submitted to MoEFCC on 25/04/2018, wherein the consultant has mentioned that the violating units are in operation:</p> <ol style="list-style-type: none"> <li>1. In Form-1 submitted to MoEFCC for ToR at Point No. 15, it was mentioned that there is an ongoing case in Jharkhand High Court (writ petition no. 1125/2014) for stay on JSPCB letter dated 10/12/2012.</li> <li>2. The above mentioned High court order was also attached as Annexure with Form-1 submitted to MoEFCC</li> <li>3. In 33<sup>rd</sup> EAC (Violation) meeting held on 19.05.2020 for ToR, Project proponent and EIA Consultant informed the EAC about the Jharkhand High Court stay order on JSPCB letter dated 10/12/2012 to the Committee members through presentation Slide No. 6, while explaining the chronology of events. As per Slide No. 6 containing reference of Letter dated 12.05.2017<sup>5</sup> submitted by JtpL to MoEFCC, it was clarified that the violation units were under operation by virtue of Jharkhand High Court Stay Order.</li> </ol> <p>Hence from the above clarifications, it is clear that no information was suppressed regarding the operation of violation units during the EAC (Violation) meeting for Issuing Terms of Reference</p>
iv.	Action plan for the utilization of dolochar generated from the DRI kiln shall be submitted	<p>The industry is generating about 30,000 TPA Dolochar through operation of 4x100 TPD DRI kiln.</p> <p>At present the Dolochar is being sold to M/s Godavari Commodities Limited. MoU for the same is provided with ADS reply submitted to MoEFCC.</p> <p>After implementation of AFBC boiler as a part of Proposed Expansion, the Dolochar (having Calorific Value of 149pprox.. 1400 kcal/kg) will be used as Raw material along with Coal in AFBC Boiler to generate 12 MW Power.</p> <p>Dolochar management plan is provided with ADS reply submitted to MoEFCC.</p>

52.20.26 Also, as per the recommendations of EAC, a show-cause notice was issued to the consultant M/s. Vardan EnviroNet Pvt. Ltd. by the Ministry vide letter dated 18/01/2022. The reply submitted by the consultant vide letter dated 24/12/2022 was uploaded on PARIVESH by the proponent on 24/12/2022 as follows:

S. No.	Detail Sought	Reply
<b>A</b>	<b><i>Observations of the Committee during the 49th EAC (Industry-I) meeting</i></b>	
i.	The proposal was accorded ToR on 9/11/2020 as per the	Proposal of Jharkhand Ispat Pvt Ltd (JIPL) for ToR was considered in 33 <sup>rd</sup> EAC (Violation) meeting dated 18.05.2020

