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

Date of zero draft MoM sent to Chairman:31/03/2022
Approval by Chairman: 05/04/2022
Uploading on PARIVESH: 05/04/2022

Summary record of the Second (2nd) meeting of Expert Appraisal Committee (EAC) held on 22nd-23rdMarch, 2022 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) Notification, 2006.

The second meeting of the Expert Appraisal Committee (EAC) for Industry-I Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held during **22nd-23rd March, 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	22/03/2022	23/03/2022
1.	Shri. Rajive Kumar	Chairman	Present	Present
2.	Dr. S. Ranganathan	Member	Present	Present
3.	Dr. Ranjit Prasad	Member	Present	Present
4.	Dr. E V R Raju	Member	Present	Present
5.	Dr. S. K. Singh	Member	Present	Present
6.	Dr. Jai Krishna Pandey	Member	Present	Present
7.	Dr. Dipankar Shome	Member	Present	Present
8.	Dr. TejaswiniAnanthkumar	Member	Present	Present
9.	Dr. Hemant Sahasrabuddhe	Member	Present	Present
10.	*Dr. B. N. Mohapatra, DG, National Council for Cement and Building Materials (NCCBM)*	*Member*	*Absent*	*Absent*
11.	*Representative of CPCB*	*Member*	*Absent*	*Absent*
12.	*Dr. S. Raghavan, Scientist 'D' National Institute of Occupational Health (NIOH)*	*Member*	*Absent*	*Absent*
13.	*Representative of IMD*	*Member*	*Absent*	*Absent*
Officials from MoEF&CC				
14.	Shri. Sundar Ramanathan	Member Secretary	Present	Present
15.	Dr. Sandeepan B.S.	Scientist 'B'	Present	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 1st meeting held during 5-6th March, 2022 were confirmed by the EAC as already uploaded on PARIVESH.

22ndMarch, 2022

2.1 Proposed installation of Pellet Plant (1x0.6 MTPA), Sponge Iron Plant (2x350 TPD DRI kilns), Induction Furnaces (4x20 T) with matching LRF & CCM, Rolling Mill (0.25 MTPA) along with 26 MW capacity Captive Power Plant (16 MW WHRB & 10 MW AFBC based) by **M/s. AIC Metaliks Private Limited** located at Jamuria Industrial Estate, Jamuria, **District Paschim Bardhman, West Bengal** [Online Proposal No. IA/WB/IND/117709/2019, File No. IA-J-11011/274/2019-IA-II(I)] – **Environment Clearance – regarding.**

2.1.1 M/s. AIC Metaliks Private Limited has made an online application vide proposal no. IA/WB/IND/117709/2019 dated 19/02/2022 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 Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

2.1.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
11/09/2019	11th meeting of EAC, held on 25th September, 2019	Terms of Reference	30/10/2019	29/10/2022

2.1.3 The project of M/s. AIC Metaliks Private Limited is located at Jamuria Industrial Estate, Jamuria, District Paschim Burdwan, West Bengal State is for Proposed installation of following facilities:

- Pellet Plant (1x0.6 MTPA)
- Sponge Iron Plant (2x350 TPD DRI kilns) for production of 2,31,000 TPA Sponge Iron
- Induction Furnaces (4x20 T) with matching LRF & CCM for production of 2,60,000 TPA Billets (2,64,000 TPA Liquid Steel)
- Rolling Mill (0.25 MTPA) for production of structural (Sheets, Angels, Channels, TMT Bars, Wires, Rods, Strips, Pipes)
- 26 MW capacity Captive Power Plant (16 MW WHRB & 10 MW AFBC based)

2.1.4 Environmental Site Settings:

S No	Particulars	Details	Remarks
i.	Total land	19.27 ha [Private: 19.27 ha]	Land use: Industrial – 19.27 ha
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Total land of 19.27 ha for the proposed project is already under the possession of the Company.	Site located in notified Jamuria industrial Estate

<table>
<tr><th>S No</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any</td><td>There is no habitation and no involvement of R&R.</td><td>Total land under the possession of the company.</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>1</td><td>23°41'11.73"N</td><td>87° 5'47.09"E</td></tr><tr><td>2</td><td>23°41'13.00"N</td><td>87° 5'53.32"E</td></tr><tr><td>3</td><td>23°41'10.97"N</td><td>87° 6'1.69"E</td></tr><tr><td>4</td><td>23°41'0.75"N</td><td>87° 6'18.37"E</td></tr><tr><td>5</td><td>23°40'53.37"N</td><td>87° 6'11.98"E</td></tr></table></td><td></td></tr>
<tr><td>V.</td><td>Elevation of the project site.</td><td>115 meters AMSL</td><td></td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>Not Applicable</td><td></td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td><u>Project Site:</u>
No water body in the project site.

<u>Study area:</u>
Ajay River – 8.7 Km/NNE
Damodar River – 9.3 km/SSW
Several village pond within 3 km from the project site</td><td></td></tr>
<tr><td>viii.</td><td>Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area</td><td>Nil</td><td></td></tr>
</table>

2.1.5 The project proponent has earlier obtained Environment Clearance for site mentioned above from MoEF&CC vide letter no. J-11011/22/2008-IAII(I) 13/06/2008 and another EC from MoEF&CC vide letter no. J-11011/519/2008-IAII(I) dated 02/06/2011. The facilities envisaged under the said ECs could not be implemented by the proponent except the construction of two sheds at the site.

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

S No	Proposed Units	Unit Configuration	Production capacity
1	Pelletization Plant	(Module: 1×6,00,000 TPA)	6,00,000 TPA Pellets
2	Sponge Iron Plant	700 TPD (2×350 TPD)	2,31,000 TPA Sponge Iron
3	Induction Furnaces with matching LRF & CCM	4×20 T	2,60,000 TPA Billets (2,64,000 TPA Liquid Steel)
4	Rolling Mill	2,50,000 TPA	2,50,000 TPA Structural (Sheets, Angles, Channels, TMT Bars, Wires, Rods, Strips, Pipes)
5	Captive Power Plant	26 MW	26 MW Power

S No	Proposed Units	Unit Configuration	Production capacity
		(16 MW WHRB based + 10 MW AFBC Boiler based)	

2.1.7 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	Annual Requirement (in TPA)	Source	Distance (in km)	Transportation		
					Internal	Rail	Road
Pellet Plant (1x6,00,000 TPA)							
1	Iron Ore Fines	7,20,000	Barbil- Joda, Orissa	300-350	-	7,20,000	-
2	Limestone	6,000	Birmitrapur, Orissa Bilaspur Raipur CG Katni MP	300 700 800 900	-	-	6,000
3	Bentonite	51,000	Gujarat	2200	-	51,000	-
4	Coal	24,000	Imported- Haldia Port Open Market	290-300 100-150	-	24,000	-
DRI Plant (2x350 TPD)							
1	Pellet	3,46,500	In-House	-	3,46,500	-	-
2	Coal	2,31,000	Imported- Haldia Port Open Market	290-300 100-150	-	1,61,700	69,300
3	Dolomite	6,930	Raipur CG Katni MP	800 900	-	-	6,930
Induction Furnaces (4x20 T)							
1	Sponge Iron	2,31,000	In-House	-	2,31,000	-	-
2	Scraps	24,000	Howrah Durgapur Asansol	200 35 20	-	-	24,000
3	Pig Iron	47,000	Durgapur Jamuria	35 5-10	-	-	47,000
4	Ferro Alloys	3,500	Barjora Durgapur Jamuria	50 35 5-10	-	-	3,500
Captive Power Plant (10.0 MW based on AFBC boiler)							
1	Coal	63,000	Imported- Haldia Port Open Market	290-300 100-150	-	44,100	18,900
2	Dolochar	69,300	In-House	-	69,300	-	-
Total		**1816930**	**-**	**-**	**6,40,500**	**10,00,800**	**1,75,630**
Percentage (%)					**35%**	**55%**	**10%**

2.1.8 The water requirement to the tune of 743 m^3/day (Fresh Water 643 cu.m/day and recycled water 100 cu.m/day) including 18 m^3/day for domestic purposes will be required for the proposed project. The raw water will be sourced from Asansol Municipal Corporation supply system. No ground water shall be abstracted. The permission for drawl of 900 m^3/day water is obtained from Asansol Municipal Corporation vide Ref. No. 0854/B-1/J/AMC dated 29/06/2021.

2.1.9 The estimated power requirement of the proposed unit is around 45.5 MW. The power requirement will be met from proposed 26 MW captive power plant and the rest from the State grid.

2.1.10 Baseline Environmental Studies:

Period	**1st October, 2019 – 31st December, 2019**	**Additional Study**
AAQ parameters at 8 locations & Additional study for 3 new locations (min and max)	$PM_{2.5}$ = 19 - 41 µg/m^3 PM_{10} = 52 - 85 µg/m^3 SO_2 = 5 - 21 µg/m^3 NO_2 = 10 - 36 µg/m^3 CO = 0.173 - 1.281 mg/m^3	**(Nov- Dec 2021)** $PM_{2.5}$ = 25 - 44 µg/m^3 PM_{10} = 62 - 81 µg/m^3 SO_2 = 6 - 18 µg/m^3 NO_2 = 16 - 31 µg/m^3 CO = 0.153 - 1.054 mg/m^3 Fresh ambient air quality monitoring has been done in the month of November, 2021 at three additional locations.
Incremental GLC level	PM = 2.10 µg/m^3 (0.8 km in SE) SO_2 = 2.56 µg/m^3 (1.2 km in SE) NO_x = 2.56 µg/m^3 (1.2 km in SE)	
Ground water quality at 9 locations	pH: 6.9 - 7.6, Total Hardness: 206 - 263 mg/l, Chlorides: 87 - 130 mg/l, Fluoride: 0.15 - 0.39 mg/l, Iron: 0.19 - 0.44 mg/l, TDS: 347 - 473 mg/l	
Surface water quality at 10 locations (3 River water & 7 pond water samples)	**<u>River Water (Ajay River)</u>** pH: 7.5 & 7.7, DO: 6.6 & 6.8 mg/l, BOD: 3 & 2 mg/l, COD: 12 & 10 mg/l, Fe: 0.12 & 0.13 mg/l, Coliform: 1670 & 1460 MPN/100ml, TDS: 194 & 191 mg/l, Total Hardness: 111 & 113 mg/l, Chloride: 40 & 37 mg/l **<u>River Water (Damodar River)</u>** pH: 7.1, DO: 6.5 mg/l, BOD: 3 mg/l,	***(19thNov, 2021 – 14thDec, 2021)*** **<u>River Water (Ajay River)</u>** pH: 7.45 to 7.79, DO: 6.8 to 7.2 mg/l, BOD: 2 to 5 mg/l, COD: 6 to 13 mg/l, Coliform: 1300 to 5800 MPN/100ml, Free NH_3 : <0.05 mg/lit. **<u>River Water (Damodar River)</u>** pH: 7.12 to 7.56, DO: 6.4 to 7.3 mg/l, BOD: 2 to 4 mg/l,

Period	1st October, 2019 – 31st December, 2019	Additional Study
	COD: 16 mg/l, Fe: 0.28 mg/l, Coliform: 1880 MPN/100ml, TDS: 398 mg/l, Total Hardness: 202 mg/l, Chloride: 110 mg/l **<u>Pond Water</u>** pH: 6.8 - 7.6, DO: 5.9 - 6.8 mg/l, BOD: 4 - 8 mg/l, COD: 18 - 31 mg/l, Fe: 0.15 - 0.34 mg/l, Coliform: 820 - 2330 MPN/100 ml, TDS: 321 - 398 mg/l, Total Hardness: 156 - 214 mg/l, Chloride: 80 - 123 mg/l	COD: 8 to 21 mg/l, Coliform: 1700 to 6300 MPN/100ml, Free NH_3 : <0.05 mg/lit. ***<u>(2nd February, 2022)</u>*** **<u>River Water (Ajay River Near Birkulti)</u>** pH: 7.24, DO: 7.1 mg/l, BOD: 2 mg/l, COD: 9 mg/l, Coliform: 1200 MPN/100ml, Free NH_3 : <0.05 mg/lit. **<u>River Water (Ajay River Near Darbardanga)</u>** pH: 7.36, DO: 7.4 mg/l, BOD: 2 mg/l, COD: 7 mg/l, Coliform: 1100 MPN/100ml, Free NH_3 : <0.05 mg/lit. **<u>River Water (Damodar River)</u>** pH: 7.53, DO: 7.3 mg/l, BOD: 3 mg/l, COD: 13 mg/l, Coliform: 1500 MPN/100ml, Free NH_3 : <0.05 mg/lit.
Noise levels (min and max)	53.6 to 71.4 dBA for day time and 44.8 to 58.6 dBA for night time.	
Traffic assessment study findings	Existing Load (in PCU/day): ❖5948 on Jamuria-Ranisayer road near Ikrah More ❖28973 on NH-2 near Ranisayar More	

Period	1st October, 2019 – 31st December, 2019	Additional Study
	❖11873 On NH-60, near Topsi Petrol Pump Total traffic load during operation of the proposed project (PCU/Day): ❖7453 on Jamuria-Ranisayer road near Ikrah More ❖30,479 on NH-2 near Ranisayar more ❖13,378 On NH-60, near Topsi petrol pump As per IRC:106 – 1990 code, guidelines for capacity of urban roads in plain areas (PCU/day): ❖57,600 for Jamuria-Ranisayer road near Ikrahmore ❖86,400 for NH-2 near Ranisayar More ❖57,600 for NH-60, near Topsi petrol pump Level of Service of all three roads mentioned above as per IRC Guideline (Volume/ capacity) **Present level of service** ❖Jamuria–Ranisayer Road: 5948/57600 = 0.10 (level A– Excellent) ❖NH-2: 28973/86400 = 0.33 (level B- Very good)6 ❖NH-60: 11873/57600 = 0.20 (level B - Very good) **After operation of proposed project level of service** ❖Jamuria – Ranisayer Road: 7453/57600 = 0.13 (level A – Excellent) ❖NH-2: 30479/86400 = 0.35 (level B – Very good) ❖NH-60: 13378/57600 = 0.23 (level B- Very good) The level of service will remain same even after including the traffic of proposed project.	
Flora and fauna	No endangered flora is present in the study area. No Schedule I species is present in the study area.	

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

S No	Type	Quantity in Tons/Year	Utilization
1	Dolochar from Sponge Iron Plant	69,300	100% to be used in AFBC boiler of CPP.
2	Slag from Induction Furnaces.	29,600	The slag generated from the furnaces shall be 29,600 TPA considering 100% production in the furnaces. After metal recovery about 10% metal shall be recovered from the total slag and the balance 26,640 TPA (as stone chips / road construction materials) shall be used for road construction & repairing / land filling purposes. Considering 7 m width & depth 12 inch (0.3 m) of the road and density of the slag as 3.5 ton/cum, 7,350 T slag may be consumed for 1.0 km stretch. Therefore, the entire quantity of slag generated in a year (26,640 TPA) shall be utilized for the construction of around 4 km roads. As per an estimate, it was found that around 450 km undeveloped (Kuchha) road is existing in the surrounding villages in the 10 km radius area. Hence, there is lot of potential of slag utilisation during construction of these roads.
3	End Cuts, Scale & Scrap from CCM & Rolling Mill	14,000	100% to be used in Induction Furnaces.
4	Fly Ash from CPP	24,192	100% to be sold as a raw material in cement plant / brick manufacturers in the neighborhood.
5	Bottom Ash from CPP	6,048	100% to be utilised for brick making / landfilling purposes.

2.1.12 Public Consultation:

Details of advertisement given	6th January, 2021 in Bengali newspaper "Bartaman", Hindi newspaper "Sanmarg" and English newspaper "The Times of India"
Date of public consultation	10th February, 2021
Venue	Jamuria Town Hall, Jamuria, Dist. - Paschim Bardhaman, West Bengal
Presiding Officer	Additional District Magistrate, Paschim Bardhaman, West Bengal
Major issues raised	• Control measures for abatement of Air Pollution due to the proposed project • Development of local roads and local schools • Regarding Ground water depletion • Regarding no discharge of waste water outside the plant

	premises • Development of Green Belt inside and outside the plant • Organizing health camp for the local people • Generation of employment for the local people and youths • Providing drinking water facilities in village during dry season • Safety due to vehicle movement for transportation of materials

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

Concerns raised during Public Hearing	Physical Activity and Action Plan	Particulars	YEAR OF IMPLEMENTATION			Total Expenditure (Rs. in Lakhs)
			1st Year	2nd Year	3rd Year	
• Regarding Control measures for abatement of Air Pollution due to the proposed project	• Adequate control measures like installation of ESP, Bag filters, dust suppression system&stacks of adequate height at relevant places will be installed. • Air borne dust shall be controlled by mobile water tanker inside the plant premises. • Maintenance of air pollution control equipment shall be done at regular intervals. • All roads shall be paved on which movement of raw materials or products will take place inside the plant premises.	Physical Target	The physical Target for the entire activities shall be achieved in 3 years.			-
		Budget in Lakhs	Included in the EMP Cost.			
• Development of local roads	Construction of metal road (6 km) (@Rs. 18,00,000/- per Km) in the nearby six villages.	Physical Target (3 years)	2 km metal road at Hijalgora&Barul villages	2 km metal road at Lalbazar&Jamsol villages	2 km metal road at Bhuri&Kumardiha villages	108
		Budget in Lakhs	36	36	36	
• Development of local schools	Financial support will be given to the local schools for the renovation / repairing work through extension of building / class room/ development of library facilities/ provision of computers for educational development purpose.	Physical Target (3 years)	Development of existing building in 5 local schools by creating extra space @1000 sq.ft per school.	Development of 5 nos. playground each of 7200 sq.m along with the sports items in the local schools.	Supply of 15 nos. of computers with printers to the 5 local schools along with upgradation of existing libraries.	
		Budget in Lakhs	25	10	25	60
• Ground water depletion	As per an initial estimate, water to the tune of around 743 m^3/day including 18 m^3/day for domestic purposes will be required	Physical Target	-			-
		Budget in Lakhs	-			

Concerns raised during Public Hearing	Physical Activity and Action Plan	Particulars	YEAR OF IMPLEMENTATION			Total Expenditure (Rs. in Lakhs)
			1st Year	2nd Year	3rd Year	
	for the proposed project which will be fulfilled from Asansol Municipal Corporation supply system. No groundwater will be used for the proposed project.					
• No discharge of waste water outside the plant premises	The plant will be designed as a zero discharge plant. The water will be recirculated through cooling and treatment. The entire waste water will be recycled for various purposes inside the plant.	Physical Target	The physical Target shall be achieved with the commissioning of the project.			-
		Budget in Lakhs	Included in the EMP Cost.			
• Development of Green Belt inside and outside the plant	• The company has earmarked 15.72 acres (6.36 Ha) of land for Green Belt Development within its plant site. Around 15900 number of trees (@ 2500 nos. of tree per hectares) shall be planted under greenbelt development programme within the plant premises. • Development of Parks and Tree Plantation Programme in the nearby villages will be done and distribution of saplings will be done to the nearby villagers and school students.	Physical Target	Physical Target for greenbelt development inside the plant premises shall be achieved before commissioning of the project.			-
			Development of 1 no. park of 25000 sq.m area along with tree plantation & distribution of saplings at village Hijalgora.	Development of 1 no. park of 25000 sq.m area along with tree plantation & distribution of saplings at village Bhuri.	8000 numbers Tree plantation & distribution of saplings at Barul, Jamsol&Kumardia villages.	
		Budget in Lakhs	Greenbelt development inside the plant included in the EMP Cost.			40
			15	15	10	
• Organizing health camp for the local people	Periodic health check-up programme will be conducted by arranging camps through Primary Health Care Centers in nearby villages.	Physical Target	Health checkup camps shall be organized on half-yearly basis, in 5 nearby villages for general body, eyes, blood test and donation along with mass vaccination for polio, dengue, typhoid, malaria, etc. For this purpose, one doctor along with 2 – 3 assistants shall be deputed. This will come under CSR activities of the company.			-
		Budget in Lakhs	Shall be included in the CSR budget of the company			

Concerns raised during Public Hearing	Physical Activity and Action Plan	Particulars	YEAR OF IMPLEMENTATION			Total Expenditure (Rs. in Lakhs)
			1st Year	2nd Year	3rd Year	
• Generation of employment opportunities for the local people	In the proposed project, top most priority will be given to the local people based on their academic qualification. Skill development to unemployed local youths through National Skill Development Corporation, Govt. of India Scheme. Construction of a building along with the necessary infrastructures for this purpose like different machineries for industries.	Physical Target (3 years)	Construction of a 2 – room building (1200 sq.ft area) with infrastructure development like installation of 5 sewing machines, 5 computer systems & 7 machines for making hand craft items along with necessary raw materials for training purpose.			40
		Budget in Lakhs	15	15	10	
• Providing drinking water facilities in village during dry season	20 numbers Tube well / Hand pumps in nearby villages (@ Rs. 50,000/- per Tube Well / Hand Pumps	Physical Target (3 years)	8 nos. Tube wells in nearby 4 villages namely Hijalgora, Barul, Lalbazar&Jamsol villages	6 nos. Tube wells in nearby 3 villages namely Jote Janaki, ChakDoal&Bhuri villages	6 nos. Tube wells in nearby 3 villages namely Kumardiha, Babuisol&Gobindapur villages	10
		Budget in Lakhs	4	3	3	
• Safety due to vehicle movement for transportation of materials	• All roads shall be paved on which movement of raw materials or products will take place inside the plant premises. • Allowing only PUC certified vehicle movement inside the plant premises. • Repairing of the roads wherever necessary and to the extent possible.	Physical Target	The physical Target for the entire activities shall be achieved in 3 years.			-
		Budget in Lakhs	Included in the EMP Cost.			
Total Budget - Public Hearing related: Rs. 258 Lakhs						

Need based Assessment:

Need based Activities	Particulars	Year of Implementation			Total Expenditure (Rs. in Lakhs)
		1st Year	2nd Year	3rd Year	
Street Lighting (Solar) provision at	Physical Target:	Providing 50 nos. Solar light at	Providing 40 nos. Solar light at Jote Janaki,	Providing 35 nos. Solar light at Kumardiha,	25

Need based Activities	Particulars	Year of Implementation			Total Expenditure (Rs. in Lakhs)
		1st Year	2nd Year	3rd Year	
suitable public places in and around the nearby villages (125 numbers, @ Rs. 20,000/- per Solar Light)		Hijalgora, Lalbazar&Jamsol villages	ChakDoal&Bhuri villages	Babuisol&Gobindapur villages	
	Budget in Lakhs	10	8	7	
Providing Dustbins (300 nos @Rs. 1000/- per unit) in nearby villages (under Swachh Bharat Scheme) for waste segregation and handling	Physical Target:	100 nos. Dustbins at Lalbazar&Jamsol villages	100 nos. Dustbins at Bhuri&Kumardiha villages	100 nos. Dustbins at Babuisol&Gobindapur villages	3
	Budget in Lakhs	1	1	1	
Rain Water Harvesting ponds in nearby villages (4 nos. @ Rs. 5 Lakhs per pond).	Physical Target:	2 Rain Water Harvesting pond at Hijolgora village	2 Rain Water Harvesting pond at Bhuri village	-	20
	Budget in Lakhs	10	10	-	
Construction of 7 nos. of ground water Recharging system for rainwater in nearby villages (@3 lakhs per system).	Physical Target:	3 no. of ground water Recharging system at Hijalgora village	2 no. of ground water Recharging system at Bhuri village	2 no. of ground water Recharging system at Barul village	21
	Budget in Lakhs	9	6	6	
Total Budget - Need based activities: Rs. 69 Lakhs					
Overall Budget (Public Hearing related + Need based Activities): Rs. 327 Lakhs					

2.1.13 The capital cost of the project is Rs. 353 Crores and the capital cost for environmental protection measures is proposed as Rs. 52.98 Crores (around 15% of the project cost). The annual recurring cost towards the environmental protection measures is proposed as Rs. 5.04 Crores. The employment generation from the proposed project is 400 persons. The details of cost for environmental protection measures is as follows:

S. No.	Description of Item	Proposed (Rs. in Crores)	
		Capital Cost	Recurring Cost
i.	Cost of Air Pollution Control Systems	27.5	2.75
ii.	Cost of Water conservation & Pollution Control	8.5	0.85
iii.	Cost of Solid Waste Management System	3.7	0.37
iv.	Green belt development	0.2	0.02

S. No.	Description of Item	Proposed (Rs. in Crores)	
		Capital Cost	**Recurring Cost**
v.	Noise Reduction Systems	3.3	0.33
vi.	Occupational Health Management	2.9	0.29
vii.	Risk Mitigation & Safety Plan	2.6	0.26
viii.	Environmental Management Department	1.7	0.17
ix.	Total Budget - Public Hearing related	2.58	-
TOTAL		**52.98**	**5.04**

2.1.14 M/s. AIC Metaliks Pvt. Ltd.has earmarked 6.36 hectares (15.72 acres) of land for Green Belt Development out of 19.27 hectares (47.62 acres) of total land, within its plant area at Jamuria Industrial Estate, Jamuria, District Paschim Burdwan in West Bengal. Around 15,900 trees (2500 nos. of tree per hectares) will be planted in the green belt development area.

2.1.15 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.

2.1.16 Name of the EIA consultant: M/s. Envirotech East Pvt. Ltd. [Sl. No. 178, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2124/SA0145 Valid upto 12/09/2022, Rev. 19, February 14, 2022].

2.1.17 M/s. AIC Metaliks Private Limited had initially applied for Environment Clearance vide proposal no. IA/WB/IND/117709/2019dated 6th October, 2021and the proposal was considered in 47th meeting of REAC held on 28th – 29thOctober, 2021 wherein the Committee recommended the proposal to be returned in present form due to the shortcomings. The proponent reapplied vide proposal no. IA/WB/IND/117709/2019 dated 31/12/2021 and the proposal was considered in the 51st meeting of the Re-constituted EAC (Industry-I) held on 11 – 12thJanuary, 2022 wherein the Committee again recommended the proposal to be returned in its present form to address the technical shortcomings.

2.1.18 The proponent has again made an online application vide proposal no. IA/WB/IND/117709/2019 dated 19/02/2022. The proposal is considered in the 2nd meeting of the EAC (Industry-I) held on 22nd – 23rd March, 2022. The observations and recommendations of the EAC are as follows:

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

M/s. AIC Metaliks Private Limited has given undertaking in the form of affidavit listed as below:

i. Two sheds at the project site were constructed around four years back in connection with earlier ECs dated 2/6/2011 and 13/06/2008 which was valid at that time.

ii. The proposed project is designed as "Zero Liquid Discharge" Plant. No waste water will be discharged outside the plant boundary. Thus, there will be no impact on water quality of any space water body including Ajay River &Damodar River.

iii. The greenbelt development at the project site will be completed within is year of implementation of the proposed project. In successive years the plantation for dead plants (if any) will be taken cere of

iv. It is mentioned in the EIA report that the capital cost and recurring cost for Environmental Management Department is Rs. 1.7 Crores and Rs. 0.17 Crores per annum respectively This amount is not earmarked for any salary payment to the employees of the Company.

v. The Company shall adopt one nearby village namely Mondalpur for its development through CER Corporate Environment Responsibility) activities

Observations of the Committee

2.1.20 The Committee noted 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.

iii. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

iv. The EAC observed that there are two sheds exists at the project site for which PP submitted that the sheds were constructed around four years back as part of earlier ECs dated 2/6/2011 and 13/06/2008. Further, an undertaking was submitted by the PP stating that no construction activity has been started at the project site with respect to the proposal under consideration.

v. Govt. Sr. Sec School, Ikrah village is located at 0.66 km from the project boundary for which PP proposed for additional plantation of 50-107 m width.

Recommendations of the Committee

2.1.21 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 based on project specific requirements:

A. Specific Condition

i. Three tier Green Belt shall be developed covering 33% of total area with native species all along the periphery of the project site with 10-70 m width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. In addition, PP shall provide 50-107 wide green belt towards Ikara Govt. School located at 0.66 km from project site. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.

ii. Water requirement to the tune of 743 m^3/day shall be met from Asansol Municipal Corporation after prior approval of the Competent Authority. No ground water abstraction is permitted.

iii. The proposed project shall be designed as "Zero Liquid Discharge" Plant. No waste water will be discharged outside the plant boundary.
iv. PP shall provide the rain water harvesting facility as per the action plan submitted along with the EIA report.
v. All internal roads and connecting roads from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to existing and proposed project.
vi. Following additional arrangements to control fugitive dust shall be provided:
    a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas.
    b. Properly covered vehicle shall be used while transport of materials.
    c. Wheel Washing mechanism shall be provided in entry and exit gates with complete recirculation system.
vii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
viii. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to the concerned Regional Office of the MoEF&CC.
ix. Particulate matter emission from stacks shall be less than 30 mg/Nm^3.
x. 85-90 % of billets shall be rolled directly in hot stage. Reheating furnace shall be operated using LDO/LSHS as a fuel.

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 two 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 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
iii. 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) 31st 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.
ii. Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing,

carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

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. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.
ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

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

iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
viii. The project 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.

2.2 Expansion of coke production from 0.425 MTPA to 0.78 MTPA by installation of a new Stamp Charged by product recovery type Coke Oven within the existing plant by **M/s. Jindal Coke Limited** located at Kalinga Nagar Industrial Complex, Village & Tehsil Danagadi, **District Jajpur, Orissa** [Online Proposal No. IA/OR/IND/246973/2021; File No. IA-J-11011/281/2007-IA.II(I)] – **Environment Clearance – regarding.**

2.2.1 It was apprised to the EAC that the project proponent vide email dated 16/03/2022 expressed their inability to participate in the meeting and requested for withdrawal of the proposal cited above.

2.2.2 In view of the above and after detailed deliberations, the Committee recommended that proposal to be returned in its present form.

2.3 Expansion of existing Integrated steel plant to final capacity of Sponge Iron– 20,54,000 TPA; Billets (Mild & Alloy Steel)- 23,73,566 TPA; Rolled Products – 15,60,000 TPA; Captive Power- 328 MW; Pellets- 30,00,000 TPA; Producer Gas Plant- 96,450 Nm^3/Hr; Sinter Plant- 5,90,625 TPA and Blast Furnace- 3,93,750 TPA by **M/s. Shyam Metalics& Energy Limited** Located at Village- Pandloi, Block- Lapanga, **District- Sambalpur, Odisha**[Online Proposal No. IA/OR/IND/187952/2020; File No. J-11011/495/2006-IA.II(I)] – **Environment Clearance – regarding.**

2.3.1 M/s. Shyam Metalics and Energy Limited submitted an online application for obtaining ToR vide proposal no IA/OR/IND/187952/2020 dated 14/12/2020. The proposal was considered in 27th EAC meeting held on 30-31th December, 2020, accordingly ToR was granted by Ministry on 14/01/2021. As per ToR, total land requirement for the project is 347.058 ha and no involvement of Forest land.

2.3.2 M/s. Shyam Metalics and Energy Limited have made an online application vide proposal no. IA/OR/IND/187952/2020 dated 19/02/2022 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 cited above. As per the Form 2 submitted to the Ministry, total land requirement for the project is 340.8 ha and there is no involvement of forest land.

2.3.3 During the presentation made before the EAC, the project proponent informed the EAC that following is the total land requirement for the existing and proposed expansion project:

Details	Private (Ha)	Govt. (Ha)	Forest (Ha)	Total (Ha)
Existing	63.44	64.38	38.393	166.269
Proposed expansion	172.34	0	8.361	180.789
	235.78	64.38	46.94	347.1

Observations of the Committee

2.3.4 The EAC noted the following:

- As per the Form 1&2 application submitted to the Ministry, project proponent has not disclosed the involvement of forest land in the proposed expansion project.
- PP needs to take formal amendment in Terms of Reference dated 14/01/2021 regarding the involvement of forest land in the proposed expansion project.

Recommendations of the Committee

2.3.5 In view of the foregoing and after detailed deliberations, the committee recommended to return in its present form. Further, EAC recommended that project proponent shall first seek amendment in ToR dated 14/01/2021w.r.t. involvement of forest land in the proposed expansion project.

2.4 Establishment of Cement Plant (Clinker: 3.5 MTPA and Cement 5.0 MTPA), WHRS (17 MW) and D.G. Set (2 x 1250 kVA) by **M/s. UltraTech Cement Limited** located at Village: Kota (Dalla), Tehsil: Obra (Erstwhile Robertsganj), **District: Sonebhadra, Uttar Pradesh** [Online Proposal No. IA/UP/IND/162025/2020; File No. J-11011/449/2009-IA.II(I)] – **Environment Clearance – regarding**.

2.4.1 It was apprised to the EAC that the project proponent vide email dated 09/03/2022 expressed their inability to participate in the meeting and requested to consider the proposal in the next EAC meeting.

2.4.2 In view of the above and after detailed deliberations, the Committee recommended that the proposal may be placed before the EAC in the next EAC meeting for consideration.

2.5 Change in Product Mix under Para 7(ii) of EIA notification 2006 for production of Stainless Steel Products (Billets, Flats ,rounds, Wire rod, Rebars, Angle and Channel) by removing facility of one 12 ton induction furnace and addition of Two Argon Oxygen Decarburization vessel (AOD) of 25 Tons each (One is standby) and with existing facilities of one induction furnace of 12 ton, 1 Ladle Furnace of capacity 15 Tonne, 4/7 radius Continuous Casting Machine & 22 TPH Reheating Furnace and Rolling Mill of 1,38,000 TPA for production of M.S Billets, TMT Bar, light, medium section rolled product by **M/s. D. S. Rolling Mills Pvt. Ltd.** located at Khasra No. 175, 181, 187-191, 195-197 Village Dayalpur, Khanpur Block, Tehsil Lakshar, **District Haridwar, Uttarakhand** [Online Proposal No. IA/UK/IND/252728/2022, File No. IA-J-11011/349/2013-IA-II(I)] – **Environment Clearance under the provision of para 7 (ii) of EIA Notification, 2006 – regarding.**

2.5.1 M/s. D. S. Rolling Mills Private Limited has made an online application vide proposal no. IA/UK/IND/252728/2021 dated 25/02/2022 along with copy of Environmental Appraisal report, Form – 2 and certified EC 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 "B" of the schedule of the EIA Notification, 2006 and attracts general condition due to the existence of interstate boundary (UP-UK Boundary at 2.0 km). Hence, the project is appraised at Central Level as Category 'A' project.

Details submitted by the project proponent

2.5.2 The project of M/s D. S. Rolling Mills Pvt. Ltd located in Village-Dayalpur, Block-Khanpur, Tehsil-Lakshar, District-Haridwar, State-Uttarakhand is for change in Product Mix under Para 7(ii) of EIA notification 2006 for production of Stainless Steel Products (Billets, Flats ,rounds, Wire rod, Rebars, Angle and Channel) by removing facility of one 12 ton induction furnace and addition of Two Argon Oxygen Decarburization vessel (AOD) of 25 Tons each (One is standby) and with existing facilities of one induction furnace of 12 ton, 1 Ladle Furnace of capacity 15 Tonne, 4/7 radius Continuous Casting Machine & 22 TPH Reheating Furnace and Rolling Mill of 1,38,000 TPA for production of M.S Billets, TMT Bar, light, medium section rolled product.

2.5.3 Environmental site settings

S. No	Particular	Details	Remarks
1	Total land	2.592 ha (Private Land-2.592 Ha)	Industrial Land
2	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Total land is under the possession of company	

<table>
<tr><th>S. No</th><th>Particular</th><th>Details</th><th>Remarks</th></tr>
<tr><td>3</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Not applicable</td><td></td></tr>
<tr><td>4</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Latitude</th><th>Longitude</th></tr><tr><td>29°38'12.04"N</td><td>77°59'48.08"E</td></tr><tr><td>29°38'17.36"N</td><td>77°59'53.10"E</td></tr><tr><td>29°38'15.18"N</td><td>77°59'56.07"E</td></tr><tr><td>29°38'10.53"N</td><td>77°59'51.40"E</td></tr></table></td><td></td></tr>
<tr><td>5</td><td>Elevation of the project site</td><td>230 m AMSL</td><td></td></tr>
<tr><td>6</td><td>Involvement of Forest land if any.</td><td>No forest land involved</td><td></td></tr>
<tr><td>7</td><td>Water body exists within the project site as well as study area</td><td><u>Project site:</u>
Nil

<u>Study area:</u>
Ganga River at approx. 6.0 km, ESE</td><td></td></tr>
<tr><td>8</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td>Nil</td><td></td></tr>
</table>

2.5.4 The existing project was accorded environmental clearance vide File No. J-11011/349/2013-IA.II.(I) dated 22/06/2015. Consent to Operate for the existing unit was accorded by Uttarakhand State Pollution Control Board vide Letter No-UKPCB/HO/Con-D-73/2021/885 dated 30/09/2021. The validity of CTO is up to 31/03/2024.

2.5.5 Implementation status of the existing EC:

S. No	Facilities	Units	As per EC dated 22/06/2015	Implementation Status as on	Production as per CTO
1	Induction Furnace (2x12 Ton)	SMS unit	2 x 12 Ton	Installed	3,480 TPM
2	1 no. of Ladle Furnace	--	15 Ton	Installed	--
3	CCM (4/7 Radius)	--	2 Strands	Installed	--
4	Reheating Furnace	--	22 TPH	Installed	--
5	Rolling Mill	--	1,38,000 TPA	Installed	6666.33 TPM

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

Description	Existing Capacity	Proposed Configuration	Final capacity/ Configuration
Unit			
Induction Furnace	2x12 Ton	Removing one induction furnace	1x12 Ton Induction furnace
1 no. of Ladle Furnace	15 Ton	No Change	15 Ton
Continuous Casting Machine (4/7 radius)	2 Strand		2 Strand
Reheating Furnace	22 TPH		22 TPH
Rolling Mill	1,38,000 TPA		1,38,000 TPA
Product	MS Billets, TMT Bar, light, medium section rolled product	Addition of SS Billets, S.S Steel grade alloy Flats ,rounds, Wire rod, S.S Rebars, Angle and Channel	MS Billets, TMT Bar, light, medium section rolled product, S.S Billets, S.S Steel grade alloy Flats, rounds, Wire rod, S.S Rebars, Angle and Channel
Argon Oxygen Decarburization vessel	Nil	Installation of 02 No. of AOD Vessel	2x25 Tons (One standby)

2.5.7 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 for Billets with one I.F (12 Ton)

Sl. No	Name	Quantity (TPA)	Source	Transportation	Distance w.r.t Plant
1	Sponge Iron/MS Scrap	39,996	M/s Sri Venkatesh Iron & Alloys (India) Ltd, Ramgarh, Jharkhand	Road through covered trucks	Between 1000 – 1500 KMs
2	Pig Iron	5,999.5	M/s.Anam Steels Pvt. Ltd, New Delhi and M/s Balaji Scrap Traders, New Delhi	Road through covered trucks	Between 100 – 150 KMs
3	Ferro alloys	2,000	Local Purchase	Road through covered trucks	Between 40 – 50 KMs
Total		**47,995**			

Raw Material for AOD (Per Heat)

SL. No	Name	Quantity (Ton)	Source	Transportation	Distance w.r.t Plant
Raw Materials					

SL. No	Name	Quantity (Ton)	Source	Transportation	Distance w.r.t Plant
1	Hot Metal from IF	14	--	In-house	--
2	H.C Ferro Chrome	1	Open Market	Through Covered Trucks	50-100 km
3	H.C Ferro Manganese	3.750	Open Market	Through Covered Trucks	50-100 km
4	Ferro Silicon	1.125	Open Market	Through Covered Trucks	50-100 km
5	Ferro Nickel	4.50	Open Market	Through Covered Trucks	50-100 km
6	Scrap Coolant	7	Open Market	Through Covered Trucks	20-50 km
Flux					
1	Lime	1.250	Open Market	Through Covered Trucks	20-50 km
2	Dolomite	1.250	Open Market	Through Covered Trucks	20-50 km
Total		**29.825**			

Raw Material for Rolling Mill (1,38,000 TPA)

Raw Material requirement	Quantity of Raw Material	Source	Transportation	Distance w.r.t Plant
Hot Billets (MS and S.S)/Ingots	1,46,000 TPA	In-house and Local Market	Internal Movement and Road through covered trucks	Between 20 – 40 KMs
Fuel for Re-heating Furnace	12 KL/Annum	Open Market	Oil Tankers	Between 100 – 150 KMs

2.5.8 The water requirement for the project is estimated as 98 m^3/day which will be obtained from the Ground Water. The permission for drawl of groundwater is obtained from CGWA vide:- CGWA/NOC /IND/ORIG/ 2021/13168, dated: 29/09/2021 which is valid up to 28/09/2024.

2.5.9 Existing power requirement is 10,000 kVA and permission has already been obtained from Uttarakhand Power Corp. Ltd. No additional power will be required for the proposed change in unit configuration & Product mix project.

2.5.10 Baseline Environmental Studies

Period	(From post project monitoring data April-2021)	Additional Study (From post project monitoring data - October-2021)
AAQ parameters	$PM_{2.5}$ = 39.8 to 53.1 µg/m^3 PM_{10} = 69.6 to 93 µg/m^3	$PM_{2.5}$ = 39.6 to 52.4 µg/m^3 PM_{10} = 74.3 to 93.8 µg/m^3

Period	**(From post project monitoring data April-2021)**	**Additional Study (From post project monitoring data - October-2021)**
at one locations	SO_2 = 8.4 to 12.7 µg/m^3 NO_2 = 13 to 29.7 µg/m^3 CO = 1050 to 1300 µg /m^3	SO_2 = 10.1 to 12.9 µg/m^3 NO_2 = 14.8 to 26.7 µg/m^3 CO = 1080 to 1380 µg/m^3
AAQ modelling (Incremental GLC)	PM_{10} = 0.99 µg/m^3 SO_2 = 3.54 µg/m^3	-
Ground water quality at one locations	pH: 7.85, Total Hardness: 326 mg/l, Chlorides: 93 mg/l, Fluoride: 0.1 mg/l. Heavy metals are within the limits.	pH: 7.43, Total Hardness: 316 mg/l, Chlorides: 86 mg/l, Fluoride: 0.3 mg/l. Heavy metals are within the limits.
Surface water quality at one locations	pH: 7.32 ; DO: 7.4 mg/l and BOD: 2.2 mg/l. COD: 11 mg/l	pH: 7.21, DO: 7.1 mg/l, BOD: 2.4 mg/l, COD: 12 mg/l.
Noise levels	72.9 dB (A) for the day time and 59.8 dB(A) for the Night time.	68.8 dB (A) for the day time and 53.6 dB(A) for the Night time
Flora and fauna	Flora: There are no critically endangered plant species observed or reported in the study area. Fauna: There are no Schedule-I species presented in study area.	

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

Industrial Waste Management after proposed project (In TPA)

S. No	**Name/ Source**	**Existing Quantity**	**After Proposed facilities**	**Final Configuration**	**Utilization**
1.	SMS slag	7,500	-3,750	3,750	Slag from SMS is being crushed and metal is being recovered and same will be followed for AOD slag & remaining non-magnetic material is being inert nature and used as sub base material in road construction/ used for brick manufacturing/ civil construction works like PCC and wall
2.	Slag from AOD	Nil	6,600	6,600	

S. No	Name/ Source	Existing Quantity	After Proposed facilities	Final Configuration	Utilization
					construction.
3.	Mill scales from Rolling Mill	1800	Nil	1800	Sold to contractor of sinter making
4.	End Cutting	6,200	Nil	6,200	Being recycled to SMS unit
5.	Used Oil	1KL/ Annum	Nil	1 KL/ Annum	Sent to SPCB approved agency for disposal

The waste generation/reused disposed as follows:

- The lead acid battery or dry battery are being given to authorized recycler having authorization from competent authority.
- The domestic wastewater will be treated in Sewage Treatment Plant; the treated water is being used for toilet flushing, irrigation and dust suppression.