S. No.	Detail Sought	Reply
	<p>provisions contained under S.O. 804 (E) dated 14/03/2017. As per para 13(3) of the said notification, no consent to operate or occupancy certificate will be issued till the project is granted the environmental clearance for the units under violation</p>	<p>as Lateral Proposal Entry, as per MOEF&amp;CC OM 09/09/2019. The EAC (violation) had three observations in the meeting. Minutes of meeting of the 33rd EAC (Violation) were provided with ADS reply</p> <p>The reply of the observations of EAC (Violation) was submitted to MOEF&amp;CC on <b>08.09.2020</b> (receiving along with documents such as Form 1, PFR, court order details, proposed TOR, production data provided with ADS reply), in which the information about High Court Order W.P.(C) No. 1125 of 2014 dated 24.03.2014 and the violation units being in operation based on the same order were mentioned and submitted to MOEF&amp;CC.</p> <p>Kindly refer point no. 24 of the Form 1 and Annexure V wherein the court order is attached for the record and appraisal of MOEF&amp;CC and EAC. Kindly refer to page no. 14 of the PFR wherein it is mentioned that the four number of 100 TPD kiln <b>are producing 1,20,000 TPA of sponge iron</b>. Kindly also refer to page no. 16 of the PFR wherein it is mentioned that <b>the two nos. of 12 T induction furnace of are in operation through which production of 72,000 TPA of billets is done</b>. Kindly also refer to page no. 38 of the PFR wherein it is once again mentioned that “<b>M/s Jharkhand Ispat Pvt. Ltd. (JIPL) is presently operating 4 nos. of 100 TPD DRI kilns for production of 120,000 TPA sponge iron and two number of 12 Ton induction furnace with billet caster for annual production of 72000 TPA MS Billets</b>”.</p> <p><b>Kindly refer to Annexure 3 of the TOR application (signed documents submitted to MOEF&amp;CC on 08.09.2020) wherein the production figures of DRI Kiln and Induction furnace have been submitted to MOEF&amp;CC and EAC (Violation) for appraisal. As per the production figures it is very clear and evident that the unit was in continuous operation since 2006.</b></p> <p>It is also pertinent to mention here that an email was sent to MOEF&amp;CC as well as EAC (violation) on dated 15.09.2020 which contained all the above documents such as Form 1, PFR, presentation, KML files, details of the court case and the production figures (<b>documents indicating that the unit was in continuous operation</b>). Copy of email sent to MOEF&amp;CC and EAC on 15.09.2020 is provided with ADS reply submitted to MoEFCC.</p> <p>On the basis of the above submission, the proposal was reconsidered in 36th EAC (Violation) meeting dated <b>22.09.2020</b> and recommended for grant of TOR (Minutes of EAC meeting provided with ADS reply). Sir it is also very</p>

S. No.	Detail Sought	Reply
		<p>pertinent to mention here that further in response of discussions held in the EAC (Violation) meeting dated 22.09.2020, we have once again submitted the details of High Court Stay Order dated 24.03.2014 via our email dated <b>23.09.2020</b> (Email provided with ADS reply submitted to MoEFCC)</p> <p>Thereafter, ToR was accorded on 09.11.2020 as per the provisions contained under S.O. 804 (E) dated 14/03/2017.</p>
ii.	<p>Violation aspect involved in the instant proposal is “PP had installed 2x100TPD DRI Kiln and 2x12T Induction Furnace without obtaining prior Environmental Clearance as per EIA Notification 2006”</p>	<p>The Violation aspects of the project proposal were installation of 2x100 TPD DRI Kiln and 2x12T Induction Furnace without obtaining prior Environmental Clearance as per EIA Notification 2006.</p>
iii.	<p>As per the information made available by the proponent i.e. page no.13 of the final EIA report and slide no. 40 of the presentation, the aforementioned units which are under violation are being operated continuously by the proponent without obtaining requisite environment clearance which is not in conformity to the provisions contained under S.O. 804 (E) dated 14/03/2017. Further, as per the undertaking submitted by the proponent, it has been stated that the violating units are not under operation. Thus, conflicting statements have been made by the proponent and EIA consultant regarding the operation of the violating units since grant of ToR and misled the EAC as well as the Ministry deliberately with a malafide intention to obtain EC</p>	<p>Reply in point no. (i) above clearly indicates that the information of the plant being in continuous operation has been informed to the EAC (violation) and on the basis of the above TOR has been accorded.</p> <p>Further, the same information that the plant is in continuous operation on the basis of High Court Stay order has also been provided to EAC (Industry-1).</p> <p>The EIA report made by Vardan Environet submitted to MOEF&amp;CC on 3.6.2021. Kindly refer to various instances in the EIA report wherein it has been mentioned that the violating units are in operation.</p> <ul style="list-style-type: none"> <li>• S.No. 1 (details of violation) of Form-2 reads “Company has installed 2x100 TPD DRI Kiln and 2x12 Ton Induction Furnace after obtaining NOC from JSPCB on 06.11.2006 <b>and is operating the same till date, without obtaining prior Environmental Clearance</b> as per EIA Notification 2006”. (provided with ADS reply submitted to MoEFCC)</li> <li>• Para no. 2.6.2.1 at page 25 of the EIA report reads “<b>Four numbers of 100 TPD each rotary kiln is producing 120,000 MT of sponge iron annually considering 300 working days.</b>”</li> <li>• Para 2.6.2.2 at page 28 of the EIA report reads “<b>Two nos. 12T induction furnaces (each with two crucibles and a common power supply) are in operation through which production of 72000 TPA MS Billets is done.</b>”</li> <li>• Para 11.2.2.2 at page 248 again reproduces the above-mentioned facts that the 2x100 TPD DRI Kilns and 2x12 T induction furnace are in operation</li> <li>• It is most pertinent here to mention here that <b>as per para no. 13.3 at page 281 of EIA report</b>, i.e. economic benefits derived which is reproduced here</li> </ul>