2.5.12 Public Consultation: (As part of the EC dated 22/06/2015)

Details of advertisement given	20/07/2014
Date of public consultation	20/08/2014
Venue	Project Site
Presiding Officer	• ADM, Haridwar, Uttarakhand
Major issues raised	• Employment to Local peoples • CSR

2.5.13 The capital cost of the project after the proposed change of Product mix project is Rs 34.5 Cr (Existing: Rs. 32 Crores and Proposed facilities: Rs. 2.5 Crores) and the capital cost for environmental protection measures after proposed change of product is proposed as Rs 1.86 Cr. The annual recurring cost towards the environmental protection measures is proposed as Rs 0.305 Cr. The employment generation from the project after current proposal is 80 nos. The details of cost for environmental protection measures is as follows:

Investment on Environmental Protection Measures (Rs. in Lakhs)

S. No	Activity	Existing		Proposed	
		Capital Cost (Lakh)	Recurring expenses proposed / annum (Lakh)	Capital Cost (Lakh)	Recurring expenses proposed/ annum (Lakh)
1	Air Pollution Control Devices.	99	2.5	25	04
2	Green Belt development	5	2.5	5	1.5
3	Water pollution control	21	03	2	1
4	Solid waste management	14	03	5	2
5	Occupational Health & Safety (provision of first aid room and shelter)	5	2	5	2

S. No	Activity	Existing		Proposed	
		Capital Cost (Lakh)	Recurring expenses proposed / annum (Lakh)	Capital Cost (Lakh)	Recurring expenses proposed/ annum (Lakh)
6	Environmental Monitoring	--	4.5	--	2.5
Total		**144**	**17.5**	**42**	**13**

2.5.14 Total Greenbelt area provided is 0.855 ha, which is about 33% of the total project area. 1300 no's of trees have been planted at project site and remaining 837 trees will be planted during 2022-2023. Local and native species will be planted with a density of 2,500 trees per hectare.

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

Particulars	As per EC dated 22nd June, 2015	After Proposed change under Para 7(ii)	% Increase/ decrease
Land	2.592 ha	2.592 ha	No additional land is required
Total Water	98 KLD	98 KLD	No increase in water consumption and Permission available
Power	10,000 KVA	10,000 KVA	No Change
Raw materials for SMS & Rolling Mill	Sponge Iron-39996 TPA Pig Iron-5999.5 TPA Ferro Alloys-2000 TPA MS Billets-146000 TPA Furnace Oil-1200KL/Annum	Sponge Iron/Steel Scrap-39996 TPA Pig Iron-5999.5 TPA Ferro Alloys-2000 TPA MS Billets-146000 TPA Furnace Oil-1200KL/Annum	No Change No Change No change No change No change
Raw materials for AOD (Per Heat)	Nil	H.C Ferro Chrome-1000kg H.C Ferro Manganese-3800 kg Ferro Silicon-1200 kg Ferro Nickel-50 kg Scrap Coolant-4450 kg Lime-1250 kg Dolomite-1250 kg Argon-48 kg Oxygen-962 kg Nitrogen-290	Additional raw material for AOD
Final Products	MS Billets, TMT Bar, light, medium section rolled product	MS Billets, TMT Bar, light, medium section rolled product, Stainless Steel Products (Billets, Flats ,Rounds, Wire rod, Rebars, Angle and Channel)	Addition of Stainless Steel Products
Rolling Mill Capacity	138000 TPA	138000 TPA	No Change in Capacity

2.5.16 Pollution load assessment:

Particulars	As per EC dated 22nd June., 2015	After Proposed change under Para 7 (ii)-After excluding 1 induction	% Increase/ decrease

		furnace and addition of AOD	
Air	PM – 3.25 kg/hr	PM – 2.5 kg/hr	decrease by 23.07%
	SOx – 14.75 kg/hr NOx – 19.33 kg/hr	SOx – 14.75 kg/hr NOx – 19.33 kg/hr	No Change NO Change
Domestic waste water	4 KLD	4 KLD	No change
Industrial Effluent	Closed circuit cooling system is adopted. Hence no waste water discharge.	Closed circuit cooling system will be adopted. Hence no waste water discharge.	ZLD will be followed even after the present proposal.
Solid & Hazardous Waste	SMS Slag - 7500 TPA	SMS Slag - 3750 TPA	decrease by 50 %
	Mill scales from Rolling Mill–1800 TPA	Mill scales from Rolling Mill–1800 TPA	No change
	End Cutting-6200 TPA	End Cutting-6200 TPA	No change
	Waste/Used oil - 1 KLA	Waste/Used oil - 1 KLA	No change
	Slag from AOD – Nil	Slag from AOD – 6600 TPA	Slag from AOD vessel is non-hazardous in nature and will be supplied to cement industry. IIT, Roorkee report is available stating that AOD slag is non-hazardous in nature. Hence, no solid waste disposal issue w.r.t solid waste disposal.
Traffic Load	Existing: 20 Trucks/day	After Proposed project: 20 trucks/day	No capacity changes hence no increase in traffic.

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

2.5.18 Name of the EIA consultant: M/s Grass Roots Research and Creation India (P) Ltd. [S.No. 170, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2124/RA0213 valid upto 15/02/2024; Rev. 19, February 14, 2022].

Certified compliance report from Regional Office:

2.5.19 The status of compliance of earlier EC was obtained from Integrated Regional Office, MoEF&CC, Dehradun vide file No:-NC/RO/ENV/IND/UK/50/2015 /703, dated:-10/09/2021 in the name of M/s D.S Rolling Mills Pvt Ltd. The Action taken report regarding the partially complied condition was submitted to Integrated Regional office,

MoEF&CC, Dehradun dated 22/09/2021. The observations made by the RO in the report dated 10/09/2021 are as follows:

Condition No.	Condition	Observation of RO as per report dated 10/09/2021
Specific Condition I	The project proponent should install 24x7 monitoring devices to monitor air emission, as provided by CBCB and submit report to Ministry and its regional Office.	It was informed that installation of online stack monitoring system for IF, LF, RF is under process. The order voucher for the same has been shown. As soon the installation will be done the monitoring report should be submitted to Ministry and its Regional office.
Specific Condition VII	Green Belt over 33% of the total project area should be developed within plant premises with at least 10-meter-wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	It was informed that 33% of the total plot area has been covered under green belt of the total plant area. However, it appears that the green-belt is less than 10m wide and the project proponent should explore more areas along the periphery for wider plantation.

2.5.20 M/s. D. S. Rolling Mills Pvt. Ltd. had initially applied for Environment Clearance under para 7 (ii) of EIA Notification, 2006 vide proposal no. IA/UK/IND/236014/2021 dated 27/10/2021 and the proposal was considered in the 48th meeting of the Re-constituted EAC (Industry-I) held on 11 – 12thNovember, 2021 wherein the Committee recommended to return the proposal in its present form stating that the Proposed project does not qualify to be appraised under the provisions of para 7(ii) of EIA Notification 2006.

2.5.21 The proponent has again made an online application vide proposal no. IA/UK/IND/252728/2021 dated 25/02/2022 with the following technical justification:

- Project Proponent (PP) has applied the current project under para 7(ii) of EIA notification category because PP is going for modernization by installing AOD furnace for the production of S.S products within existing premises without increasing the overall capacity as per earlier granted EC. PP is also removing the facility of one induction furnace. Therefore, PP requests to EAC for acceptance of their submission and for further process of grant of Environment Clearance under para 7(ii) of EIA notification 2006.
- Slag which will be generated from AOD vessel is non-hazardous in nature and will be crushed. The metal from it will be recovered & remaining non-magnetic material which is inert in nature will be used as sub base material in road construction/ used for brick manufacturing/ civil construction.
- IIT, Roorkee has analyzed two samples of AOD slag from Rathi Power and Steel Ltd, Ghaziabad to do chemical analysis for Fe, Ni, Cr etc. Fe and Ni have been found BDL. Cr is 0.02 and 0.03 mg/l respectively however it is almost two orders

of magnitude lesser than the limit as per Hazardous Waste Management Rules, 2016. Therefore, the results show that the Slag is non-hazardous. Copy of IIT report is submitted by the PP.

- Further, total quantum of gaseous emissions from AOD will be 1,22,615 m3/hr for which we have proposed ID Fan capacity = 1,40,000 m3/hr. Therefore, there will be no increase in pollution load.
- Also, no additional Water, Land or Manpower is required for current proposal."

2.5.22 The proposal is considered in the 2nd meeting of the EAC (Industry-I) held on 22nd– 23rdMarch, 2022. The observations and recommendations of the EAC are as follows.

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

i. PP submitted resource consumption after the proposed change same has been updated at par 2.5.15 above and provided Comparison of Pollution load assessment as updated in para 2.5.16 above.

ii. PP has provided revised material balance given as below:

S No	INPUT	Quantity (KG)	OUTPUT	Quantity (KG)
1	Hot Metal from IF	14500	Finished Liquid Metal	25000
2	H.C Ferro Chrome	1000	Slag	2500
3	H.C Ferro Manganese	3800	Gases	1300
4	Ferro Silicon	1200		
5	Ferro Nickel	50		
6	Scrap Coolant	4450		
7	Lime	1250		
8	Dolomite	1250		
9	Argon	48		
10	Oxygen	962		
11	Nitrogen	290		
	Total	**28800**	**Total**	**28800**

Observations of the Committee

2.5.24 The EAC noted the following:

i. The project cited above was earlier considered in EAC (Industry-I) meeting held on 11 – 12th November, 2021 wherein the Committee recommended to return the proposal in its present form stating that the AOD slag has hazardous substance and with this background proposed project does not qualify to be appraised under the provisions of para 7(ii) of EIA Notification 2006. In this regard PP submitted the technical justification as mentioned at para no. 2.5.21 based on the report obtained from IIT Roorkee. The findings of the said report have been deliberated upon by the EAC and found it satisfactory.

ii. M/s. D. S. Rolling Mill Private Limited obtained EC from MoEF&CC vide File No. J-11011/349/2013-IA.II.(I) dated 22/06/2015 for IF: 2x12 T and Rolling mill: 138,000 TPA.

iii. Instant proposal is for seeking EC under para 7(ii) for addition of SS product along with MS product by removing 1 IF of 1x12 T and adding new AOD furnace of 2x25 T, keeping the rolling mill capacity same.

iv. The proposed amendment is proposed within existing project area of 2.592 ha along-with same water and power consumption.
v. PP submitted that there will be reduction in PM level emission by 23.07% and reduction in SMS slag generation by 50%.
vi. The Committee noted that the addendum report submitted along with pre-feasibility report is found to be in order, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found that the reported baseline data and incremental GLC due to the proposed project are within NAAQ standards.
vii. The Committee deliberated upon the certified compliance report of RO and found that PP has to comply with the EC condition for continuous emission monitoring system and green belt.
viii. The EAC has carried out requisite due diligence of the instant proposal and considered the same under para 7(ii) (a) of the EIA Notification, 2006 and dispense with the requirement of conducting fresh public consultation in light of the observations mentioned above.

Recommendations of the Committee

2.5.25 In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the para 7(ii) of EIA Notification, 2006 subject to the stipulation of following 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. Three tier Green Belt shall be developed with native species all along the periphery of the project site with minimum 15 m width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years.
ii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
iii. TCLP analysis of the AOD slag shall be carried out periodically. In case of presence of hazardous material, the same shall be sent to TSDF. In case of non-hazardous material, AOD slag shall be utilized at project site for brick manufacturing and construction work after the recovery of metal.
iv. Online stack monitoring system for IF, LF, RF and AOD furnace shall be installed and monitoring report shall be submitted to the concerned Regional Office of the MoEF&CC along with the six monthly compliance report.
v. Two online Continuous Ambient Air Quality Monitoring station shall be set up. The location of the CAAQMS shall be decided in consultation with the SPCB.
vi. Particulate matter emission from all the stacks shall not exceed 30 mg/Nm^3.
vii. All stockyards shall have 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.
viii. Performance monitoring of all Pollution Control Devices shall be carried out annually and report shall be submitted to MoEF&CC, Regional Office.
ix. Hot charging shall be achieved up to 85- 90 % and reheating furnace shall be operated on LDO/LSHS as a fuel.
x. Following additional arrangements to control fugitive dust shall be provided:

a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas.
b. Proper covered vehicle shall be used while transport of materials.
c. Wheel Washing mechanism shall be provided in entry and exit gates.

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 with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS 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 carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
iii. 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.
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. 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 heat treatment furnaces.
viii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
ix. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection)

Act, 1986 and NABL accredited laboratories.

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

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

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

VI. Waste management

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

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

iii. 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.

ii. Project proponent shall submit a study report on Decarburization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

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.As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental

activities in consultation with the village Panchayat and the District Administration as committed.

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

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

X. Miscellaneous

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

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

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

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

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

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

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

viii. The project 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.

2.6 Proposed expansion project for extraction of 35 KTA Vanadium and Nickel and manufacture of 90 KTA Polysilicon / Chlorosilane / Silane by **M/s. Reliance Industries Limited (RIL)** located at Village Motikhavdi, Padana, Navagam, Meghpar, Kanachhikari, PO Digvijay Gram, **District Jamnagar, Gujarat.** [Online Proposal No. IA/GJ/IND/258536/2022; File No. IA-J-11011/76/2022-IA-II(IND-I)] – **Prescription of Terms of Reference – regarding.**

2.6.1 M/s. Reliance Industries Limited (RIL) has made an application online vide proposal no. IA/GJ/IND/258536/2022dated 25/02/2022in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical Industries (Ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

Details submitted by Project proponent

2.6.2 The project of M/s Reliance Industries Limited (RIL), Jamnagar Manufacturing Division (JMD)located in Motikhavdi Village, Lalpur Tehsil, Jamnagar District, Gujarat State is for setting up of a new Metal Extraction Unit for production of 35 KTA of Vanadium & Nickel and Polysilicon unit of 90 KTA capacity for production of Polysilicon / Chlorosilane / Silane.

2.6.3 Environmental site settings:

S No	Particulars	Details	Remarks
i	Total land	82 ha.	Land use - Industrial
ii	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	The land is already acquired and in possession of RIL.	
iii	Existence of habitation & involvement of R&R, if any	R&R is not involved.	
iv	Latitude and	**Metal Extraction Unit**	

	Longitude of all corners of the project site.	**Point** | **Latitude** | **Longitude** 1 | 22°19'45.76"N | 69°51'00.74"E 2 | 22°19'48.07"N | 69°51'10.40"E 3 | 22°19'36.21"N | 69°51'10.51"E 4 | 22°19'36.32"N | 69°51'00.91"E **Polysilicon Manufacturing Unit** **Point** | **Latitude** | **Longitude** 1 | 22°22'52.63"N | 69°53'30.52"E 2 | 22°22'52.35"N | 69°53'57.30"E 3 | 22°22'21.54"N | 69°53'57.06"E 4 | 22°22'21.81"N | 69°53'30.18"E	
v	Elevation of the project site	16-57 m above MSL	
vi	Involvement of Forest land if any.	No forest land is involved.	
vii	Water body (Rivers, Lakes, Pond, Nala, Natural drainage, Canal etc.) exists within the project site as well as study area	**Project Site** – Nil **Study Area** **Water body** | **Distance** | **Direction** Panna dam | 5 km | East Sasoi dam | 9 km | East Gulf of Kutch | 9.5 km | NNE	--
viii	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve /elephant reserve etc. if any within the study area	Nil	

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

Sl. No.	Plant Equipment / Facility	Configuration	Capacity	Remarks
1	Vanadium and Nickel Extraction – 35 KTA	35 KTA • Vanadium – 28 KTA; • Nickel – 7 KTA	35 KTA • Vanadium – 28 KTA; • Nickel – 7 KTA	Extraction of "V" and "Ni" from Petcoke cinder by proprietary process involving roasting and extraction
2	Polysilicon Manufacturing Unit – 90 KTA	MG Silicon – 100 KTA	MG Silicon – 100 KTA	MG Silicon is proposed to be manufactured by carbothermic reduction of quartz (SiO2).
		Chlorosilane – 25 KTA	Chlorosilane – 25 KTA	MG Silicon is converted to Chlorosilane by Hydrochlorination for production of Polysilicon as an intermediate.

Sl. No.	Plant Equipment / Facility	Configuration	Capacity	Remarks
		Silane – 7,50,000 m^3	Silane – 7,50,000 m^3	Extracted as a side stream.
		Polysilicon – 90 KTA	Polysilicon – 90 KTA	Through Chemical Vapor Deposition, Silicon extracted from Chlorosilane is deposited on silicon seed rods. These silicon seed rods are harvested and crushed to produce Polysilicon.

2.6.5 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.	Raw Material	Quantity required per annum	Source	Distance from site (km)	Mode of transportation
1	Petcoke cinder	432 KTA 1.	Captive Petcoke gasification unit	NA (Captive source)	Conveyors
2	Quartz (SiO_2)	215 KTA	Indigenous / Import	2.	Road / Rail / Sea
3	HCl	460	Indigenous / Import	3.	Road

2.6.6 The water requirement for the project is estimated as 6000 m^3/day, which will be obtained from proposed desalination facility.

2.6.7 The power requirement for the proposed project is estimated as 450 MW which will be obtained from the proposed 3,000 MW capacity captive power plants.

2.6.8 The capital cost of the overall project is Rs 70,000 Crores and the capital cost for environmental protection measures is proposed as Rs 3,500 Crores. The employment generation from the overall proposed projectis 5,000 (construction phase) and 100 (operation phase).

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

2.6.10 Name of the EIA consultant: M/s. National Environmental Engineering Research Institute [S No 85, NABET Certificate no. NABET/EIA/2124/RA0227and valid upto 21/07/2024; Rev. 19, February 14, 2022].

2.6.11 Proposed Terms of Reference:**(Baseline data collection period: Winter 2020)**

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
A. Air				
a. Meteorological parameters	Temperature, Relative Humidity, Wind speed and direction, Rainfall	1	Continuous	
b. AAQ parameters	PM_{10}, $PM_{2.5}$, SO_2, NO_2, CO, O_3, Pb, NH_3, C_6H_6, BaP, As, Ni	8	Twice a week	

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
B. Noise	L_{eq} (day), L_{eq} (night)	8	Once	
C. Water				
a. Surface water / Ground water quality parameters	pH, Temp., Turbidity, EC, O&G, BOD, COD, DO, TSS, TDS, Alkalinity, Hardness, Sodium, Potassium, Chlorides, Sulphates, Nitrates, TKN, Fluoride, Heavy Metals, Fecal Coliforms, Total Coliforms	Surface water – 5 Ground water - 13	Once	
D. Land				
a. Soil quality	Particle size distribution, Bulk density, Porosity, Water holding capacity, pH, EC, Salinity, Permeability, Ca, Mg, Na, K, Cl, CO_3^{-2}, HCO_3^-, SO_4^{-2}, SAR, Cation Exchange Capacity, Organic carbon, Available N, P and K, Heavy Metals, Hydrocarbons, Microbiological characteristics,	13	Once	
b. Land use	NA			Based on Remote Sensing & GIS
E. Biological				
a. Aquatic	Diversity and distribution of Phytoplankton & Zooplankton	5	Once	
b. Terrestrial	Floral and Faunal diversity	18	Once	
F. Socio-economic parameters	Population distribution and density, Avg. household size, Sex ratio, Social structure, Literacy level, Employment pattern, Infrastructure resources and accessibility	30 villages & 1 town	Once	Based on Primary and Secondary data

2.6.12 M/s. Reliance Industries Limited (RIL) had earlier made an online application for Terms of Reference vide proposal no. IA/GJ/IND/238889/2021 dated 05/01/2022 and the proposal was considered in 52nd meeting of the Re-constituted EAC (Industry-I) held on 27th and 28th

January, 2022 wherein the Committee recommended the proposal to be returned in present form due to the shortcomings and to submit the revised proposal.

2.6.13 The proponent has made a revised online application vide proposal no. IA/GJ/IND/258536/2022 dated 25/02/2022. The proposal is considered in the 2nd meeting of the EAC (Industry-I) held on 22nd – 23rd March, 2022. The observations and recommendations of the EAC are as follows:

Observations of the Committee

2.6.14 The Committee noted the following:

i. The instant proposal is for seeking ToR for undertaking EIA study for setting up of a new Metal Extraction Unit for production of 35 KTA of Vanadium & Nickel and Polysilicon unit of 90 KTA capacity for production of Polysilicon / Chlorosilane / Silaneloace located at Motikhavdi Village, Lalpur Tehsil, Jamnagar District, Gujarat State.
ii. Proposed project will be located within refinery complex of Reliance India Limited at Jamnagar, wherein the Ministry has already issued ToRs for interlinked projects.
iii. The baseline data collection done by the proponent is not in accordance with the wind rose diagram of the project site and monitoring has only been done on eight locations in place of 15 locations.

Recommendations of the Committee

2.6.15 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. Project proponent shall prepare layout plan showing all internal roads with minimum 6m width and 9m turning radius with proper looping for smooth traffic flow, including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing.
ii. Project proponent shall provide plan for Greening and Paving in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
iii. Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.
iv. As the project is located within refinery complex, cumulative impact assessment shall be done including all units. Further, Cumulative impact of all the interlinked project shall be carried out. Provisions contained in the MoEF&CC circular dated 24/12/2010 pertaining to consideration of interlinked project shall be adhered with.
v. There are two separate patches of land for Vanadium and Nickel Extraction and Polysilicon manufacturing unit in refinery complex. PP shall provide scheme for connectivity in between both proposed project sites.
vi. Panna Dam is adjacent to the project site. PP shall prepare scheme for mitigation measures to be adopted to prevent contamination of dam due to the proposed project.
vii. Toxicity study shall be undertaken for effluent and flue gas emission arising out from Vanadium and Nickel production units.

viii. Two months (April and May) summer data with at least 15 AAQ sampling stations for environment baseline study shall be carried out with all 12 parameters for refinery complex as per CPCB guidelines.

ix. PP shall provide details of technology to be adopted in proposed project in EIA report.

x. Project proponent shall submit detailed action plan to meet Indian Standards for proposed metal extraction unit and poly silicone unit.

xi. Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.

xii. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.

xiii. Action plan for rain water harvesting shall be submitted.

xiv. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

xv. Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be submitted.

xvi. Comprehensive risk assessment study for the entire refinery complex shall be carried out and submitted.

xvii. Separate chapter on cyclone/ disaster management shall be prepared and included in the EIA report.

xviii. Details regarding the existence of mangroves and coral reefs if any, within the study area of the project site along with the conservation plan shall be included in the EIA report.

xix. CRZ clearance for the proposed desalination facility shall be submitted.

xx. Socio-economic survey in the project study area that is 10 Kms radial coverage from the project site shall be carried out and included as a part of EIA report.

xxi. Characteristics of the petcoke cinder to be used in the plant shall be submitted along with the EIA report.

2.7 Proposed Mineral Beneficiation of 1.25 MTPA of Iron ore and 0.15 MTPA of Manganese ore by **M/s. Taanish Resources Pvt. Ltd** located at Emmihatti Village, Sandur Taluka, **Bellary District, Karnataka.** [Online Proposal No. IA/KA/IND/255717/2022; File No. IAJ-11011/84/2022-IA-II(IND-I)] – **Prescription of Terms of Reference – regarding.**

2.7.1 M/s. Taanish Resources Pvt. Ltd. has made an application online vide proposal no. IA/KA/IND/255717/2022 dated 01/03/2022in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 2(b) Mineral Beneficiation under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

Details submitted by Project proponent

2.7.2 The project of M/s Taanish Resources Pvt. Limited located in Emmihattti Village, Sandur Tehsil, Bellary District, Karnataka is for setting up of a new Mineral Beneficiation Plant for production of 1.25 MTPA of Iron ore and 0.15 MTPA of Manganese ore.

2.7.3 Environmental site settings:

<table>
<tr><th>S No</th><th>Particulars</th><th>Details</th></tr>
<tr><td>i</td><td>Total land</td><td>Total Land: 10.66 ha (26.34 acres) [Private Land]</td></tr>
<tr><td>ii</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>26.34 Acres (20 Acres + 6.34 Acres)
1.Non-agricultural land (Industrial Converted) bearing survey No. 28/4, measuring 20 acres situated at Emmihatti Village, Sandurtaluq, Bellary district, Karnataka having Rural Development & Panchayath Raj Property No.: 244, Property No. 1505006001010.152.

2. Non-agricultural land (Industrial Converted) bearing survey No. 29/C, measuring 06 acres 34 cents situated at Emmihatti Village, Sandurtaluq, Bellary district, Karnataka Rural Development & Panchayath Raj Property No: 245, property No.1505006001010.154.</td></tr>
<tr><td>iii</td><td>Existence of habitation & involvement of R&R, if any</td><td>No Settlements has been found within the project site. Therefore, R&R is not involved.

<u>Projectsite:</u>Emmihatti Village

<u>StudyArea:</u>
1. Sidappur 2.5 Km/SE
2. Jaisingpura 1.9 Km/ NE
3. Hospet 11.65 Km/NW</td></tr>
<tr><td>iv</td><td>Latitude and Longitude of all corners of the project site.</td><td>
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1.</td><td>15°10'1.21"N</td><td>76°26'58.61"E</td></tr>
<tr><td>2.</td><td>15°10'3.70"N</td><td>76°27'1.70"E</td></tr>
<tr><td>3.</td><td>15°10'6.09"N</td><td>76°27'3.05"E</td></tr>
<tr><td>4.</td><td>15°10'8.89"N</td><td>76°27'1.61"E</td></tr>
<tr><td>5.</td><td>15°10'16.84"N</td><td>76°26'56.83"E</td></tr>
<tr><td>6.</td><td>15°10'9.20"N</td><td>76°26'51.69"E</td></tr>
<tr><td>7.</td><td>15°10'5.59"N</td><td>76°26'46.31"E</td></tr>
<tr><td>8.</td><td>15°10'4.50"N</td><td>76°26'48.81"E</td></tr>
<tr><td>9.</td><td>15°10'2.90"N</td><td>76°26'54.09"E</td></tr>
</table>
</td></tr>
<tr><td>v</td><td>Elevation of the project site</td><td>636 m above MSL</td></tr>
<tr><td>vi</td><td>Involvement of Forest land if any.</td><td>No forest land is involved.</td></tr>
<tr><td>vii</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural drainage,</td><td>Project Site – Nil

Study Area</td></tr>
</table>

<table>
<tr><th>S No</th><th>Particulars</th><th>Details</th></tr>
<tr><td></td><td>Canal etc.) exists within the project site as well as study area</td><td>
<table>
<tr><th>Water body</th><th>Distance (Km)</th><th>Direction</th></tr>
<tr><td>Tungabhadra Reservoir</td><td>6.62</td><td>NW</td></tr>
<tr><td>DarojiKere</td><td>23.40</td><td>NE</td></tr>
<tr><td>Kamlapura Lake</td><td>3.83</td><td>NE</td></tr>
<tr><td>Tungabhadra High Level Canal</td><td>11.5</td><td>NE</td></tr>
<tr><td>DayanadaKere</td><td>7.4</td><td>SW</td></tr>
</table>
</td></tr>
<tr><td>viii</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve /elephant reserve etc. if any within the study area</td><td><u>Project Area</u>: Nil.

<u>Study Area</u>
Name of the ESZ/ESA:
• Gudekote Sloth Bear Sanctuary
• Status of Notification No.: Notification No. 127.S.O.2145(E) [06.07.2017] Distance of project from ESZ/ESA: 34.8 Km

List of Reserved and protected forests:
• Ramgad FR Adjacent
• Joga RF 4.9Kms towards NE
• Billakula West RF 7.9Kms towards South
• Sandur RF 1.12Kms towards NE
• Gunda RF 17Kms NW
• Bandri RF 10.6Kms towards SE</td></tr>
</table>

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

Sl. No.	Plant Equipment / Facility	Product	Configuration & Capacity	Remarks
1	Mineral Beneficiation Plant	Iron Ore	1.25 MTPA	-
		Mn Ore	0.15 MTPA	-

2.7.5 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.	Raw Material	Quantity required per annum	Source	Distance from site (km)	Mode of transportation
1	Low Grade Iron Ore	Not provided	BellarySanduru - Hospet Region [Through E-Auction conducted by the monitoring committee and MSTC, as per the orders of the Govt. of Karnataka]		Covered tipper trucks
2	Low Grade Manganese Ore (Mn)				

2.7.6 Initially 350 KLD water will be required for the proposed plant and the water of about 297 KLD will be reused in the process, 33 KLD of water will be in the form of sludge, the domestic water requirement is 20 KLD, hence the water usage will be about 53KL and is proposed to draw from the Bore wells, check dam, water tankers proposed within the

identified project site. The water will be drawn and stored in a Tank and Pumped to the relevant units. Requisite permission from Ground water authority and No Objection Certificate from subsequent authority for drawing water from check dam will be obtained.

2.7.7 The power requirement for the proposed project is estimated as 700KW, which will be obtained from the GESCOM, Karnataka Government.

2.7.8 The capital cost of the overall project is Rs 24.25 Crores. The employment generation from the overall proposed project is 64.

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

2.7.10 Name of the EIA consultant: M/s Ecomen Laboratories Pvt. Ltd., Lucknow [S No 156, NABET Certificate no. NABET/EIA/2023/RA 0203 and valid up to 21/09/2023; Rev. 19, February 14, 2022].

2.7.11 Proposed Terms of Reference:**(Baseline data collection period: December 2022 – February 2022)**

Attributes	**Parameters**	**Sampling**		**Remarks**
		No. of stations	**Frequency**	
A. Air				
a. Meteorological parameters	Wind Speed and Direction, Temperature, Relative Humidity & Rainfall	1	Hourly	Hourly recording at project site
b. AAQ parameters	RSPM(PM_{10}),$PM_{2.5}$, SO_2, NO_2 and CO	8	24 hourly sampling	Twice a Month
B. Noise	Noise levels in dB(A) Day And Night	8	24 Hours	Once during Study Period
C. Water				
a. Surface water parameters	Physical, Chemical and Bacteriological Parameters as per APHA and IS standards	3	One day	3 locations once in a Study Period.
b. Ground water quality	Physical, Chemical and Bacteriological Parameters as per APHA and IS standards	8	One day	8 locations once in a Study Period.
D. Land				
a. Soil quality b. Land use	Soil profile, characteristics, soil type and texture, NKP value etc. Land use for different categories (Satellite Imagery)	8	One day	8 locations once in a Study Period.
E. Biological				

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
a. Aquatic	Not Applicable	-	-	Through field visit and secondary data
b. Terrestrial	Existing terrestrial flora and fauna	-	-	
F. Socio-economic parameters	Socio-economic characteristics	-	-	Through field visit and secondary data

Observations of the Committee

2.7.12 The Committee noted the following:

i. Ramgarh Reserved Forest is 20 m from project site and site is covered by Hills in SW and NE sides. Further as per the KML file, lot of vegetation present at the site.
ii. The proposed project site seems to involve forest land as per Survey of India Topo sheet map land use and KML file.
iii. The proposed project site area for tailing management needs to be revisited due to the presence of hilly terrain.
iv. Raw material will be procured from far away locations and transported through road.
v. Project proponent has not provided the details regarding the alternate sites envisaged for the project.

Recommendations of the Committee

2.7.13 In view of the foregoing and after deliberations, the Committee recommended for site visit of the proposed project area by a subcommittee of EAC Industry-1 members. Further, EAC recommended that PP may explore alternate sites for the proposed project.

2.8 Proposed installation of 3x15T Induction Furnace with 1x2 stand of CCM for Manufacturing of M.S. Ingot/Billet (200000 TPA) and 1 x25 TPH Rolling Mill (200000 TPA) by **M/s. Purbanchal Concast Private Limited** located at Khoribari Ghoshpukur Road, Village Kashiram, P.S. Phansidewa, **District Darjeeling, West Bengal** [Online Proposal No. IA/WB/IND/214214/2021; Fileno: IA-J11011/265/2021-IA-II(I)] – **Prescribing of Terms of Reference– regarding.**

2.8.1 M/s. Purbanchal Concast Private Limited (PCPL) has made an application online vide proposal no IA/WB/IND/214214/2021 dated 04/08/2021in 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 S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and attracts general condition due to existence of India-Bangladesh International boundary at a distance of 2.55 Km in SE direction from the project and appraised at Central Level.

2.8.2 The project proponent had applied on 04/08/2021 initially for expansion of existing Rolling Mill Products-Angles (Structure), Pipes, Profile and Strips from 77400 TPA to 200000 TPA) & New installations of 3x15T Induction Furnace with 1x2 stand of CCM for Manufacturing of M.S. Ingot/Billet (200000 TPA). Project proponent approached the Ministry to obtain EC for their existing unit in pursuance to the Order dated 12/02/2020 of

Hon'ble NGT in Appeal No. 55 of 2019. PP stated that they could not approach the Ministry timely due to Covid-19 pandemic situation. The said proposal was considered in the 42nd meeting of the Re-constituted EAC (Industry-I) held on 12 – 13th August, 2021 wherein after detailed deliberation, the Committee recommended thatMoEF&CC may take an appropriate view regarding processing this request as it has been received after the deadline i.e. after 11/02/2021. Subject to the decision by MoEF&CC regarding the late submission of application by the PP as mentioned above, the committee recommended the project proposal for prescribing ToR. Ministry vide letter dated 13/09/2021 requested PP to submit additional information w.r.t. reasons for delay in submission of proposal after the deadline (11/02/2021).

Further, on 24/11/2021, the Ministry clarified that The Hon'ble NGT vide its Order dated 12/02/2020 in O.A No. 55 of 2019 held that the MoEF upon consideration of the expert opinion appears to have now clarified that Cold Rolled Stainless Steel manufacturing industries do require prior environmental clearance but, having regard to the fact that there were a large number of such mills operating on the strength of CTE and CTO, opportunity should be provided to such units to fall within the EC regime by granting a period of at least one year to operate for the purpose. The time frame for applying within the EC regime got expired on 11/02/2021 and application for ToR was submitted on 04/08/2021. The delayed submission of proposal by the proponent is under examination by the Ministry.

The PP vide letter dated 24/12/2021 made a request to Ministry to issue ToR letter only for installation of the Induction Furnaces instead of the entire proposal of expansion and modification (hot charging) of Rolling mill and installation of induction furnace for the sustainability of the project. In view of the same PP has revised the proposal, the details of which are given below:

Details submitted by Project proponent

2.8.3 The project of M/s. Purbanchal Concast Private Limited (PCPL) located in Kashiram Jote Village, Phansidewa Tehsil, Darjeeling District, West Bengal is for installation of 3x15T Induction Furnace with 1x2 stand of CCM for Manufacturing of M.S. Ingot/Billet (200000 TPA) and 1 x25 TPH Rolling Mill within the existing Rolling mills area running on basis of CTE/ CTO from West Bengal Pollution Control Board. PP assured that they will be abide by the order of MoEF&CC, SPCB and Hon'ble NGT to bring the existing rolling mill in ambit of the Environment Clearance under the provisions of EIA, Notification, 2006.

2.8.4 Environmental site settings:

<table>
<tr><th>SL. No</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i</td><td>Total Land</td><td>10.31 ha [Private: 10.31 ha]</td><td>Land use: Industrial.</td></tr>
<tr><td>ii</td><td>Land Acquisition details as per MoEF O.M dated 7/10/2014.</td><td>The proposed expansion will be coming within the existing plant premises.</td><td></td></tr>
<tr><td>iii</td><td>Existence of habitation involvement of R&R, if any</td><td>R&R is not involved in the proposed project.</td><td></td></tr>
<tr><td>iv</td><td>Latitude and Longitude of all the corners of project</td><td><table><tr><td>Point</td><td>Latitude</td><td>Longitude</td></tr><tr><td>A</td><td>26.628835°</td><td>88.369272°</td></tr></table></td><td></td></tr>
</table>

<table>
<tr><th>SL. No</th><th>Particulars</th><th colspan="3">Details</th><th>Remarks</th></tr>
<tr><td></td><td>site.</td><td colspan="3"><table>
<tr><td>B</td><td>26.627442°</td><td>88.369566°</td></tr>
<tr><td>C</td><td>26.627593°</td><td>88.370109°</td></tr>
<tr><td>D</td><td>26.627625°</td><td>88.371800°</td></tr>
<tr><td>E</td><td>26.628800°</td><td>88.371778°</td></tr>
<tr><td>F</td><td>26.628744°</td><td>88.372421°</td></tr>
<tr><td>G</td><td>26.629341°</td><td>88.371468°</td></tr>
<tr><td>H</td><td>26.629057°</td><td>88.369785°</td></tr>
</table></td><td></td></tr>
<tr><td>v</td><td>Elevation of the project site</td><td colspan="3">103-105 m above mean sea level</td><td>-</td></tr>
<tr><td>vi</td><td>Involvement of Forest land if any</td><td colspan="3">No involvement of Forest Land</td><td>-</td></tr>
<tr><td>vii</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td colspan="3"><u>Project site:</u>
Nil.

<u>Study area</u><table>
<tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Mahananda river</td><td>2.68</td><td>E</td></tr>
<tr><td>Tista sub canal</td><td>2.55</td><td>E</td></tr>
<tr><td>Fulbari Ghoshpukur canal</td><td>0.6</td><td>W</td></tr>
<tr><td>Fuleswari River</td><td>6.22</td><td>NE</td></tr>
</table></td><td></td></tr>
<tr><td>viii</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve etc. if any within the study area.</td><td colspan="3">Nil</td><td></td></tr>
</table>

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

S No	Plant Facility/ Equipment	Unit	Configuration	Production
1	MS Billet/Ingot	TPA	Induction Furnace: 3x15T CCM: 1x2 Strand and 7 m Dia	2,00,000
2	Rolling Mill	TPA	1x25 TPH	2,00,000

2.8.6 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:

S. No.	Raw Material	Quantity Required Per Annum TPA	Source	Distance from site (Kms)	Mode of Transport
For Rolling Mill Products					
1	MS Billets/ Ingot	200000	Captive Production	--	--
For Billets					
2	Sponge Iron	175000	Durgapur,	~ 500 to 900	Truck

S. No.	Raw Material	Quantity Required Per Annum TPA	Source	Distance from site (Kms)	Mode of Transport
3	MS Scrap	45000	Jharsuguda and other local sources	Kms	
4	Ferro alloy	2350			
5	Pig Iron	1250			

2.8.7 The water requirement for the project is estimated as 111 m^3/day, out of which 45m^3/day of fresh water requirement will be obtained from the Ground Water and the remaining requirement of 66 m^3/day will be met from the recycled water. The permission for drawl of groundwater will be obtained.

2.8.8 The proposed power requirement is estimated as 4.4 MW (5550 KVA). power will be sourced from West Bengal State Electricity Development Corporation Limited (WBSEDCL). DG Set of 320kVA proposed for power backup.

2.8.9 The capital cost of the project is Rs. 10 Crores and the capital cost for environmental protection measures is proposed as Rs. 1.0 Crores. The employment generation from the proposed project / expansion is 100.

2.8.10 The project proponent has reported that there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.

2.8.11 Name of the EIA consultant: M/s. Ultra-Tech Environmental Consultancy and Laboratory [S No 88, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/RA 0194; valid upto09/03/2023; Rev. 19, February 14, 2022].

2.8.12 Proposed Terms of Reference (**Baseline data collection period: January 2021 To March 2021)**:

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
A. Air			
a. Meteorology	1 location	Continuous for three month with hourly recording at one central location and secondary data collected from nearest IMD	Wind speed, wind direction, temperature, relative humidity, rainfall, and other non-instrumental observations
b.AAQ Parameters	8 locations	24 hourly samples twice a week for three months	PM_{10}, $PM_{2.5}$, SO_2, NOx, CO.
B. Noise	8 locations	Hourly readings for 24 hours at 8 locations, once during study period	Lday, Lnight, Leq
C. Water			
Surface water/Ground	8 locations	Grab samples were	Physical, chemical and

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
water quality parameters	(GW) + 8 location (SW)	collected from surface water (SW) and ground water (GW) sources. Sampling and analysis is carried out for once during study period	bacteriological parameters
D. Land			
a. Soil Quality	8 locations	Once during study period	Soil profile with chemical constituents
b. Land Use	Study area	Based on secondary data and satellite imagery	Trend of land use change for different categories
E. Biological			
a. Aquatic	2 aquatic locations	Primary survey through field studies once during study period and supplemented with published data	Aquatic flora and fauna in the study area
b. Terrestrial	5 terrestrial locations		Terrestrial flora and fauna in the study area
F. Socio Economic Parameters	Once during study period	Based on data published in district census handbooks and field study	Socio-economic characteristics

Observations of the Committee

2.8.13 The Committee noted the following:

i. The project proponent had applied earlier for expansion of existing Rolling Mill products-Angles (Structure), Pipes, Profile and Strips from 77400 TPA to 200000 TPA) & New installation of 3x15T Induction Furnace with 1x2 stand of CCM for Manufacturing of M.S. Ingot/Billet (200000 TPA) in pursuance to the Order dated 12/02/2020 of Hon'ble NGT in Appeal No. 55 of 2019. PP stated that they could not approach the Ministry timely due to Covid-19 pandemic situation. The said proposal was considered in EAC (Industry-I) meeting held on 12 – 13thAugust, 2021 wherein after detailed deliberation, the Committee recommended that MoEF&CC may take an appropriate view regarding processing this request as it has been received after the deadline i.e. after 11/02/2021. Subject to the decision by MoEF&CC regarding the late submission of application by the PP as mentioned above, the committee recommended the project proposal for prescribing ToR. Ministry vide letter dated 13/09/2021 requested PP to submit additional information w.r.t. reasons for delay in submission of proposal after the deadline (11/02/2021).

ii. Further, on 24/11/2021, the Ministry clarified that The Hon'ble NGT vide its Order dated 12/02/2020 in O.A No. 55 of 2019 held that the MoEF upon consideration of the expert opinion appears to have now clarified that Cold Rolled Stainless Steel manufacturing industries do require prior environmental clearance but, having regard to the fact that there were a large number of such mills operating on the strength of

CTE and CTO, opportunity should be provided to such units to fall within the EC regime by granting a period of at least one year to operate for the purpose. The time frame for applying within the EC regime got expired on 11/02/2021 and application for ToR was submitted on 04/08/2021. The delayed submission of proposal by the proponent is under examination by the Ministry.

iii. The PP vide letter dated 24/12/2021 made a request to Ministry to issue ToR letter only for installation of the Induction Furnaces with CCM instead of the entire expansion proposal of (hot charging) of Rolling mill and installation of induction furnace for the sustainability of the project.

iv. The instant proposal is for seeking ToR for undertaking EIA study for setting up of a 3x15 T induction furnace with 1x2 strand CCM for production of 2,00,000 TPA M.S Billet/Ingot and 1x25 TPH Rolling Mill within the within the existing Rolling mills area running on basis of CTE/ CTO from West Bengal Pollution Control Board. PP assured that they will be abide by the order of MoEF&CC, SPCB and Hon'ble NGT to bring the existing rolling mill in ambit of the Environment Clearance.

Recommendations of the Committee

2.8.14 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. Project proponent shall prepare layout plan showing all internal roads minimum 6m width and 9m turning radius with proper looping for smooth traffic flow, including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing.
ii. Project proponent shall provide plan for Greening and Paving in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
iii. Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.
iv. Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.
v. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.
vi. Action plan for rain water harvesting shall be submitted.

vii. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
viii. Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be submitted.
ix. Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.
x. Action plan for fugitive emission control in the plant premises shall be provided.
xi. Action plan for 100 % solid waste utilization shall be submitted.
xii. Action plan for rain water harvesting shall be submitted.
xiii. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
xiv. Action plan for 90 % Hot Charging of billets/ingots shall be submitted.
xv. An action plan for Green Belt development consisting of 3 tiers of plantations of native species all along the periphery of the project of adequate width shall be raised in 33% of total area with a tree density of not less than 2500 per ha within a time frame of one year shall be submitted. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years.