S. No.	Detail Sought	Reply
		<p><b>“Jharkhand Ispat Pvt. Ltd has been in operation since 2003. The violation units (2x100 TPD DRI Kilns, 2x12T Induction furnaces with 2 strand 6/11m billet casters) were installed in the year 2006 and production from DRI unit started on 2012 and Billet production started on 2006 and is continued till date. The Violation units are still in operation as per the High court stay order [W.P.(C) No. 1125 of 2014] dated 24.03.2014 on Clause No. 27 of CTO dated 10/12/2012.”</b></p> <p>All relevant section of EIA mentioned above are provided with ADS reply submitted to MoEFCC <b>that indicate the unit being in continuous operation.</b></p> <p>Consequent to the submission of EIA report, the proposal was considered in the 40<sup>th</sup> meeting of EAC (Industry-1) dated 15<sup>th</sup> July 2021. Kindly refer to our emails dated 6.7.2021 and another email dated 9.7.2021 sent to EAC (Industry-1) and MOEF&amp;CC. The brief write up sent via our email dated 9.7.2021 is provided with ADS reply submitted to MoEFCC. As per the point no. 18 details of the four court cases against the PP including the case in W.P. (C) 1125 of 2014 in Jharkhand High Court have been provided indicating that the plant is in operation on the basis of court order. The presentation made before the EAC (Industry-1) also contains the details of the court cases (as per slide no. 66)</p> <p>Kindly refer to point no. 40.1.17 of the minutes of EAC meeting dated 15<sup>th</sup> July 2021 (MoM provided with ADS reply submitted to MoEFCC) which is reproduced as follows:</p> <p><b>“Summary of violation under EIA, 2006 furnished below: Company has installed 2x100TPD DRI Kiln and 2x12T Induction Furnace after obtaining NOC from JSPCB on 06.11.2006 and is operating the same till date, without obtaining prior Environmental Clearance as per EIA Notification 2006. The Damage Assessment was carried out for violation period for Construction and Operation Phase.....”</b></p> <p>The above statement indicates that MOEF&amp;CC and EAC (industry-1) acknowledged the plant being in continuous operation. However, due to certain shortcomings the proposal was returned in the present form as per the 15th July 2021 EAC (Industry-1) meeting.</p> <p>The updated proposal was submitted to MOEF&amp;CC on 3.11.2021 and was considered for appraisal in the 49<sup>th</sup> EAC (Industry-1) meeting held on 16.12.2021. Once again as per our email sent to MOEF&amp;CC and EAC dated 10.12.2021 we have informed the MOEF&amp;CC and EAC about the four ongoing</p>