2.9 Integrated Steel Plant (1.0 MTPA) along with Coal Based Power Plant (200 MW) by **M/s. Orissa Steel & Power Private Limited** located at Village HijalgarhMouja, P.S. Jamuria, **District Burdwan, West Bengal.** [Online Proposal No. IA/WB/IND/255988/2022; File No. J-11011/112/2010-IA II (I)] – **Amendment in Environment Clearance – regarding.**

2.9.1 M/s Orissa Steel & Power Private Limited has made an online application vide proposal no. IA/WB/IND/255988/2022dated 10/02/2022 along with copy of addendum in EIA/EMP report, Form 4 and revised plant layout seeking amendment in the Environment Clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The major proposed project activity is listed at, S.No.-3 under Category "A" of the schedule 3 (a)' Metallurgical industries (ferrous & non-ferrous) and '1(d)' Captive Power Plant ; '2 (b)' Mineral beneficiation; '4(b)' Coke oven Plant of the EIA Notification, 2006 and being appraised at Central Level.

Details submitted by Project proponent

2.9.2 The project was initially accorded environmental clearance from MoEF&CC, New Delhi in the name of M/s. Rashmi Cement Limited vide letter no. J-11011/112/2010-IA II (I) dated 26th August 2014 & EC validity extension dated 6thAugust 2021. EC was transferred to M/s Orissa Steel & Power Private Limited by Ministry vide letter no. J-11011/112/2010-IA.II (I) dated 16th December 2021.

2.9.3 The present proposal of M/s Orissa Steel & Power Private Limited is for Change in configuration of the DRI plant from 7 x 100 + 6 x 350 TPD to 4 x 100 + 4 x 600 TPD in the environment clearance without changing the production capacity.

2.9.4 **Reason for seeking amendment in EC**.
The justification for change in DRI plant configuration is given below:

a) The size of the kiln has been changed from 7 x 100 + 6 x 350 TPD to 4 x 100 + 4 x 600

TPD resulting increase in WHRB based CPP from 30 MW to 38 MW. The advantage of bigger size of the kiln is less water consumption and decrease in land requirement.

b) As the power generation from waste heat recovery type boiler has been increased dependency on the balanced power demand from grid (non-renewable sources) will be reduced. The total power generation (WHRB+CFBC) will be 238 MW.

c) Land requirement because of change in configuration of DRI will reduce to 26 % as for commissioning of 7 x 100 TPD DRI kiln 18,200 sq. meter and for 6 x 350 TPD DRI Kiln 36,000 sq. Meter, in total 54,200 sq. meter land will be required, whereas for construction of 4 x 600 DRI Kiln & 4 x 100 TPD DRI Kiln 40,400 Sq. meter land will be required.

d) Also the water demand from proposed project will be reduced from 23,160 KLD to 22,872 KLD (-288 KLD). This is partly due to adoption of partial air cooled system for WHRB plant and due to decrease in surface area of DRI kiln.

e) Number of point source emission will reduce as earlier there was 07 nos. of stacks (7 x 100 TPD DRI + 6 x 350 TPD DRI) and now after change in configuration only 04 nos. of stack (4 x 600 TPD + 4 x 100 TPD) resulting overall reduction in point source emission. Also no of transfer point (raw material handling system & stock yard) will be reduces, resulting reduction in fugitive emission sources.
From the pollution load calculation, it may be seen PM_{10}, SO_2 and NOx have been reduced from 29.45 gm/ sec, 113.55 gm/ sec and 104.5 gm/ sec at EC configuration to 27.44 gm/ sec, 75.93 gm/ sec and 62.0 gm/ sec respectively at the revised configuration. Thus there is a net reduction in the impact on air quality at revised configuration.

f) Industrial waste water generation will be reduced from 222 m^3/hr to 220 m^3/hr (-2 m^3/hr), due to reduction in water demand and use of power plant blow down water in DRI plant.
Solid waste generation will be reduced from 22,63,300 TPA to 22,55,050 TPA (-8,250 TPA) as no of transfer point attached with DRI kiln (raw material handling system, I-Bin, Transfer house, Product House, Coal circuit & stock yard) will be reduced.

Following will be Pollution load assessment after the proposed change:

Sl. No.	Component	As per Existing EC	Revised value based on change in configuration	Remarks
1.	Air Emissions	PM-29.45 g/sec SO_2-113.55 g/sec NO_x-104.50 g/sec	PM-27.44 g/sec **(- 2.01 g/sec)** SO_2-75.93 g/sec **(-37.62 g/sec)** NO_x-62.0 g/sec **(- 42.50 g/sec)**	There is net decrease in pollution load for PM, SO_2 and NO_x.
2.	Waste water generation	Industrial waste water - 222 m^3/hr Domestic Waste Water - 4 m^3/hr	Industrial waste water – 220 m^3/hr **(-2 m^3/hr)** Domestic Waste Water - 4 m^3/hr**(0)**	There would be a decrease in waste water generation and the plant would continue to operate on Zero Effluent Discharge principle.
3.	Solid Waste generation	22,63,300 TPA	22,55,050 TPA **(-8,250 TPA)**	There is decrease in solid waste generation as no of transfer point attached with DRI kiln (raw material handling system, I-Bin,

Sl. No.	Component	As per Existing EC	Revised value based on change in configuration	Remarks
				Transfer house, Product House, Coal circuit & stock yard) will be reduced.
4.	Make up water requirement	23,160 KLD	22,872 KLD **(-288 KLD)**	Adoption of partial air cooled system for WHRB plant and due to decrease in surface area of DRI kiln.
5.	Power Requirement from Grid	40.0 MW	9.0 MW **(- 31.0 MW)**	There is a significant decrease in power demand from Grid (coal based), because of increase in WHRB based power plant which is exempted as per ministry O.M. no-F. No.-22-24/2018-IA.III dated 23rd January 2019.
6.	Raw material consumption	49,00,300 TPA	49,00,300 TPA **(0)**	No change
7.	Land use	515.0 acres • Green Belt (114.97 acres)-33%. • Open space/ Raw Material Storage Area-(45.33 acres)-8.8%	515.0 acres • Open space/ Raw Material Storage Area-(52.74 acres)-10.3%	The overall land requirement is same.

2.9.5 The changes proposed in the existing EC accorded project configuration along with the proposed final configuration unit is given as below:

Sl. No	Particulars of Facilities	Existing As per EC dated 2014 & 2021		Proposed	Ultimate (Final Configuration & Capacity)		
		Configuration	Capacity	EC Amendment under clause 7 (ii) (C)	Configuration	Capacity	Product
1.	Pellet Plant (along with I/O Beneficiation Plant)	Pellet Plant (1 x 1.2 MTPA) Beneficiation Plant (1 x 1.5 MTPA)	Pellet Plant (1 x 1.2 MTPA) Beneficiation Plant (1 x 1.5 MTPA)	**No Change**	Pellet Plant (1 x 1.2 MTPA) Beneficiation Plant (1 x 1.5 MTPA)	Pellet Plant (1 x 1.2 MTPA) Beneficiation Plant (1 x 1.5 MTPA)	Iron ore Concentrate & Pellet
2.	DRI	7 X 100 TPD + 6 x 350 TPD	0.84 Million T.P.A	**Configuration change 4 X 100 + 4 X600**	4 x100 TPD + 4 x 600	0.84 Million T.P.A	Sponge Iron
3.	Blast Furnace	2 x 350 m^3	0.42 Million T.P.A	**No Change**	2 x 350 m^3	0.42 Million T.P.A	Hot Metal / Pig Iron

Sl. No	Particulars of Facilities	Existing As per EC dated 2014 & 2021		Proposed	Ultimate (Final Configuration & Capacity)		
		Configuration	Capacity	EC Amendment under clause 7 (ii) (C)	Configuration	Capacity	Product
4.	Coke Oven Plant	0.5 Million T.P.A	0.5 Million T.P.A	**No Change**	0.5 Million T.P.A	0.5 Million T.P.A	Metallurgical Coke
5.	Steel Making Facilities	40 T EAF X 3 + 3 x 40 T LF	1.05 Million T.P.A	**No Change**	40 T EAF X 3 + 3 x 40 T LF	1.05 Million T.P.A	Liquid Steel
6.	Ferro Alloy Plant	3 x 9 MVA	0.036 Million T.P.A	**No Change**	3 x 9 MVA	0.036 Million T.P.A	Ferro Alloys
7.	Sinter Plant	1 x 70 m^2 + 1 x 25 m^2	0.60 Million T.P.A	**No Change**	1 x 70 m^2 + 1 x 25 m^2	0.60 Million T.P.A	Sinter
8.	Lime Dolomite Plant	1 x 300 TPD	300 TPD	**No Change**	1 x 300 TPD	300 TPD	Calcined Lime &Dolime
9.	Oxygen Plant	1 x 300 TPD	300 TPD	**No Change**	1 x 300 TPD	300 TPD	Oxygen, Nitrogen &Argon
10.	H.R. Coil Mill	**	0.6 Million T.P.A	**No Change**	**	0.6 Million T.P.A	Seamless Pipe, HR Coil, Slabs, Angle Beams, Wire Rods, Channels, TMT etc.
11.	Alloy Steel Mill with Billet & Bloom Caster	**	0.4 Million T.P.A	**No Change**	**	0.4 Million T.P.A	Plates, DI Pipes etc.
12.	Captive Power Plant	[WHRB Based 12+18+40 MW & CFBC based 2 x 65 MW]	200 MW	**(+) 38 MW WHRB based DRI Plant.***	**108 MW WHRB** Based (68 MW from DRI Plant) + 40 MW from Coke Oven Plant) **130 MW CFBC** (Coal &Dolochar Mix based) 2 x 65 MW	238 MW***** (WHRB-108 MW + CFBC-130 MW)	Power
13.	Railway Siding	01 No.	01 No.	******	01 No.	01 No.	Material Handling

***As per ministry O.M. no-F. No.-22-24/2018-IA.III dated 23rd January 2019, setting up new or expansion of captive power plants employing WHRB without using any auxiliary fuel, in the existing Cement Plants, Integrated Steel Plants, Metallurgical Industries (Ferrous and Nonferrous) and other industries having potential for heat recovery, does not attract the provisions of EIA Notification 2006.**

2.9.6 **Any other amendment required in EC:** Amendment in clearance condition as follows:

Condition No.	Description as per Approved EC dated 26/08/2014	Description as per proposal	Remarks

Specific condition (vii)	Total make up water requirement shall not exceed 23,160 m³/day. The water consumption shall not exceed as per the standards prescribed for the sponge iron plants and steel plants.	Total make up water requirement shall not exceed 22,872 m³/day. The water consumption shall not exceed as per the standards prescribed for the sponge iron plants and steel plants.	The water demand from proposed project will be reduced from 23,160 KLD to 22,872 KLD (-288 KLD). This is partly due to adoption of partial air cooled system for WHRB plant and due to decrease in surface area of DRI kiln.

2.9.7 The project proponent has reported that there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.

Observations of the Committee

2.9.8 The Committee noted the following:

i. The original EC was accorded by MoEF&CC videletter no. J-11011/112/2010-IA II (I) dated 26/08/2014& EC validity extension vide letter dated 06/08/2021. EC was transferred to M/s Orissa Steel & Power Private Limited by Ministry vide letter no. J-11011/112/2010-IA.II (I) dated 16/12/2021 for Integrated Steel Plant (1 MTPA) along with coal based power plant (200 MW) at Village Hijalgarh, tehsil Jamuria District Burdwan, West Bengal.
ii. The instant proposal is for Change in configuration of the DRI plant from 7x100 + 6x350 TPD to 4x100 + 4x600 TPD in the environment clearance without changing the production capacity.
iii. The EAC noted that the revised configuration is more energy efficient and will lead to decrease in overall pollution.
iv. Due to proposed amendment, the water demand will be reduced from 23,160 KLD to 22,872 KLD.

Recommendations of the Committee

2.9.9 In view of the foregoing and after detailed deliberations, the committee recommended for amendment in EC dated 26/08/2014, subsequent validity extension dated 06/08/2021 and EC transfer dated 16/12/2021 as mentioned at para 2.9.5 and 2.9.6 above. All other terms and conditions of the EC dated 26/08/2014, 06/08/2021 and 16/12/2021 shall remainthe same.

2.10 Expansion of Pulp production capacity from 1,75,000 TPA to 2,27,500 TPA (500 TPD to 650 TPD) by modernization and debottlenecking the process by **M/s. International Paper APPM Limited** located at Sreeram Nagar, Rajahmundry, **East Godavari District, Andhra Pradesh.** [Online Proposal No. IA/AP/IND/255479/2022; File No. J- 11011/410/2010-IA.II(I)] – **Extension of Validity of Environment Clearance – regarding.**

2.10.1 M/s. Andhra Paper Limited (Formerly International Paper APPM Ltd.) has made an online application vide proposal no IA/AP/IND/255479/2022 dated 08/02/2022 along with Form-6 and sought for Extension of validity of Environment Clearance (EC) accorded by Ministry vide letter no. J-11011/410/2010-IA.II(I) dated 06/03/2014 and subsequent amendment dated 12/12/2014.

Details submitted by Project proponent

2.10.2 The project was granted Environmental Clearance vide letter no J-11011/410/2010-IA.II(I) dated 06/03/2014 from MoEF&CC in the name of M/s. Andhra Pradesh Paper Mills Limited. Subsequently, the EC was transferred in the name of M/s. International Paper APPM Ltd vide MoEF&CC letter dated 26/08/2014. Thereafter, amendment in EC was granted vide letter of even no. dated 12/12/2014 in the name of M/s. International Paper APPM Ltd.

2.10.3 The unit obtained consent to establish (CTE) vide order no. APPCB/VSP/KKD/361/CFE/HO/2012 dated 20/10/2014. Subsequently, extension of validity of CTE was obtained vide order no. 361/APPCB/CFE/RO-KKD/HO/2012 dated 14/12/2021 valid till 20/10/2024 and CTO vide order no. APPCB/VSP/RJY/361/CFO/HO/2018 dated 02/04/2018 valid till 30/06/2023.

2.10.4 The implementation status of the existing EC is as follows:

S. No	Products	As per EC dated 06/03/2014 and amendment dated 12/12/2014	As per CFO dated 02/04/2018	Balance Quantity
1	Pulp (TPA)	2,27,500	2,00,000	27,500
2	Paper (TPA)	2,07,550	2,07,550	--
3	Captive Power (MW)	46	46	--
Note: Balance quantity of Pulp with respective to 2014 EC i.e.27,500 TPA yet to be implemented, for that M/s. Andhra Paper Limited (Formerly International Paper APPM Ltd) is seeking EC validity extension.				

2.10.5 **Reasons for delay in implementation of the project:**
The proponent has submitted that after obtaining the Environmental Clearance, part of the facilities has been implemented. PP could not go ahead with the balance implementation due to change in Management and Covid-19 Pandemic.

2.10.6 PP has further submitted that the unimplemented portion of Environment Clearance will be implemented by 15/02/2025 as per the implementation schedule submitted along-with Form 6. Therefore, the proponent has requested for extension of validity of EC dated 06/03/2014 and amendment dated 12/12/2014 up to 05/03/2025.

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

i. PP has given assurance for seeking change name of EC dated 06/03/2014 from M/s. International Paper APPM Ltd.to M/s. Andhra Paper Limited after extension of validity of EC.

Observations of the Committee

2.10.8 The Committee noted the following:

i. Original EC is accorded by the Ministry vide letter no J-11011/410/2010-IA.II(I) dated 06/03/2014 in the name of M/s. Andhra Pradesh Paper Mills Limited. Subsequently, the EC was transferred in the name of M/s. International Paper APPM Ltd vide MoEF&CC letter dated 26/08/2014. Further, amendment in EC was granted vide letter of even no. dated 12/12/2014 in the name of M/s. International Paper APPM Ltd.
ii. Validity of EC will expire on 05/3/2022 according to the provision contained in the MoEF&CC notification dated 18/01/2021.
iii. PP in the instant proposal requested for extension of validity of environment clearance dated 06/03/2014 for a further period of 3 years i.e. up to 05/03/2025.
iv. EAC noted that as per EC dated 06/03/2014 has completed most of facilities and only Pulp facility for 27,500 TPA is pending for implementation as mentioned at para 2.10.4 above.
v. PP has provided the schedule for implementation of the unimplemented facility of pulp. As per the time schedule, the project will be implemented by February, 2025.
vi. PP has given written assurance to change the name in EC dated 06/03/2014 from M/s. International Paper APPM Ltd. to M/s Andhra Papers Limited after extension of validity of EC.

Recommendations of the Committee

2.10.9 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 05/03/2022, i.e., from 06/03/2022 to 05/03/2025 subject to stipulation of environmental safeguards prescribed in the EC dated 06/03/2014, EC transfer dated 26/08/2014 and amendment dated 12/12/2014.

2.11 Expansion of existing pig iron manufacturing industry consisting of 262 m^3 blast furnace, 33 m^2 sinter plant and 6 MW blast furnace off gas power plant by installation of 0.30 MTPA steel, 0.32 MTPA Rolling Mill, 0.12 MTPA coke oven plant, 9 MW coke oven off gas-based power plant, 120 TPD oxygen plant and Producer Gas Plant by **M/s SLR Metaliks Ltd.** located at village Narayanadeverakere, Taluka Hagaribommanahalli **District Bellary, Karnataka.** [Online Proposal No. IA/KA/IND/24422/2013; File No. J-11011/257/2013- IA II(I)] – **Extension of Validity of Environment Clearance – regarding.**

2.11.1 M/s. SLR Metaliks Limited has made an online application vide proposal no. IA/KA/IND/24422/2013 dated 09/03/2022 along with Form-6 and sought for Extension of validity of Environment Clearance (EC) accorded by Ministry vide letter no. J-11011/257/2013-IA.II(I) dated 31/03/2015 and subsequent amendment dated 09/03/2016.

Details submitted by Project proponent

2.11.2 The existing project (0.3MTPA Steel plant,0.32MTPA Rolling mill,0.12MTPA Coke Oven plant, 9MW Coke oven off gas based power plant, 120TPD oxygen plant, 10TPH Pulverized coal injection (PCI) plant and 5,500 Nm^3/hr Producer Gas plant) was accorded Environmental clearance vide letter no J-11011/257/2013-IA II (I) dated 31/03/2015 with amendment dated 09/03/2016. The chronology of EC granted from the Ministry as per the following details:

S No	EC details	Project Facilities

1	J-11011/766/2008-IA II (I) dated 30/08/2010	1) 262 m^3Blast Furnace with 2,00,000 TPA capacity 2) 33 m^2 Sinter Plant (3,31,000 TPA) and 3) 6 MW Blast Furnace off gas based power plant
2	J-11011/257/2013-IA II (I) dated 31/03/2015	1) 0.3 MTPA Steel Plant, 2) 0.32 MTPA Rolling Mill, 3) 0.12MTPA Coke Oven Plant 4) 9.0 MW Coke Oven Off Gas Based Power Plant, 5) 120 TPD Air Separation (Oxygen) Plant, 6) 10 TPH Pulverized Coal Injection and 7) 15000NM^3/hr Producer Gas Plant
3	Amendment to EC vide no J-11011/257/2013-IA II (I) dated 09/03/2016	1) Change of fuel in 1x6MW Captive power plant from BF gas to Coal (31TPH boiler) 2) Change of fuel in Reheating furnace of Rolling mill from FO to BFgas 3) Reduction in capacity of Producer gas plant from 15000 to 5500Nm^3/hr

2.11.3 The unit obtained CTE/CTO as per following details:

EC Details	**CTE Details**	**Latest CTO Details**	**Permitted Production as per CTO**
EC J-11011/766/2008-IA II (I) dated 30/08/2010	No. 14/KSPCB/SEO/ MINES/CFE/2011-12/139 dated 27/05/2011	AW-302794 dated 06/06/2017 valid upto 30/06/2022.	1) Billets – 25000 MT/month 2) Crushed mineral ore, stone, slag products – 144000 MT/month 3) Pig iron – 16667 MT/month 4) Power generation – 6 MWH 5) Pulversied coal – 7000 MT/month 6) Rolled steel products – 26667 MT/month 7) Sinter – 27583 MT/month
EC for Expansion J-11011/257/2013-IA II (I) dated 31/03/2015	No. 11/KSPCB/SEO/ MINES/CFE/2015-16/156, dated 08/05/2015		
Amendment to EC J-11011/257/2013-IA.II (I) dated 09/03/2016	Amendment to Consent for Establishment (CFE) vide KSPCB/SEO/ MINES/2016-17/4904, dated 23/11/2016		

2.11.4 The implementation status of the existing EC's is as follows:

Sl. No.	**EC no and date**	**Projects**	**Status of implementation**
1	J-11011/766/2008-IA II (I) dtd August 30th,2010	1) Blast Furnace 262 m3 with 2,00,000 TPA capacity,	Implemented and in operation
		2) Sinter Plant 33 m2 (3,31,000 TPA)	Implemented and in operation
		3) Captive power plant 6 MW Blast Furnace off gas based	Implemented and in operation
2	J-11011/257/2013-IA II (I) dated 31/03/2015	1) Steel Plant, 3.0 Lakh TPA	Implemented and in operation
		2) Rolling Mill 3.2 Lakh TPA	Implemented and in operation
		3) Coke Oven Plant 1.2 Lakh TPA	Yet to be implemented
		4) Coke Oven Off Gas Based Power	Yet to be implemented

Sl. No.	EC no and date	Projects	Status of implementation
		Plant 9.0 MW	
		5) Air Separation (Oxygen) Plant,120 TPD	Implemented by M/s Inox on lease basis and in operation
		6) Pulverized Coal Injection 10 TPH	Implemented and in operation
		7) Producer Gas Plant 5000NM^3/hr	Yet to be implemented
3	Amendment to EC vide no J-11011/257/2013-IA II (I) dated 09/03/2016	1) Change of fuel in 1x6MW Captive power plant from BF gas to Coal (31TPH boiler)	Under construction
		2) Change of fuel in Reheating furnace of Rolling mill from FO to BF gas	In operation
		3) Reduction in capacity of Producer gas plant from 15000 to 5500 Nm^3/Hr	Yet to be implemented

2.11.5 **Reasons for delay in implementation of the project:**

The proponent has submitted the following reasons for delay of project:

1. Financial constraints
2. COVID / Pandemic restrictions
3. High variation in price of thermal or steam coal
4. Stabilization period of the other steel making facilities

2.11.6 PP has further submitted that the unimplemented portion of Environment Clearance will be implemented as per the implementation schedule submitted along-with Form 6. Therefore, the proponent has requested for extension of validity of EC dated 31/03/2015[withsubsequent amendment dated 09/03/2016] up to 30/03/2025.

Observations of the Committee

2.11.7 The Committee noted the following:

i. The existing project was accorded Environmental clearance vide letter no J-11011/257/2013-IA II (I) dated 31/03/2015 with amendment dated 09/03/2016 for 0.3 MTPA Steel plant, 0.32 MTPA for Rolling mill, 0.12 MTPA Coke Oven plant, 9MW Coke oven off gas-based power plant, 120TPD oxygen plant, 10TPH Pulverised coal injection (PCI) plant and 5,500 Nm^3/hr Producer Gas plant)located at village Narayanadeverakere, Taluka Hagaribommanahalli District Bellary, Karnataka.

ii. Validity of EC will expire on 30/03/2022.

iii. PP in the instant proposal requested for extension of validity of environment clearance dated 31/03/2015 for further a period of 3 years i.e. up to 30/03/2025.

iv. PP reported that the complete project implementation got delayed due to financial constraints, COVID / Pandemic restrictions, High variation in price of thermal or steam coal.

v. The extent of the work completed and the balance work is mentioned at para 2.11.4 above. PP has submitted a time schedule for the same the unimplemented work. As per the time schedule, the project is set to be implemented by February, 2025.

Recommendations of the Committee

2.11.8 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 30/03/2022, i.e., from 31/03/2022 to 30/03/2025 subject to stipulation of environmental safeguards prescribed in the EC dated 31/03/2015 and amendment letter dated 09/03/2016.

2.12 Pellet Plant (1.0 MTPA) with Upstream Slime Beneficiation facilitates at Iron Ore Complex (IOC) Dalli -Rajhara, **District-Balod, Chhattisgarh** of **M/s Steel Authority of India Ltd** (19ha). [Online Proposal No. IA/CG/IND/259322/2022; File No. J-11015/437/2012-IA.II(M)] – **Extension of Validity of Environment Clearance – regarding.**

2.12.1 M/s. Steel Authority of India Limited has made an online application vide proposal no. IA/CG/MIN/253108/2022 dated 25/01/2022 along with Form-6 and sought for Extension of validity of Environment Clearance (EC) accorded by Ministry vide letter no. J-11015/437/2012-IA.II(I) dated 17/04/2015.

Details submitted by Project proponent

2.12.2 The project was granted Environmental Clearance vide letter no J-11015/437/2012-IA.II(I) dated 17/04/2015 from MoEF&CC in the name of M/s. Steel Authority of India Limited for Pellet Plant (1.0 MTPA) with Upstream Slime Beneficiation facilitates at Iron Ore Complex (IOC) Dalli - Rajhara, District-Balod, Chhattisgarh.

2.12.3 The unit obtained consent to establish (CTE) vide order no. 429/TS/CECB/2016 dated 21/04/2016. The latest CTO was obtained vide order no. 6744/TS/CECB/2021 dated 20/12/2021 valid till 31/10/2023 for 0.6 MTPA Slime Beneficiation Plant.

2.12.4 The implementation status of the existing EC is as follows:

S. No	Products	As per EC dated 17/04/2015	As per CTO dated 20/12/2021	Status
1	Pellet Plant	1 MTPA	-	Not Implemented
2	Slime Beneficiation facilities	1 MTPA Upstream Slime Beneficiation facilities	0.6 MTPA Slime Beneficiation Plant	0.6 MTPA Implemented and operational

2.12.5 **Reasons for delay in implementation of the project:**

Bhilai Steel Plant has made two attempts for setting up of pellet plant on turnkey mode in year 2015 and 2017. The lowest bidder in first tender was consortium of M/s MECON Limited, M/s Stemcor India Limited and M/s Stemcor MESA DMCC, Dubai at an evaluated price of Rs. 556.02 crore but the same was not materialized due to formation of new consortium by M/s MECON Limited. The tender of the setting up of pellet plant was again

floated in year April' 2017 wherein 5 bidders were participated in tender but the same was cancelled due to depressed financial condition of the company.
In the meanwhile, due to stretched financial condition of company and to establish the technology of slime beneficiation to production level, it was decided to set up a slime beneficiation unit (package-1). The input feed of Fe 55% to 57% and silica upto 12% is being beneficiated upto 63.5% Fe and silica percentage less than 4% with a yield of 57%-60%. This plant is successfully operating since Nov'19. The pelletability of beneficiated iron ore product of slime beneficiation unit is also established to production level by converting the same in the pilot scale test performed at pellet manufacturer.

2.12.6 **Need of the Project:**
PP has submitted that setting up of Slime beneficiation plant along with Pellet Plant shall facilitate utilization of low grade iron ore accumulated in form of tailing in tailing dam resulting in mineral conservation and reducing environment hazards. It shall also help in partially bridging the demand-supply gap of iron ore requirement for Bhilai Steel Plant. Charging of pellets in Blast Furnaces of BSP shall enable better operation of the furnaces, which will be reflected in lower coke rate, higher productivity and improved hot metal quality. Further, to produce hot metal of 7.0 MTPA in Bhilai Steel Plant, the requirement of Iron Ore shall be 12.0 million tonne. The remaining iron ore reserve in the other leases of SAIL in Chhattisgarh (Dalli Rajhara group) is approx. 70 million tonne in which 50 million tonne is mineable. The iron ore in these leases have higher silica and alumina content (both add up to 11%). The present rate of supply of iron ore reserve is 8.0 million tonne per annum from leases of Dalli Rajhara. In this circumstances, supply of pellet @1 MTPA shall help to some extant to sustain the hot metal production level of 7.0 MTPA as well as utilization of low grade iron ore slime which shall help in reducing the environment degradation and also serve the purpose of mineral conservation. In view of shortage of iron ore in form of lumps & fines and to effectively utilize the available ore resources, Bhilai Steel Plant has again floated a tender for setting up of pellet plant on BOO basis on 02/01/2022. The envisaged construction period is 2 years from the date of award of contract.

2.12.7 The unimplemented portion of Environment Clearance will be implemented as per the implementation schedule submitted along-with Form 6. Therefore, the proponent has requested for extension of validity of EC dated 17/04/2015 by another 3 years i.e. upto 16/04/2025.

Observations of the Committee

2.12.8 The Committee noted the following:

i. The project was granted Environmental Clearance vide letter no J-11015/437/2012-IA.II(I) dated 17/04/2015 from MoEF&CC in the name of M/s. Steel Authority of India Limited for Pellet Plant (1.0 MTPA) with Upstream Slime Beneficiation facilitates at Iron Ore Complex (IOC) Dalli - Rajhara, District-Balod, Chhattisgarh.
ii. Validity of EC will expire on 16/04/2022.
iii. PP in the instant proposal requested for extension of validity of environment clearance dated 17/04/2015 for further a period of 3 years from 17/04/2022 i.e. up to 16/04/2025.
iv. Plant got delayed due to stretched financial condition of company.
v. The extent of the work completed and the balance work is as mentioned at para 2.12.4 above. PP has submitted a Bar Chart for the for completion of unimplemented work. As per the time schedule, the project will be implemented by May, 2024.

Recommendations of the Committee

2.12.9 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 16/04/2022, i.e., from 17/04/2022 to 16/04/2025 subject to stipulation of environmental safeguards prescribed in the EC dated 17/04/2015.

23rd March, 2022

2.12a. Expansion of Aluminum Smelter production capacity from 5.75 LTPA to 10.85 LTPA by **M/s. Bharat Aluminum Company Limited (BALCO)** located at Risda Village, Korba Tehsil, **Korba District, Chhattisgarh.** [Online Proposal No. IA/CG/IND/2536/2007, File No. J-11011/123/2007-IA.II(I)] – **Reconsideration for Environment Clearance based on ADS reply – regarding.**

2.12a.1 M/s. Bharat Aluminium Company Limited (BALCO) has made an online application vide proposal no. IA/CG/IND/2536/2007 dated 20/09/2021 along with copy of EIA/EMP report, Form-2, certified EC Compliance report and subsequent ADS reply dated 10/10/2021 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 (a) Metallurgical industries (Ferrous & non-ferrous) under Category "A" of the schedule of the EIA notification, 2006 and appraised at Central level.

2.12a.2 The above-mentioned proposal was considered by the Re-constituted EAC (Industry-I) in its 45th meeting held on 28-29th September, 2021 and further reconsidered in its 47th meeting held on 28th – 29th October, 2021 wherein EAC has recommended the proposal for grant of Environment Clearance. Subsequently, the proposal was referred back to the EAC by the Ministry with a request to address the environment impacts occurred due to the following non-compliances and the remedial measures undertaken by the proponent on account of the said environment impacts.

i. Fluoride consumption level was exceeding the permissible norms of 10 Kg/ per ton of Aluminium production
ii. Utilization of Spent Pot Lining waste
iii. Utilization of legacy ash stocks

2.12a.3 In this regard, additional information has been sought from the proponent and the same was submitted by the proponent on 8/12/2021 through PARIVESH. The submissions made by the proponent are summarized as below:

- There is no impact observed on the environment as PP has taken requisite precautionary and remedial measures from time to time. Regular monitoring of air, water and soil quality is being carried out and the report is being submitted to OSPCB, CPCB and MoEF&CC periodically.
- Fume treatment Plants with dry scrubbers have been installed in Pot rooms and Bake Ovens for fluoride absorption and alumina enrichment. Dry scrubbing efficiency is more than 99%.
- Real Time monitoring of Fluoride emissions is being done through CEMS. The fluoride emissions from the Fume Treatment Plant stacks are being maintained well within the stipulated norms i.e., less than 0.65 mg/Nm^3 and reports confirming the same are being submitted to CECB monthly and to the Regional Office of the Ministry every six months.

<table>
<tr><th>S No</th><th>ADS Point</th><th>Reply/ Response of PP</th></tr>
<tr><td>1.</td><td>Impact of fluoride on environment and remedial measures.</td><td>
• Fluoride consumption has been reduced from 14.53 Kg/MT (2009) to 12.06 Kg/MT (2021).
• The fluoride goes to the environment through stack emissions and fugitive emissions and the rest of the fluoride goes to SPL and gets recycled the bath material from time to time.
• The SPL waste is stored in concrete floor sheds and SLF. The bath materials are kept in Bag and stored in covered shed for use in recycling process.

Preventive Measures to Control Fluoride Emission to Environment:
• Installation of FTP system with dry scrubber in Pot lines and bake ovens for fluoride absorption& enrichment of Alumina.
• The trend of fugitive fluoride which goes out of the Pot line is produced below, however, fugitive fluoride is a volume source emission in which most of the emissions are contained inside the plant premises and very less amount of fluoride goes to the environment.
• However, the fluoride which falls in plant premises is collected through drains and treated through ETP having adequate capacity and being controlled through RO technology.
• Zero Discharge is maintained.

Monitoring and Results:
As mentioned above, measures of the emission from the stack is well within the limit though there is high consumption of fluoride (>10 kg/MT).
From last 8 years monitoring results it is observed that:
<table>
<tr><th>S No</th><th>Parameter</th><th>Medium</th><th>Location</th><th>Range</th></tr>
<tr><td>1.</td><td>Fluoride</td><td>Air</td><td>Bake oven stack</td><td>0.04-0.47 mg/NM^3</td></tr>
<tr><td>2.</td><td>Fluoride</td><td>Air</td><td>Pot line stack</td><td>0.2-0.5 mg/NM^3</td></tr>
<tr><td>3.</td><td>Fluoride</td><td>Water</td><td>Surface Water</td><td>0.14-1.2 mg/lit</td></tr>
<tr><td>4.</td><td>Fluoride</td><td>Water</td><td>Ground water</td><td>0.1-0.85 mg/lit</td></tr>
<tr><td>5.</td><td>Fluoride</td><td>Soil</td><td>Around Plant</td><td>15.6-30.4 mg/kg</td></tr>
</table>
From above monitoring values it is found that there is no impact to the environment as values are well within the limit as prescribed.
</td></tr>
<tr><td>2.</td><td>Impact of spent pot lining wasteson environment and remedial measures.</td><td>
• Two secured landfills of 10,500 MT, 54000 MT capacity are constructed for the storage/ disposal of SPL / HW as per authorization.
• SPL generation including refractory portion is around 10,000 MTPA.
• Currently around 45000 MT SPL Carbon portion is stored in SLF and around 30000 MT refractory portion is stored
</td></tr>
</table>

<table>
<tr><th>S No</th><th>ADS Point</th><th>Reply/ Response of PP</th></tr>
<tr><td></td><td></td><td>on concrete floor in covered sheds.

Control Measures Taken for Impact due to SPL:
• Double liner SLF as per CPCB guidelines have been commissioned and in operation as per approval of CECB. SLF-1 – 10,500 MT capacity and SLF-2 – 54,000 MT capacity.
• Primary and secondary leachate collection pits have been constructed for collection of leachate from the SLF if any which is directed to HDPE lined Solar Pond for evaporation of the leachate. The residue generated if any is disposed in SLF.
• The SLF is covered during rainy season to prevent/reduce leachate generation.
• The refractory portion is being stored on concrete floor in covered shed for further utilization/ disposal as per CPCB SOP.
• Central Pollution Control Board (CPCB) has developed SOP for SPL detoxification, accordingly the SPL generated from our smelters is being disposed off to authorized agencies for detoxification which is further sent to Cement/steel plants.
• Disposed around 53000 MT of SPL to authorized detoxifiers till Nov’21.
• Agreements in place for disposal of complete SPL including stored in SLF by Dec’22.

Monitoring and Results:
Four piezometers are installed around the SLF and regular monitoring is being carried out.
<table>
<tr><th>Sl. No.</th><th>Parameter</th><th>Results</th><th>Limit</th><th>Remarks</th></tr>
<tr><td>1.</td><td>Fluoride in Piezo metric bore well</td><td>0.8 – 1.65 mg/lit</td><td>2 mg/lit</td><td>Four piezometers are installed around the SLF</td></tr>
<tr><td>2.</td><td>Fluoride in Soil around SLF</td><td>15.6 – 30.4 mg/kg</td><td>NA</td><td>-</td></tr>
</table>
</td></tr>
<tr><td>3.</td><td>Impact of legacy ash stocks on environment and remedial measures.</td><td>• Present average ash generation - 3MT /Annum and 100 % ash utilization from last 3 years and for this year.
• Out of 7 ash dykes, 3 are already reclaimed and legacy ash has been brought down from around 13 to 7 MT.
Control Measures Taken for Impact due to Legacy Ash Stocks:
• Ash dykes are constructed on abandoned lined red mud ponds, no new land is acquired.
• The Dykes are designed by Dyke Experts (Dr. Dayal,</td></tr>
</table>

<table>
<tr><th>S No</th><th>ADS Point</th><th>Reply/ Response of PP</th></tr>
<tr><td></td><td></td><td>Retired Prof. from IIT, Kanpur and Dr. Patra, Prof. NIT, Rourkela) and they also visit the site periodically to verify the stability issues and guide on the action required, if any.
• PP has adopted High Concentration Slurry Disposal System (HCSD) to dispose ash at dykes which is an environment friendly methodology for ash disposal.
• Dust suppression measures - Stationary sprinklers provided on dyke surface. Also, mobile sprinkling system through tankers in place. Ash trucks are moisturized covered with tarpaulin before leaving dykes.
• Decantation system is provided to collect the decanted water which is recycled back for ash slurry making.

Monitoring and Results:
Regular monitoring of Water and Soil quality is being carried out around Ash Dykes.
<table>
<tr><th>S No</th><th>Parameter</th><th>Results</th><th>Limit</th></tr>
<tr><td>1.</td><td>Fluoride in Surface Water</td><td>0.14 – 1.2 mg/lit</td><td>-</td></tr>
<tr><td>2.</td><td>Fluoride in Ground Water</td><td>0.1 – 0.85 mg/lit</td><td>1.5 mg/lit</td></tr>
<tr><td>3.</td><td>Heavy Metals in GW
Arsenic (As)
Mercury (Hg)</td><td>
<0.01 mg/lt
<0.001 mg/lt</td><td>
0.01 mg/lt
0.001 mg/lt</td></tr>
</table>
</td></tr>
</table>

2.12a.4 Based on the ADS reply, the proposal is reconsidered in the 49th meeting of the Re-constituted EAC (Industry-I) held on 16-17th December, 2021. The observations and recommendation are given as below.

Observations of the Committee held on 16-17th December, 2021

2.12a.5 The EAC noted the following:

i. The proposal was earlier considered and recommended by the EAC in its meeting held on 28-29th October, 2021. Subsequently, the said proposal was referred back to EAC by the Ministry for examining the environment impacts occurred due to the following non-compliances and the remedial measures undertaken by the proponent on account of the said environment impacts:

- Fluoride consumption level was exceeding the permissible norms of 10 Kg/ per ton of Aluminium production
- Utilization of Spent Pot Lining waste
- Utilization of legacy ash stocks

ii. On perusal of the information submitted, PP claimed that there was no impact of all above non compliances on the environment. However, EAC was not convinced with the data furnished by the proponent and sought for a detailed report by competent agency on analysis of the data for past ten years and submit detailed recommendations on impact and mitigation measures to be taken by PP to remediate the adverse impacts occurred due to excess consumption of Fluoride, storing and

not reusing the SPL waste as per CREP recommendations and Storage and non-utilization of Fly Ash as per Fly Ash management and Handling Rules.

iii. As per the Fluoride balance diagram, there is a differential (unaccounted) emission of 0.15 kg/ton is reflected. In view of this, in the report to be submitted through Competent Agency, year wise fluoride data analysis shall be carried out for last ten years and the fluoride balance calculations needs to be submitted. The final result shall be submitted in the following format:

Year details	Fluoride in FEED for corresponding period	Fluoride consumption in the process	Fluoride Contents in SPL/Refractory	Fluoride Emissions	Gap if any

Note: All calculations shall be for per ton of production.
Stack emissions for fluoride & Forage fluoride data shall be submitted.

iv. With respect to SPL waste (carbonaceous and refractory part) and legacy ash stock, PP shall furnish the year wise generation and utilization data.

Recommendations of the Committee held on 16-17th December, 2021

2.12a.6 In view of the foregoing and after detailed deliberations, the committee recommended to defer the proposal and sought additional information on the points referred at para no. 2.12.5 above.

2.12a.7 Accordingly, additional information has been sought from the proponent and the same was submitted by the proponent on 06/03/2022 through PARIVESH. The submissions made by the proponent are summarized as below:

ADS point 1:
A detailed report by competent agency on analysis of the data for past ten years and submit detailed recommendations on impact and mitigation measures to be taken by PP to remediate the adverse impacts occurred due to excess consumption of Fluoride, storing and not reusing the SPL waste as per CREP recommendations and Storage and non-utilization of Fly Ash as per Fly Ash management and Handling Rules.

Reply by PP:
M/s. BALCO engaged to IIT, Kanpur as the competent agency to analyze the data and conduct the study on impact and mitigation measures due to excess consumption of fluoride, storing of SPL and non-utilization of fly ash. Report is submitted to the Ministry. Following conclusion and recommendation are made by IIT, Kanpur after study for further improve related environmental quality in the area:

Conclusions by IIT Kanpur:

i. All the past data/information received from BALCO have been analyzed through various modelling and trend analyses procedures. There are statistically significant decreasing trends in fluoride consumption, SPL generation, fluoride uptake by forage, and fluoride emissions. The parameter which had specified limits were found within the limits.

ii. The fluoride level in ground and surface waters was less than the BIS drinking water standard of 1.5 mg/L. Heavy metals in ground and surface waters were below the detection levels both in surface and ground waters.
iii. SPL management and disposal is through its detoxification and utilization as fuel in other industries.
iv. The fume collection and treatment system has very high efficiency of 99.7 – 99.8 percent.
v. Fly ash utilization is 100 percent and utilization of legacy ash is under progress.
vi. The stack and ambient environment samplings and chemical analyses (undertaken by IIT Kanpur) result generally match with current data/results of BALCO, indicating BALCO results are representative of actual emissions and environmental quality.
vii. Based on accumulated fluoride in soil, the modelled fluoride maximum un-attenuated uptake would be 8.76 ppm in the forage. The modelling suggests that forage concentration modelled and reported are of the same order. Based on the modelling, it can be concluded that vegetation concentration is not likely to exceed 40 ppm (MoEFCC Standard, 2006) even during critical periods of the year and with the proposed expansion in production.

Recommendations by IIT Kanpur:
The IIT, Kanpur made recommendations to further improve fluoride related environmental quality in the area and to have a long-term environmentally sustainable operation of the plant.

i. Detoxify the stored SPL and utilize (value recovery or other means) in a time-bound manner.
ii. Enhance the utilization of legacy fly ash in a time-bound manner in line with new notification 31/12/2021.
iii. The area of sampling and analysis of fluoride in soil and forage should extend up to 10 kilometers radius of plant premises covering upwind and downwind directions. Further, fluoride sampling and analysis should be taken quarterly at the nearest irrigated lands growing crops, vegetables, and other products of human consumption.
iv. The major emissions are from the pot room roof. The sampling frequency should be increased, and sampling is done at multiple locations. The laser-based advance technology to be followed to continuously monitor gaseous fluoride emissions from pot rooms on real time basis.
v. The BALCO should continuously explore advanced technologies, operations, and quality of raw material to further reduce the fresh fluoride intake (less than 10 kg/t of Al) and emissions.

ADS point 2:
As per the Fluoride balance diagram, there is a differential (unaccounted) emission of 0.15 kg/ton is reflected. In view of this, in the report to be submitted through Competent Agency, year wise fluoride data analysis shall be carried out for last ten years and the fluoride balance calculations needs to be submitted.