S. No.	Detail Sought	Reply
		<p>court cases in the brief summary and presentation. Copy of email dated 10.12.2021 and copy of brief summary is provided with ADS reply submitted to MoEFCC.</p> <p><b>The above facts clearly indicate that Vardan Environet has performed its duty as an accredited EIA consultant for reporting the factual position about the project, its operational status and the ongoing court cases time and again to the MOEF&amp;CC, EAC (Violation) and the EAC (Industry-1).</b></p> <p>After discussion of the proposal in the 49<sup>th</sup> EAC (Industry-1) meeting held on 16.12.2021, an undertaking was submitted by Shri RC Rungta, Director of Jharkhand Ispat Pvt. Ltd. vide their letter no. JIPL/095/2021-22 dated 16.12.2021 to MoEF&amp;CC stating that units under violation, i.e. 2x100 TPD DRI Kiln and 2x12 T induction furnace along with two strands of 6/11 m billet caster are not in operation.</p> <p>On 21.12.2021, a statement (clarification) regarding the period of operation of violating units and the date of stoppage of the said units was sought by MoEF&amp;CC vide their email. The project proponent Shri RC Rungta, Director of Jharkhand Ispat Pvt. Ltd. replied to MoEF&amp;CC on the same date and clarified vide para 6 of his email to MoEF&amp;CC that the units 2x100TP DRI Kiln (Kiln 3 &amp; 4) was in continuous operation till March, 2021 and the 2x12T Induction Furnace along with CCM was in operation till November, 2021. (copy of email provided with ADS reply submitted to MoEFCC)</p> <p>When the EIA Report was prepared the violating Units were in operation and as responsible consultant, we provided the factual status in the EIA Report. Status of operation given in the undertaking provided by the project proponent is a later development and may not be considered as conflicting statement.</p> <p>May kindly appreciate that Consultant can check the status of operation of Units when their team visit the Site for collection of data / information for preparation of EIA Report and depend on the project proponent for any important change happened after that.</p> <p>The above submissions are quite self-explanatory hence it is denied that Vardan Environet has made conflicting statements regarding the operation of violating units since grant of ToR and misled the EAC as well as the Ministry deliberately with a malafide intention to obtain EC.</p> <p>It is submitted that Vardan Environet has performed its duty as an accredited EIA consultant for reporting the factual position about the project, its operational status and the ongoing court</p>

S. No.	Detail Sought	Reply
iv.	The court cases reflected at para no. 49.2.18 are not given in s.no. 37 of Form 2 except case no. 255 of 2021.	<p>cases time and again to the MOEF&amp;CC, EAC (Violation) and the EAC (Industry-1).</p> <p>The S.No. 37 of Form-2 seeks for the court cases pertaining to Environment (Protection) Act/Air (Prevention and Control of Pollution) Act/Water (Prevention and Control of Pollution) Act. The most recent case, i.e. case No. 255 of 2021, which is related to Credible Action against Jharkhand Ispat Pvt Ltd. under Section 15 of E(P) Act 1986 cognizance u/s 19 of E(P) act, 1986 was uploaded in S.No. 37 of Form-2.</p> <p><b>Since multiple entries cannot be made in the Form-2</b>, they have been mentioned in the brief write up sent to MOEF&amp;CC and EAC vide our emails dated 09.07.2021 and 10.12.2021, the same is also recorded in the minutes of 49<sup>th</sup> EAC (Industry-1) meeting dated 16.12.2021</p> <p>The reply against point no. (i) and (iii) of your show cause notice/49<sup>th</sup> EAC (Industry-1) Minutes of Meeting also indicate that we have time and again informed the MOEF&amp;CC and EAC (Industry-1) about the ongoing court cases in various forms such as the Brief Summary, Presentation, Email, etc.</p>
<b>B</b>	<b>Additional Information sought by EAC (Industry-1) during its 49<sup>th</sup> meeting</b>	
i.	Details regarding operation of the violating units namely 2x100TPD DRI Kiln and 2x12T Induction Furnace since from the date of grant of CTE dated 6/11/2006 to till date	<p>Detailed status of operation of the violating units, i.e. 2x100TPD DRI Kiln and 2x12T Induction Furnace since from the date of grant of CTE dated 6/11/2006 to till date is provided with ADS reply submitted to MoEFCC.</p> <p>The violating units were operating in compliance of court order of Hon'ble High Court of Jharkhand [W.P.(C) No. 1125 of 2014] dated 24.03.2014. The court order is still prevailing.</p> <p>Further as per Additional details/Clarifications sought by MOEF&amp;CC, JIPL has already informed via email dated 21.12.2021, that 2x100 TPD DRI Kiln (Kiln 3 &amp; 4) was in continuous operation till March, 2021 and the 2x12T Induction Furnace along with CCM was in operation till November, 2021 on the basis of Jharkhand High Court Stay Order.</p>
ii.	Explanation shall be submitted by the proponent as well as the EIA consultant for suppressing the information in Form 2 regarding the ongoing court cases as reflected at para no. 49.12.8.	<p>Kindly refer to various instances in the EIA report wherein the consultant has mentioned that the violating units are in operation.</p> <p>S. No. 1 (details of violation) of Form-2 reads “Company has installed 2x100 TPD DRI Kiln and 2x12 Ton Induction Furnace after obtaining NOC from JSPCB on 06.11.2006 <b>and is operating the same till date, without obtaining prior Environmental Clearance as per EIA Notification 2006</b>”.</p> <p>Para no. 2.6.2.1 at page 25 of the EIA report reads “<b>Four numbers of 100 TPD each rotary kiln is producing 120,000 MT of sponge iron annually considering 300 working days.</b>”</p> <p>Para 2.6.2.2 at page 28 of the EIA report reads “<b>Two nos. 12T induction furnaces (each with two crucibles and a common power supply) are in operation through which</b></p>