Reply of PP:

Table: Summary of fluoride balance in the plant*

Year details	Fluoride in FEED for corresponding period (kg/t)	Fluoride consumption in the process (kg/t)	Fluoride Contents in SPL/ Refractory (kg/t)	Fluoride Emissions (kg/t)			Total Fluoride Emission (kg/t)	Gap if any
				Fugitive	PL Stock	BO Stock		
2011-12	14.88	0	14.449	0.36	0.07	0.001	0.431	No
2012-13	13.64	0	13.209	0.36	0.07	0.001	0.431	No
2013-14	12.40	0	12.069	0.26	0.07	0.001	0.331	No
2014-15	10.76	0	10.409	0.26	0.09	0.001	0.351	No
2015-16	11.98	0	11.629	0.25	0.10	0.001	0.51	No
2016-17	12.09	0	11.849	0.18	0.06	0.001	0.241	No
2017-18	13.02	0	12.809	0.17	0.04	0.001	0.211	No
2018-19	12.12	0	11.969	0.11	0.04	0.001	0.151	No
2019-20	12.34	0	12.149	0.15	0.04	0.001	0.191	No
2020-21	12.07	0	11.859	0.16	0.05	0.001	0.211	No
Average	**12.53**	**0**	**12.239**	**0.23**	**0.06**	**0.001**	**0.291**	**No**

**With a continuous recycled fluoride at 20 kg/t (approx.)*

ADS point 3:

With respect to SPL waste (carbonaceous and refractory part) and legacy ash stock, PP shall furnish the year wise generation and utilization data.

Reply of PP:

Table: SPL (carbon & refractory) generation, storage and disposal (tons)

SPL GENERATION AND UTILIZATION				
FY	SPL Carbon Portion		SPL Refractory Portion	
	Generation (MT)	Utilization (MT)	Generation (MT)	Utilization (MT)
2011-12	7,998	6,055	1,891	Kept in covered shed on concrete floor.
2012-13	6,075	-	2,381	
2013-14	4,760	-	1,904	
2014-15	6,460	-	2,907	
2015-16	5,170	-	2,326	
2016-17	11,507	625	6,099	
2017-18	8,670	506	3,988	
2018-19	6,915	2,628	3,596	
2019-20	5,130	3,224	2,770	
2020-21	4,320	14,755	3,600	
2021-22 (YTD till Feb-22)	4340	16,375	3,200	

2.12a.8 Meanwhile, the Ministry was in receipt of a public representation on 15/12/2021, 12/01/2022 and 07/02/2022. PP submitted their reply on 11/03/2022 on PARIVESH portal of Ministry. Pointwise reply of public representations is given as below:

S No	Points of public representation	Response by PP
1	During 45th EAC meeting held on 28 -29th September 2021, it was observed by the committee that BALCO has put up expansion proposal without solving the Environment and social issues. EAC has clearly written on serial no 45.11.22 (xiv) as: PH related issues raised are; a. 100 m green belt between 1200 MW TPP and Shantinagar has not been developed. Land is yet to be acquired. Houses are 20-50 m away from plant boundary. Rehabilitation is also included. b. 90% employment to locals is yet to be provided as per CG government Rules. c. Pending issues related to compensation are yet to be resolved. d. Fugitive emissions from abandoned Red Mud Pond and ash pond are not controlled. e. Settlement of acquired land is pending. f. 98 Acre land was acquired for expansion earlier. R&R not settled. Similarly, matters related to observations under serial number 45.11.22- xiv, xv, xvi, xvii, xviii, xix, xx, xxi, xxii, xxiii are also pending. EAC had asked BALCO to prepare point wise response of above points.	Company has been submitted the action plan addressing all environment and social issues during the presentation before EAC on 29/09/2021, submission of response to ADS vide letter BALCO/HSE/Env/A02(A)/2021/251 dated 10/10/2021 and subsequent presentation 28/10/2021. Based on the aforesaid presentation and submission the committee cleared the proposal vide MOM dated 09/11/2021 and recommended for grant of EC.
2	After this, 47th EAC meeting was held on 28- 29th October 2021, BALCO has not presented the point wise response of the serial number 45.11.22- xiv, xv, xvi, xvii, xviii, xix, xx, xxi, xxii, xxiii and has hidden the same from the Committee giving responses to other points. From the above it was clear that Company has not put all the information before EAC but submitted response for few observations so that Company is able to get EC. An inspection should be conducted under guidance by Ministry of Environment and Forest and the EC should be stopped on immediate basis.	The allegations are baseless. The complainant has mentioned wrong serial number to mislead the Committee. Correct serial number is 45.11.20 which are the observations made by the Committee. 45th Re-constituted Expert Appraisal Committee was held on 28-29th September, 2021. As per the agenda number 45.11, EAC has sought additional information in serial number 45.11.21 (from i to xviii). Company has accordingly responded to the ADS vide letter number BALCO/HSE/Env/A02(A)/2021/251 dated 10/10/2021 and presented before EAC on 28/10/2021. After examining all above submissions and presentation made before EAC, the committee recommended EC vide MOM dated 09/11/2021.
3	BALCO management distributed only the compensation for land to the affected families in year 2013 after executing the sale deeds whereas the State guidelines provided that BALCO will displace the families affected by the installation of cooling tower and will provide permanent employment to the family members of each affected family in addition to	The status of various cases is given as below:

<table>
<tr><th>S No</th><th>Points of public representation</th><th>Response by PP</th></tr>
<tr><td></td><td>providing the compensation on the basis of market value whereas BALCO has only provided the compensation based on sale deeds and has not provided any money towards house etc. Affected families have filed many writs in Hon’ble Chhattisgarh High Court which are currently pending.

<table>
<tr><th>S No</th><th>Case Title</th><th>Court name & Case no</th><th>Main prayer made</th><th>Present status</th></tr>
<tr><td>1</td><td>Titiksha Social Organization &anr. Vs. Union of India &Ors.</td><td>Ld. National Green Tribunal, Central Zonal Bench, Bhopal. Original Application No.334/2014 (CZ)</td><td>To set aside / quash the permission granted by MOEF for production & operation of 1200 MW power plant &to direct Balco to rehabilitate the affected persons</td><td>Petitioner withdrew the petition vide NGT’s order dated 22/05/2015.</td></tr>
<tr><td>2</td><td>Dilendra Yadav &Ors Vs State of Chhattisgarh &ors (present Petitioner’s mother (Smt.R.Jayamma) was Petitioner no.5 in this writ petition</td><td>Hon’ble Chhattisgarh High Court W.P.(C) No.1998/2014</td><td>To direct Balco to immediately start procedure for acquisition of the land of the petitioners as per Act of 2014 and to place on record the rehabilitation plan</td><td>Petitioners withdrew the petition vide order dated 01/07/2015 of the Hon’ble High Court, without liberty.</td></tr>
<tr><td>3</td><td>R.A. Narayanan &ors Vs. Sh. N.Bajiandra Kumar, Secretary Industries & Commerce, Chhattisgarh &ors</td><td>Hon’ble Chhattisgarh High Court Contempt Case (C) No.319/2014</td><td>To initiate contempt proceedings against BALCO</td><td>The contempt application was dismissed by the Hon’ble High Court vide its direction dated 01/10/2015.</td></tr>
<tr><td>4</td><td>R.A. Narayanan &Ors. Vs. State of Chhattisgarh &Ors.</td><td>Hon’ble Chhattisgarh High Court W.P. (PIL) No.27/2013</td><td>To grant rehabilitation benefits to the residents of Shanti Nagar</td><td>PIL was dismissed as withdrawn by the Petitioner vide order dated 28/11/2013</td></tr>
<tr><td>5</td><td>R.A. Narayanan Vs. State of Chhattisgarh &Ors.</td><td>Hon’ble Chhattisgarh high Court W.P. (PIL) No.129/2017</td><td>To grant rehabilitation benefits to the residents of Shanti Nagar</td><td>PIL was disposed of by the Hon’ble High Court vide its order dated 08/05/2018 and 06/07/2018 with direction that Tripartite settlement dated 24/09/2013 will prevail.</td></tr>
</table>
</td><td></td></tr>
</table>

2.12a.9 The Ministry and EAC was in receipt of another public representation dated 22/03/2022. Point wise reply has been submitted by PP on 23/03/2022 given as below:

S No	Public representation points	Response by PP
A	Local people are being deprived from employment from BALCO management, external recruitment is being done continuously, company is involving contractors for work. Day to-day agitations being done by different organizations regarding employment and pollution. Despite this, neither the local people are being given employment by the BALCO management nor is the ash pollution being controlled, due to which local people are outraged.	Regarding employment to locals in existing facilities and proposed expansion project, it has been already clarified in the EIA as well as during the course of presentation. PP reiterate that priority is being given to local employment. Details are as under: **Existing Plant:** Executives: 64% from Chhattisgarh and 36% from other states. Workman: 99% from Chhattisgarh and 1% from other states Contract Employees: 88% from Chhattisgarh and 12% from other states. **Expansion Project:** Proposed expansion will create about 200 direct and 2800 Indirect employment opportunities in construction phase and for operation phase the manpower requirement will be around 5050 persons (direct & indirect together). PP has adopted state-of-art high concentration slurry disposal system for ash disposal to the ponds and has been utilizing more than 100% fly ash in cement manufacturing, brick manufacturing, road & construction activities and low-lying area reclamation in line with the fly ash notification. PP has taken all measures and adequate pollution control equipment's like hybrid ESP, ash silo for storage of ash, conveying of fly ash in closed circuit, adequate sprinkling system including fog canon and ensuring 100% tarpaulin cover of ash trucks before being dispatched for utilization purpose to control the pollution.
B	Without obtaining environmental clearance from the Ministry of Environment, Forest and Climate Change, construction work and dismantling work is being done by Balco Management	BALCO confirm that no construction or dismantling activities have been commenced with respect to the proposed expansion project.
C	BALCO management has constructed its 540MW Power Plant without taking permission from Town Planning Department and Municipal Corporation Korba, thus this is an illegal construction	BALCO has obtained all necessary permissions for the establishment of 540 MW Power Plant.
D	The land which is shown by Balco Management in the EIA report for capacity expansion has not been demarcated by the Revenue Department, the environment clearance should not be given without providing information about the khasra and Rakba no. of the land	The proposed expansion will be entirely established within the existing plant premises. No additional land has been acquired for the same.
E	BALCO management have been asked by the EAC committee for additional information regarding the usage of Fly Ash for past 10 years, which is presented to you by BALCO management through IT Kanpur Department	As per the recommendation from EAC, IIT Kanpur has been engaged for conducting the study. IIT Kanpur is an institution of national repute. The representation makes an allegation about the authenticity of the report prepared by the experts

S No	Public representation points	Response by PP
	of Civil Engineering report and the above given information is wrong. I will once again request the chairman of Expert Evaluation Committee and all the members to form a committee to meet with the local people and local public representatives so that real condition of the BALCO can be evaluated.	from IIT Kanpur. The allegations seem to be illogical and totally unfounded.

2.12a.10 Court case/show cause/direction related to the project under consideration are given as below:

No case is pending against the proposed expansion project. As regards the existing facility, there are cases pending in usual course of business before various Hon'ble Courts and detail of cases given as below:

- There is one litigation ongoing before Hon'ble Supreme Court of India pertaining to legacy land matter erstwhile PSU times.
- There is a matter ongoing before Hon'ble Supreme Court of India challenging NGT order in the matter of 100% fly ash utilization.
- There is a matter ongoing at Hon'ble High Court of Bilaspur pertaining to Ash Utilization / Management filed by the petitioner.

Show cause Notice:

- There were two show-cause notice received from RO CECB, Korba during FY20-21 pertaining to rain-cuts at ash dykes due heavy rainfall on the previous day, which have been closed to the satisfaction of the authorities.

Certified Compliance report from the regional Office

2.12a.11 The status of compliance of earlier EC for the Alumnium smelter plant was obtained from Integrated Regional Office (IRO), Raipur. vide letter no. 5-237/2008-(ENV)/26 dated 24/02/2021 in the name of M/s. Bharat Aluminum Company Ltd (BALCO). The Action taken report regarding the partially/non-complied condition was submitted to Regional officer MoEF&CC, Raipur (Integrated RO) vide letter no. BALCO/ENV/A-02(A)/2021/203 dated 18/08/2020. IRO, Raipur evaluated the same and has issued letter dated 09/09/2021. The details of the observations made by RO in the report dated 09/09/2021 along with its re-assessment / present status as furnished by the PP is given as below:

S No	Condition as per EC	Condition no.	Observation of RO	Reply of PP
1	Anode butts generated from the pots shall be cleaned and recycled to the Anode Plant. The spent pot lining generated from the smelter shall be properly treated in spent pot lining treatment plant to remove fluoride and cyanide and disposed off to the Cement/Steel plants and as minimum as possible to secured landfill. The location and design of the landfill site shall be approved by theca as per Hazardous Wastes (Management and Handling) Rules 1989and amended in 2003.Leachate collection facilities shall be provided to the secured landfill facility (SLF). The dross shall be recycled in the cast house. STP sludge	SC (x)	**Partially complied:** Details of leachate collection facilities. Provided for the secured land fill facility, have not been made available by the PA.	The secured Land fill site was designed by M/s. Ramky Ltd as per CPCB guidelines and the same has been constructed based on approval obtained from CEO. Secured Land fill site along with the leachate collection facility' and solar evaporation pond during the inspected on 3- 5th February, 2021 by IRO and also provided the approval document pertaining to secured landfill site However, for convenience details of Leachate collection facility along with photographs is also submitted.

S No	Condition as per EC	Condition no.	Observation of RO	Reply of PP
	shall be utilized as manure for green belt development. All the used oil and batteries shall be sold to the authorized recyclers/re-processors.			
2	The company shall comply with all the commitment made during public hearing public consultation held on the16th November, 2007. The company shall prepare the action plan for implementation of the commitments and same shall be submitted to the Ministry and its Regional Office at Raipur and Chhattisgarh Environmental Conservation Board Raipur.	SC (xvii)	**Partially complied:** The project authorities have consented to this condition however, action plan for implementation of the commitments and their present status has not been made available by the PA.	PP has submitted the response to the concerns raised during public hearing as part of final EIA report submitted to MOEF for obtaining EC. Also, action plan was made and implemented during the course of time. Company has been implementing CSR initiatives in 65 villages in and around BALCO. A glimpse of the overall CSR approach, outreach and the beneficiaries have been submitted to IRO.
3	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measured including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under Rules. 1989viz.75 dBA (daytime) and 70 dBA Night time)	GC(vi)	**Partially complied:** It was informed that equipment has been designed to ensure that noise level at plant boundary area is within the stipulated level of 85dB. Details of monitoring report are not made available during the inspection.	PP has been monitoring noise level at plant boundary and maintaining records of Ambient Noise levels as per requirement of EC condition. The Noise Monitoring report of last 3 months is submitted to your office.
4	Fluoride consumption shall be less than 10 kg/ton of Aluminium produced as specified in the CREP guidelines.	SC(v)	**Not Complied.** The PA has informed that at present Fluoride consumption is 13 kg/ton of Aluminium produced. The PA has further informed that they are putting best efforts to bring down fluoride consumption by process optimization. The PA has also informed that they have represented in the Ministry on 8.10.2014 and 3.08.2016 for seeking amendment in the condition.	Smelter is based on GAMI technology and designed for an AlF_3 consumption of 20 kg/MT of Aluminium produced. The present Fluoride consumption is 13 kg/ MT of Aluminium produced. PP is making all efforts to bring down fluoride consumption by process optimization. However, PP has presented their case trough Aluminium Association of India vide Letter no: AAI/943/GOI/2014-2015/219 dated 08/10/2014 and subsequently vide letter no Balco/Envt/A-02/2016/275 dated 03/08/2016 for suitable amendment of the condition.
5	Prior permission from the State Forest Department shall be obtained due to likely impact of transport of raw material and end product and gaseous emissions from the smelter on the surrounding reserve forests and wildlife. Recommendations regarding mitigative measures suggested by the State Forest department and Chief Wildlife Warden, Govt. of Chhattisgarh shall be strictly	SC(xviii)	**Not complied.** The PA has informed that they have applied for the prior permission from the State Forest Department on 18/11/2015. However, status of approval if any obtained from the	BALCO, Korba has required transport infrastructure with Rail & Road connection in place. For prior permission from the State Forest Department a letter has been sent to the principal Chief Conservator of Forest on 18 Nov. 2015 Vide letter No. Balco / Sm3.25LTPA / Env / 01(A) / 2015 / 380 and being followed

S No	Condition as per EC	Condition no.	Observation of RO	Reply of PP
	followed.		State Forest Department has not been made available by the PA. Further, financial details pertaining to the implementation of the Wildlife Management Plan have not been made available by the PA.	regularly.
6	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measured including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under Rules, 1989 viz.75 dBA (day time) and 70 dBA (Night time)	GC(v)	**Partially complied:** It was informed that equipment has been designed to ensure that noise level at plant boundary area is within the stipulated level of 85db(A). Details of monitoring report are not made available during the inspection.	Equipment's are designed to ensure that noise level at plant boundary area within the stipulated level of 85 dB(A)
7	The spent pot lining generated from the smelter should be utilized for cement/steel manufacturing alternatively to the disposed off in a secured landfill constructed as per the design of CPCB. The location of the landfill site should be approved by the Chhattisgarh Environment Conservation Board.	SC(vii)	**Partially Complied:** Details of leachate collection facilities, provided for the secured land fill facility have not been made available by the PA.	The secured landfill site was designed by M/s Ramky Ltd. As per CPCB guidelines and the same has been constructed based on approval obtained from CECB. Secured landfill site along with the leachate collection facility and solar evaporation pond inspected by IRO during the site inspection from 3-5th February, 2021 and also provided the approval document pertaining to secured landfill site is submitted to your office.

2.12a.12 Based on the ADS reply, the proposal is reconsidered in the 2nd meeting of the EAC (Industry-I sector) held on 22-23rd March, 2022. The observations and recommendation are given as below:

2.12a.13 During the meeting, project proponent submitted written submission on the following points:

i. M/s. BALCO has submitted commitment in form of affidavit given as below:
   a. Employment to locals in existing facilities and proposed expansion project.
   b. BALCO has adopted state-of-art high concentration slurry disposal system for ash disposal to the ponds and have been utilizing more than 100% fly ash in cement manufacturing, brick manufacturing, road & construction activities and low-lying area reclamation in line with the fly ash notification.
   c. That no construction or dismantling activities have been commenced with respect to the proposed expansion project.
   d. That BALCO has obtained all necessary permissions such as the EC and CTE for the establishment of 540 MW Power Plant.
   e. That the proposed expansion will be entirely established within the existing plant premises. No additional land has been acquired for the same.

ii. To implement laser-based roof-emission fluoride monitoring technology in order to continuously monitor gaseous fluoride emissions from pot rooms on real time basis by 31st March, 2023.
iii. PP committed for conducting decarbonisation study.
iv. PP committed for adaptation of villages.

Observations of the Committee

2.12a.14 The committee noted the following:

i. The above-mentioned proposal was considered by EAC meeting held on 28-29th September, 2021 and further reconsidered on 28th – 29th October, 2021 wherein EAC recommended the proposal for grant of Environment Clearance. Subsequently, the proposal was referred back to the EAC by the Ministry with a request to address the environment impacts occurred due to the non-compliances and the remedial measures undertaken by the proponent on account of the said environment impacts. In this PP submitted the additional information and the same was considered by the EAC in its meeting held on 16-17th December, 2021 wherein the Committee deferred the consideration of the proposal for want of additional information.
ii. Subsequently, M/s. BALCO engaged IIT Kanpur to analyze the data and conduct the study on impact and mitigation measures due to excess consumption of fluoride, storage of SPL and non-utilization of fly ash. Final report of IIT Kanpur has been submitted and details are mentioned at para no. 2.12a.7. Committee deliberated on the report of IIT Kanpur and found it satisfactory.
iii. The Committee also gone through the reply submitted by the PP on the two public representations and found it satisfactory.
iv. The additional information submitted by PP in response to the EAC observations held on 16-17th December, 2021 was found to be satisfactory.
v. The new Committee also 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 also found the baseline data and incremental GLC due to the proposed project within NAAQ standards.
vi. The new Committee also deliberated on the certified compliance report of RO and action taken report submitted by PP, reply of public representations, public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.

Recommendations of the Committee

2.12a.15 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 following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to Aluminum smelter 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 in case no. IA No.1424-1425 of 2005 filed in W.P. (C) No.202/1995 (T N Godavarman matter) in Hon'ble High Court of Chhattisgarh; Civil Appeal No. 3236/2020 (BALCO vs MoEF&CC& Others) in Hon'ble Supreme Court and Writ

Petition (PIL) 58/2020 (Dilendra Yadav vs CECB &Ors) in Hon'ble High Court of Chhattisgarh.

ii. The poly-aromatic hydrocarbons (PAH) from the carbon plant (anode bake oven) shall not exceed 2 mg/Nm^3. The data on PAH shall be monitored quarterly and report shall be submitted regularly to the Ministry/Regional Office at Raipur and CECB.
iii. Particulate fluoride emissions shall not be more than 0.65 mg/Nm^3 and fugitive particulate fluoride emissions from pot room shall not be more than 1.85 mg/Nm^3.
iv. SO_2 and NOx emissions shall be controlled by replacing Furnace Oil with Low Sulphur Heavy Stock (LSHS) within 6 months. Compliance status in this regard shall be submitted to the Regional Office of the MoEF&CC latest by 30/06/2022.
v. Project proponent shall achieve the Fluoride consumption less than 10 kg/tone of Aluminium production for the existing 5.75 LTPA Aluminium smelter by 30/04/2022 and for the proposed 5.1 LTPA expansion project right from the day of commissioning of the unit.
vi. Total water requirement for the existing and expansion project shall not exceed 4900 KLD.
vii. Present stock of SPL (48000 T) and legacy SPL stock shall be liquidated by December 2022 as committed.
viii. Refractory SPL stock of 30,000 T stored in covered shed on concrete floors shall be disposed off within 18 months from the date of approved Standard Operating Procedure (SOPs) by CPCB.
ix. Present stock of Shot Blasting Dust stored in covered shed in plant premises is 10,000 T which shall be disposed off within 18 months from the date of approved Standard Operating Procedure (SOPs) by CPCB.
x. PM levels shall be less than 30 mg/Nm^3 for all units under expansion. In case of older units, PP shall initiate retrofitting/modification action to achieve the PM emission level of 30 mg/Nm^3 by October, 2024.
xi. Leachate from Secured Land Fill (SLF) shall be collected and transferred to the solar drying ponds. During rainy season, SLF shall be covered with tarpaulin to minimize leachate generation. Regular monitoring of cyanide and fluoride in waste water shall be monitored.
xii. The company shall develop rainwater structures to harvest the run-off water for recharge of ground water as per the action plan submitted in the EIA report.
xiii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium sector shall be strictly implemented.
xiv. Legacy ash stocks of 18.2 Million tons shall be liquidated by December 2024. The vehicles carrying ash from dyke shall use tarpaulin covers. No additional ash pond shall be developed for ash disposal.
xv. Performance monitoring of pollution control equipment shall be taken up yearly and compliance status in this regard shall be reported to RO.
xvi. BALCO shall develop captive refractory detoxifying facility at project site by 31st March, 2024 as committed after obtaining requisite statutory approvals from the concerned Competent Authority.
xvii. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.

xviii. The area of sampling and analysis of fluoride in soil and forage should extend up to 10 kilometers radius of plant premises covering upwind and downwind directions. Further, fluoride sampling and analysis should be taken quarterly at the nearest irrigated lands growing crops, vegetables, and other products of human consumption.

xix. The major emissions are from the pot room roof. The sampling frequency should be increased, and sampling is done at multiple locations. The laser-based advance technology shall be in place by March, 2023 for continuously monitor gaseous fluoride emissions from pot rooms on real time basis.

xx. Wheel Washing mechanism shall be provided in entry and exit gates with complete water recirculation system

xxi. Three tier Green Belt shall be developed in a time frame of one year covering 33% of total area with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. GB action plan is given as below.