S. No.	Detail Sought	Reply
		<p><b><i>production of 72000 TPA MS Billets is done.”</i></b>            Para 11.2.2.2 at page 248 again reproduces the above-mentioned facts that the 2x100 TPD DRI Kilns and 2x12 T induction furnace are in operation            It is most pertinent here to mention here that as per para no. 13.3 at page 281 of EIA report, i.e. economic benefits derived which is reproduced here <b><i>“Jharkhand Ispat Pvt. Ltd has been in operation since 2003. The violation units (2x100 TPD DRI Kilns, 2x12T Induction furnaces with 2 strand 6/11m billet casters) were installed in the year 2006 and production from DRI unit started on 2012 and Billet production started on 2006 and is continued till date. The Violation units are still in operation as per the High court stay order [W.P.(C) No. 1125 of 2014] dated 24.03.2014 on Clause No. 27 of CTO dated 10/12/2012.”</i></b>            All relevant section of EIA mentioned above are provided with ADS reply submitted to MoEFCC.            In Form-2, Under the heading of Court Cases, Since the Multiple Entries of Court cases is not possible while uploading the EC Application, therefore only the latest Court Case dated 25.03.2021 (Credible Action U/s 15 of E(P) Act, 1986) was uploaded.            Further, in the presentation (Slide 40) made to EAC (Industry-1), it is clearly mentioned that the violating units are in operation on the basis of stay order from the High Court.            Email sent to the Ministry as well as EAC on dated 10th December 2021 contains a brief write up about the project. It contains the details of the ongoing court cases against the project proponent and clearly mentions that W.P.(C) No. 1125 of 2014 is pending for final disposal and as per this court order the PP is allowed to operate the violating units.            We hope that from the above clarifications, it is clear that no information has been suppressed about the status of operation of the unit. The details of the ongoing court cases have been mentioned in the presentation made before the EAC as well as the Brief summary sent via email dated 10th December 2021.</p>
iii.	<p>Explanation shall be submitted by the consultant regarding suppression of information regarding the operation of violating units at the time of grant of Terms of Reference accorded on 9/11/2020 under the provisions of S.O. 804 (E) dated 14/03/2017</p>	<p>Proposal of Jharkhand Ispat Pvt Ltd (JIPL) for ToR was considered in 33rd EAC (Violation) meeting dated 18.05.2020 as Lateral Proposal Entry, as per MOEF&amp;CC OM 09/09/2019. The EAC (violation) had three observations in the meeting. Minutes of meeting of the 33rd EAC (Violation) are provided with ADS reply submitted to MoEFCC.</p> <p>The reply of the observations of EAC (Violation) was submitted to MOEF&amp;CC on <b>08.09.2020</b> (receiving along with documents such as Form 1, PFR, court order details, proposed TOR, production data are provided with ADS reply submitted to MoEFCC), in which the information about High Court Order W.P.(C) No. 1125 of 2014 dated 24.03.2014 and the violation units being in operation based on the same order were mentioned and submitted to MOEF&amp;CC.</p>

S. No.	Detail Sought	Reply
		<p>Refer point no. 24 of the Form 1 and Annexure V wherein the court order in attached for the record and appraisal of MOEF&amp;CC and EAC. Kindly refer to page no. 14 of the PFR wherein it is mentioned that the four number of 100 TPD kiln <b>are producing 1,20,000 TPA of sponge iron</b>. Kindly also refer to page no. 16 of the PFR wherein it is mentioned that <b>the two nos. of 12 T induction furnace of are in operation through which production of 72,000 TPA of billets is done</b>. Kindly also refer to page no. 38 of the PFR wherein it is once again mentioned that <b>Jharkhand Ispat is operation 4x100 TPD DRI kilns and 2x12 T induction furnaces</b>. Kindly refer to Annexure 3 of the TOR application (signed documents submitted to MOEF&amp;CC on 08.09.2020) wherein the production figures of DRI Kiln and Induction furnace have been submitted to MOEF&amp;CC and EAC (Violation) for appraisal. As per the production figures it is very clear and evident that the unit was in continuous operation since 2006.</p> <p>It is also pertinent to mention here that an email was sent to MOEF&amp;CC as well as EAC (violation) on dated 15.09.2020 which contained all the above documents such as Form 1, PFR, presentation, KML files, details of the court case and the production figures (<b>documents indicating that the unit was in continuous operation</b>). Copy of email sent to MOEF&amp;CC and EAC on 15.09.2020 is provided with ADS reply submitted to MoEFCC.</p> <p>On the basis of the above submission, the proposal was reconsidered in 36th EAC (Violation) meeting dated <b>22.09.2020</b> and recommended for grant of TOR. Sir it is also very pertinent to mention here that further in response of discussions held in the EAC (Violation) meeting dated 22.09.2020, we have once again submitted the details of High Court Stay Order dated 24.03.2014 via our email dated <b>23.09.2020</b></p> <p>Thereafter, ToR was accorded on 09.11.2020 as per the provisions contained under S.O. 804 (E) dated 14/03/2017.</p>
iv.	Action plan for the utilization of dolochar generated from the DRI kiln shall be submitted	<p>The industry is generating about 30,000 TPA Dolochar through operation of 4x100 TPD DRI kiln.</p> <p>At present the Dolochar is being sold to M/s Godavari Commodities Limited. MoU for the same is provided with ADS reply submitted to MoEFCC.</p> <p>After implementation of AFBC boiler as a part of Proposed Expansion, the Dolochar (having Calorific Value of approx. 1400 kcal/kg) will be used as Raw material along with Coal in AFBC Boiler to generate 12 MW Power.</p> <p>Dolochar management plan is provided with ADS reply submitted to MoEFCC.</p>

52.20.27 Based on the aforementioned reply of proponent and consultant, the proposal is considered in 52<sup>nd</sup> meeting of Reconstituted Expert Appraisal Committee (Industry-1) held on 27-28<sup>th</sup> & 31<sup>st</sup> January, 2022. The observations and recommendations of EAC is given as below:

**Observations of the Committee**

52.20.28 The Committee noted the following:

- i. The violating unit is under operation based on the Order dated 24.03.2014 of Hon'ble High Court of Jharkhand in W.P.(C) No. 1125 of 2014.
- ii. The consultant as well as the proponent submitted that the information regarding operation of violation units was informed to the Ministry at the time of grant of ToR by EAC-Violation through Form I and presentation made before the EAC. The said information was also submitted in the final EIA/EMP submitted to the Ministry for appraisal process.
- iii. As per the undertaking submitted by the proponent during the EAC meeting held on 16/12/2021, the project proponent has stated that the violating units are not under operation. However, in the EIA report it has been reported that violating units are under operation.
- iv. As per the damage assessment report submitted as part of the EIA report, the production figures have been taken into account till 31/03/2020. As per the additional information submitted by the proponent, the DRI units were running till March 2021 and Induction Furnaces and CCM was being operated till Nov 2021. The said production details have not been taken into account for the calculation of damage assessment.

**Recommendations of the Committee**

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

- i. Reasons for making conflicting statement in the EIA report and undertaking submitted on 16/12/2021 with respect to operation of violating units shall be submitted.
- ii. Updated damage assessment report shall be submitted as the units under violation [DRI units were running till March 2021 and Induction Furnaces and CCM was being operated till Nov 2021] are under operation beyond 31/03/2020.
- iii. Chronology of events of units under violation since 2006 to till date shall be submitted along with its production figures.

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**ANNEXURE –1**

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

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

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

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

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

**6. Environmental Status**

- i. Determination of atmospheric inversion level at the project site and site/specific micro/meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre/dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the 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. To address the Public Hearing issues, provisions contained under Ministry's Office Memorandum vide F.No. 22/65/2017/IA.III dated 30/09/2020 shall be complied.
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA/EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA/EMP Report.
- vi. The index of the final EIA/EMP report must indicate the specific chapter and page no. of the EIA/EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J/11013/41/2006/IA.II (I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation

details shall be posted on the EIA/EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.

- ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA/EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA/EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district/wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA/EMP Report in a separate chapter and summarized in a tabular chart with financial budget (capital and revenue) along with time/schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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**ANNEXURE/2**

**ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT**

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. For Large ISPs, a 3/D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
4. Recent land/use map based on satellite imagery. High/resolution satellite image data having 1m/5m spatial resolution like quickbird, Ikonos, IRS P/6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land/cover mapping of the area.
5. PM (PM<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

**ADDITIONAL ToRs FOR PELLET PLANT**

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. Recent land/use map based on satellite imagery. High/resolution satellite image data having 1m/5m spatial resolution like quickbird, Ikonos, IRS P/6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land/cover mapping of the area.
4. PM(PM<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

**ADDITIONAL ToRs FOR CEMENT INDUSTRY**

1. Limestone and coal linkage documents along with the status of environmental clearance of limestone and coal mines
2. Quantum of production of coal and limestone from coal & limestone mines and the projects they cater to;
3. Present land use shall be prepared based on satellite imagery. High/resolution satellite image data having 1m/5m spatial resolution like quickbird, Ikonos, IRS P/6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land/cover mapping of the area.
4. If the raw materials used have trace elements, an environment management plan shall also be included.
5. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.
6. Energy consumption per ton of clinker and cement grinding
7. Provision of waste heat recovery boiler
8. Arrangement for co/processing of hazardous waste in cement plant.
9. Trace metals in waste material especially slag.

**ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY**

- i. A note on pulp washing system capable of handling wood pulp shall be included.
- ii. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
- iii. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.
- iv. Commitment that only elemental Chlorine/free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.
- v. A commitment that no extra chlorine base bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills. Plan for reduction of water consumption.

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

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

**ADDITIONAL ToRs FOR COKE OVEN PLANT**

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

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

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

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

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

## **Executive Summary**

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

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

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**Email**

**Sundar Ramanathan**

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**Re: DRAFT MOM OF 52 EAC MEETING HELD ON 31 JAN 2022**

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**From :** cnpandey@iitgn.ac.in

Sat, Feb 05, 2022 06:29 PM

**Subject :** Re: DRAFT MOM OF 52 EAC MEETING HELD ON 31  
JAN 2022

 1 attachment

**To :** Sundar Ramanathan <r.sundar@nic.in>

Dear Mr. Sundar,

The approved MOM of EAC 52 is attached herewith as a document file. Please go ahead with publishing this on Parivesh.

Best regards,  
C. N. Pandey.