S. No.	Details	Total Area (in ha)	Existing Plantation Area (in ha)	On-Going Plantation Area (in ha)	*Action Plan: Green Cover Proposed up to FY 24 (in Ha)			Total Green Cover (in Ha)	Total Green Cover-(%)	Species Proposed
					FY 22	FY 23	FY 24			
1	Integrated Aluminium Smelter Complex	383.63	97.72	0.81	5.0	5.85	17.40	126.78	33%	Karanj, Neem, Peepal, Sal, Sarai, Arjun, Sagon, Banyan, Sisoo, Rain Tree, Gulmohar, Mahua, Kadam, etc
2	Ash Dyke	151.75	8.87	-	6	10	9.24	34.11		
3	Township Land	263.04	126.49	6.84	2	2	2	139.33		
4	Balance Other Land	301.49	20.94	7.12	10	10	15	63.06		
	Total Area	**1099.91**	**254.02**	**14.77**	**23**	**27.85**	**43.64**	**363.28**		

xxii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

B. General Conditions

I. Statutory compliance:

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

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as 4 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 labs recognized under Environment (Protection) Act, 1986.
iii. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
iv. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;
v. The project proponent shall provide wind shelter fence and chemical spraying on the raw material stock piles;
vi. Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, and cement bagging plants.
vii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
viii. Adopt measures to recover fluoride gas from electrolytic cells and recycle the same in the process.
ix. Practice use of low-Sulphur tars for baking anodes.
x. Make efforts to increase the life of pot lining through better construction and operating techniques.
xi. Design the pot roofs with louvers and roof ventilators

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 742 (E) dated 30thAugust 1990 and further amended vide G.S.R 46 (E) dated 3rd February 2006(Aluminium); S.O. 3305 (E) dated 7th December 2015(Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
iii. 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. Water meters shall be provided at the inlet to all unit processes in the cement plant.
vi. The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

ii. 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;

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

VI. Waste management

i. Used refractories shall be recycled.

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

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.

ii. Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

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. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.

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, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

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

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

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

viii. The project 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.

2.13 Expansion of HSD Steel Bar/ Angle/ Channel from 39,000 TPA to 1,65,000 TPA and dismantling the existing Reheating Furnace (15 TPH x 1 No.) & installing new Reheating Furnace (25 TPH x 1 No.) by **M/s. Mangala Ispat (Jaipur) Limited** located at Plot No. B-234, E-221 (A), E-221(A open area), Road No.9, VKI Area, **Jaipur, Rajasthan**. [Online Proposal No. IA/RJ/IND/253058/2021; File No. IA-J-11011/278/2021-IA-II(I)] – **Environment Clearance – regarding.**

2.13.1 M/s. Mangala Ispat (Jaipur) Limited has made an online application vide proposal no. IA/RJ/IND/253058/2021 dated 08/03/2022 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 &Non-Ferrous) under Category "B" of the schedule of the EIA Notification, 2006 and attracts general condition due to presence of Nahargarh Wildlife Sanctuary at a distance of 0.5Km and Eco Sensitive Zone boundary at a distance of 0.48 km. Hence, the project is appraised at Central Level as Category 'A'.

Details submitted by Project proponent

2.13.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
11/02/2021 & EDS reply on 10/07/2021	Issued Standard Terms of Reference	Standard Terms of Reference	15/07/2021	14/07/2025

2.13.3 The project of M/s. Mangala Ispat (Jaipur) Limited is located in Plot No. B-234, E-221 (A), E-221(A open area), Road No.9, VKI Area, Jaipur, Rajasthan is for Expansion of HSD Steel Bar/ Angle/ Channel from 39,000 TPA to 1,65,000 TPA and dismantling the existing Reheating Furnace (15 TPHx1 No.) & installing new Reheating Furnace (25 TPHx1 No).

2.13.4 Environmental Site Settings:

SNo	Particulars	Details	Remarks
i.	Total land	1.01ha [Govt. 1.01 ha;]	Land use: Industrial Land
Ii	Land acquisition details as per MoEF&CC O.M. Dated 7/10/2014	The proposed expansion will be executed on the existing 1.01 ha land only. Complete land of 1.01 ha is in possession of company. No additional land is required for proposed expansion.	

<table>
<tr><td>iii.</td><td>Existence of Habitation & Involvement of R&R, if any.</td><td><u>Project site</u>: Nil
Study Area:
<table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Mahapura</td><td>2.0</td><td>SSW</td></tr><tr><td>Harmada</td><td>2.2</td><td>NNW</td></tr></table></td><td>No R&R issue involved.</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site.</td><td><table><tr><th>Point</th><th>Latitude (N)</th><th>Longitude (E)</th></tr><tr><td>1</td><td>26°59'10.43"</td><td>75°46'52.06"</td></tr><tr><td>2</td><td>26°59'8.34"</td><td>75°46'53.81"</td></tr><tr><td>3</td><td>26°59'8.09"</td><td>75°46'53.78"</td></tr><tr><td>4</td><td>26°59'8.09"</td><td>75°46'51.60"</td></tr><tr><td>5</td><td>26°59'8.45"</td><td>75°46'47.63"</td></tr><tr><td>6</td><td>26°59'10.50"</td><td>75°46'47.64"</td></tr></table></td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>469 m above mean sea level</td><td></td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No Forest Land is involved within the plant site.</td><td></td></tr>
<tr><td>vii.</td><td>Water body (Rivers,Lakes,Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td><u>Projectsite</u>: Nil
<u>Study area</u>:
<table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Amanishah Nala</td><td>5.6 km</td><td>South</td></tr><tr><td>Tal Katora Lake</td><td>7.12 km</td><td>SE</td></tr><tr><td>Man Sagar Lake</td><td>7.0 km</td><td>SE</td></tr><tr><td>Maotha Lake</td><td>6.94 km</td><td>East</td></tr><tr><td>Hanuman Sagar Lake</td><td>6.43km</td><td>East</td></tr></table></td><td></td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/national park/ Wildlife sanctuary/bio sphere reserve/tiger reserve/ Elephant reserve Etc. If any within the study area</td><td><u>Study area:</u>Nil
Name of the ESZ/ESA: Eco Sensitive Zone of Nahargarh Wildlife Sanctuary boundary located at 0.48 km and boundary of Nahargarh Wildlife Sanctuary at 0.5Km.
Status of Notification: Gazette Notification from MoEF&CC dated 08/03/2019.
Distance of project from ESZ/ESA: Zone of Nahargarh Wildlife Sanctuary boundary - 0.48 km
Authenticated map of ESZ projecting distance of ESZ from project site: Authentication of distances of the Wildlife Sanctuary and National Parkhas been obtained from the Office of Deputy Conservator of Forest (Wildlife), Chidiyaghar, Jaipur vide letter no क्रमांकएफ ()सर्वे/ज़ू/2020-21/3121-22 dated 06/05/2021.
Status of NBWL approval: NBWL is not applicable.
List of Reserved and protected forests:
<table><tr><th>SNo</th><th>Particulars</th><th>Distance</th><th>Direction</th></tr></table></td><td></td></tr>
</table>

1.	Papad ka RF	2.9Km	ESE
2.	Nindhar PF	3.3 Km	NW
3.	Amer RF	3.9 Km	E
4.	Nahargarh RF	4.2 Km	SE

ix.	Archaeological Sites (State Protected Monuments)	**Particulars**	**Distance**	**Direction**
		Sun Temple Amer	6.9	East
		Shri Jagat Shiromanni Temple	7.0	East
		Jama Masjid Amer	7.5	East
		Laxmi Narayan Temple	7.5	East

2.13.5 The existing project was accorded Consent to Establish from Rajasthan State Pollution Control Board (RPCB) vide letter dated 31/05/1996. The existing project does not come under the purview of Environmental Clearance as existing project is for Rolling mill. EC application submitted in pursuance to the Order dated 12/02/2020 of Hon'ble NGT in Appeal No. 55 of 2019. Consent to Operate for the existing unit was accorded RPCB vide letter dated 19/05/2017. The validity of CTO is up to 30/11/2021. Application for CTO renewal under Air and Water Acts for HSD Steel Bar/Angle/Channels to the tune of 39,000 TPA has been applied vide Application ID 294897 on dated 27/11/2021. The same is in under process.

2.13.6 Implementation status of the existing CTO:

Facilities	**Unit**	**ImplementationStatusason08/03/2022**	**Production As per CTO**
HSD Steel Bar/ Angle/ Channel	TPA	39,000	39,000

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

Plant Equipment/Facility	**Existing facilities (A)**		**Proposed Units (B)**		**Final(Existing +Proposed) (A+ B)**		**Remarks**
HSD Steel Bar/ Angle/ Channel	Reheating Furnace: 1x15 TPH	39000 TPA	Dismantle existing Reheating Furnace and install new RHF: 1x25 TPH	1,26,000 TPA	RHF: 1x25 TPH	1,65,000 TPA	--

2.13.8 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:

S No	**Raw Material**	**Quantity (TPA)**			**Source**	**Distance from site(Kms)**	**Mode of Transportation**
		Existing	**Expansion**	**Total**			
1	Ingots/ Billets	40,170	1,29,780	1,69,950	Local Market	50	Road
2.	Coal for Reheating furnace	4,800	12,000	16,800	Local Market	50	Road

2.13.9 Existing Water requirement is 155 m^3/day out of which fresh water is 9 m^3/day and Recycled water is 146 m^3/day. Fresh water demand is less than 10 m^3/day. Thus, CGWA permission is not required. Total water requirement after expansion will be 607m^3/day, out of which 27 m^3/day of fresh water requirement will be obtained from the Ground water and the remaining requirement of 580 m^3/day will be met through recycled water (one-time water demand for industrial purpose will be met through tanker supply). Application submitted to CGWB, Western Region, Jaipur on 21/02/2020 and same is under process.

2.13.10 Existing power requirement of 1.4 MW is obtained from Jaipur Vidyut Vitran Nigam Limited (JVVNL). The power requirement for the project after expansion will be estimated as 3.5 MW, the same will be obtained from the JVVNL.

2.13.11 Baseline Environmental Studies:

<table>
<tr><td>Period</td><td colspan="5">March, April and May’2021 (Pre-Monsoon Season)</td></tr>
<tr><td>AAQ parameters at 7 Locations (min and max)</td><td colspan="5">$PM_{2.5}$ = 45.73 to 31.72 µg/m^3
PM_{10} = 84.69 to 61.21µg/m^3
SO_2 = 12.47 to 7.12 µg/m^3
NOx = 24.13 to 16.76 µg/m^3
CO = 670 to 390 µg/m^3</td></tr>
<tr><td>Incremental GLC level</td><td colspan="5">PM_{10} =2.82 µg/m^3(Level at 0.3 km in SE)
$PM_{2.5}$ =0.84 µg/m^3 (Level at 0.3 km in SE)
SO_2 = 10.69µg/m^3 (Level at 0.3 km in SE)
NOx = 5.06 µg/m^3 (Level at 0.3 km in SE)
CO = 55.0µg/m^3 (Level at 0.07 km in SE)</td></tr>
<tr><td>Ground water quality at 7 locations</td><td colspan="5">pH: 6.82 to 8.15,
Total Hardness: 145.78-553.96 Mg/l,
Chlorides: 77.47-358.34 mg/l,
Fluoride: 0.11-0.22 mg/l.
Heavy metals (Lead):0.01-0.01 mg/l</td></tr>
<tr><td>Surface water quality at 2 locations</td><td colspan="5">pH: 7.49 to 7.66;
DO: 3.0 to 5.10 mg/l;
BOD: 15.40 to 19.80 mg/l.
COD- Nil</td></tr>
<tr><td>Noise levels Leq (Day and Night)</td><td colspan="5">52.8 to 65.4 for the day time and
40.0 to 50.7 for the Night time.</td></tr>
<tr><td>Traffic assessment study findings</td><td colspan="5">• Traffic study has been conducted at Road No-9 which is 90 m from the plant site.
• Transportation of raw material, fuel & finished product will be done 100% by road.
• Existing PCU is 165PCU/hr on (Road No. 9) and existing level of service (LOS) is:
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>Road No-9</td><td>165</td><td>1200</td><td>0.13</td><td>A</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td>
<table>
<tr><td>2 lane (Two way)</td><td></td><td></td><td></td><td></td></tr>
</table>
PCU load after proposed expansion project will be 175 PCU/hr (165 Existing + 10 Additional) and level of service (LOS) will be:
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Proposed V/C Ratio</th><th>LOS</th></tr>
<tr><td>Road No-9 2 lane (Two way)</td><td>165+10=175</td><td>1200</td><td>0.14</td><td>A</td></tr>
</table>
*Note: Capacity as per IRC-106:1990 Guideline for capacity for roads.

Conclusion: the level of service will “A” i.e., excellent after including additional traffic due to proposed expansion project.
</td></tr>
<tr><td>Flora and fauna</td><td>Schedule-I Species i.e. Common Indian Monitor, Indian peafowl, Panther/ Leopard, Striped hyena
Conservation plan for Schedule-I Species i.e. Common Indian Monitor, Indian peafowl, Panther/ Leopard, Striped hyena have been submitted to the Office of Deputy Conservator of Forest, Jaipur on 18/02/2022. The approval is in under process.</td></tr>
</table>

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

S No	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment	Disposal	Remarks
A	**Solid waste**					
1	Domestic solid waste	Domestic Activity	8.5	--	Will be handled by Municipal Corporation, Jaipur	--
2	Fly ash	Reheating furnace	1.8	--	Sent to brick manufacturing units	--
3	Mill scale/iron dust	Industrial process	3300	--	It is primarily iron waste and having market value, which is being/will be sold to steel casting unit.	--
B	**Hazardous Waste**					
1	Used/Spent oil	5.1	--	0.01KL/year	0.01KL/year	Authorized Recyclers

2.13.13 Public Consultation:

Details of advertisement given	30/09/2021: Danik Bhaskar and Samachar Jagat

Date of public consultation	01/11/2021
Venue	Industrial Association Office, Vishwakarma Industrial Area, Rajasthan
Presiding Officer	Shri Birbal Singh, Additional District Collector, City (North), District- Jaipur
Major issues raised	Environment Protection measures, Social-EMP Employment Green belt in plant premises. Provision for occupational health & Safety Rain Water Harvesting

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

S No	Major Activity Heads		Capital Cost				Recurring Cost (Rs. in Lakhs)
			Year of Implementation			Total Expenditure (Rs. In Lacs)	
			1st Year (Rs. In Lakhs)	2st Year (Rs. In Lakhs)	3st Year (Rs. In Lakhs)		
A	**Based on Need Based Study**						
1.	Community & Infrastructure Development						
	Construction of public toilets	Physical Activities	2 no. in Murlipura area	2 no. in Murlipura area	2 no. in VKI area		
		Budget	2.00	2.00	2.00	6.00	0.50
2.	Education						
	Construction of toilets in surrounding schools & its maintenance	Physical Activities	2 nos. (boys and girls) at RajkiyaUcch Madhyamik Vidyalaya, Murlipura, Jaipur.	2 nos. (boys and girls) at RajkiyaUcch Madhyamik Vidyalaya, Charannadi, Murlipura Jaipur.	-		
		Budget	2.00	2.00	-	4.00	0.50
	Sports kits for schools	Physical Activities	Sports items Badminton, carom board, cricket set volley ball, foot boll, ring ball, skip rope, chess etc. in RajkiyaUcch Madhyamik Vidyalaya, Murlipura, Jaipur.	Sports items Badminton, carom board, cricket set volley ball, foot boll, ring ball, skip rope, chess etc. in RajkiyaUcch Madhyamik Vidyalaya, Charannadi, Murlipura Jaipur.	-	2.00	-

S No	Major Activity Heads		Capital Cost				Recurring Cost (Rs. in Lakhs)
			Year of Implementation			Total Expenditure (Rs. In Lacs)	
			1st Year (Rs. In Lakhs)	2st Year (Rs. In Lakhs)	3st Year (Rs. In Lakhs)		
		Budget	1.00	1.00	-		
					Total A	**12.00**	**1.00**
B	**Based on Public Consultation**						
1	Chair, table and computer set for students and teachers.	Physical Activities	100 no. of Chair & table at RajkiyaUcch Madhyamik Vidyalaya, Murlipura, Jaipur.	100 no. of Chair & table at RajkiyaUcch Madhyamik Vidyalaya, Charannadi, Murlipura Jaipur.	10 no. of Computer at RajkiyaUcch Madhyamik Vidyalaya, Murlipura, Jaipur.		
		Budget	2.00	2.00	1.00	5.00	-
2	Plantation in VKI area, Murlipura and surrounding area	Physical Activities	500 nos. in VKI area.	500 nos. in Murlipura.	500 nos. in Vidhyadharnagar.		
		Budget	1.00	1.00	1.00	3.00	0.60
					Total B	**8.00**	0.60
	Total (A+B)					**20.00**	**1.60**

2.13.14 Existing capital cost of project was 18 crores. The capital cost of the proposed expansion project is Rs 38.0 Crores and the capital cost for environmental protection measures is proposed as Rs 1.15 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 0.14 Crores. The employment generation from the proposed expansion is 190 persons. The detail of cost for environmental protection measures is as follows:

S No	Description of Item	Amount (Rs. In Lacs)	
		Capital Cost	Recurring Cost
1	Air Pollution Control (Bag house, DG Set stack, OCEMS)	32.0	2.2
2	Water Environment (Installation of STP)	8.0	2.0
3	Rain water Harvesting (1-Existing)	--	1.0
4	Environmental Monitoring (Air, Water, Noise and Soil)	--	4.0
5	Green Belt	7.50	2.0
6	Occupational Health and Safety (PPE) (Training, Medical Checkup & Awareness programme)	10.0	2.0
7	Addressal of Public Consultation concerns	20.0	1.60
8	Conservation Plan (Schedule-I species)	38.0	--
	Total	**115.5**	**14.8**

2.13.15 Total green belt will be developed in 0.33 ha area which is about 33% of the total project area. A 2m 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 850 saplings (100 existing and 750 proposed) will be planted and nurtured in 0.33 hectares in 1 years.

2.13.16 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.

2.13.17 Name of the EIA consultant: M/s. Gaurang Environmental Solutions Pvt. Ltd [Sl. No. 115, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2023/RA 0192 valid till 19/01/2023; Rev. 19, February 14, 2022].

Certified compliance report from Rajasthan Pollution Control Board

2.13.18 The Status of compliance of CTO was obtained from Regional Office (North), Rajasthan Pollution Control Board, Jaipur vide letter dated 04/03/2022 after carried out the site visit on 21/02/2022. As per compliance report most of the conditions are mark as agreed and assured to comply.

Observations of the Committee

2.13.19 The committee noted the following:

i. PP shall provide the contour lines in project layout map and according to the contours of project site run off drainage, waste water drainage system and all other facility. PP shall submit the revised layout map.
ii. PP has been using coal as fuel in reheating furnace. Additional mitigation measures shall be provided to meet the PM emission level 30 mg/ Nm^3.
iii. Wet scrubber has been proposed with reheating furnace. Instead, PP shall install Bag filter instead of wet scrubber.
iv. Traffic load assessment shall be carried out for proposed project. PP shall provide the capacity of the internal and connecting road in terms of Million Standard Axle (MSA).
v. Action plan proposed to address the public hearing issues is not in accordance to Ministry's O.M. dated 30/09/2020. PP shall revise the action plan with monitorable physical targets.
vi. ToR point #9 is not addressed properly, same shall be revisited.
vii. Solid waste management plan shall be provided.
viii. Air Modeling has been done on the basis of PM emission limit of 150 mg/ Nm^3. PP shall revise the Air Modeling according to PM emission level of 30 mg/ Nm^3.
ix. Maximum GLC level for PM, SO_2 and NOx is at same location, clarification shall be provided for same.
x. SO_2 value is high as per baseline data submitted; additional mitigation measures shall be provided to reduce the SO_2 level.
xi. PP has not provided the action taken report for noncompliance of CTO conditions, same shall be provided.
xii. PP shall clarify whether project site comes under severely polluted area or not.
xiii. PP shall provide approved conservation plan (or) application status for schedule 1 species located in study area of the project.

Recommendations of the Committee

2.13.20 In view of the foregoing and after deliberations, the Committee recommended the proposal to be returned in its present form to address the shortcomings enumerated above in para 2.13.19 and submit revised application as per the provisions of EIA Notification, 2006.

2.14 Establishing additional facilities consisting of I/O beneficiation plant of 0.8 MTPA capacity, Pellet plant of 0.6 MTPA, 4x100 TPD DRI Kilns to produce Sponge Iron of 1,20,000 TPA, Induction Furnace of 2x20 T to produce Hot Billets / M.S. Billets of 1,20,000 TPA, Rolling Mill to produce TMT bars / Wire Rod / Strips of 1,20,000 TPA through Hot Charging, manufacturing Ferro Alloy plant of 2x6 MVA capacity to produce 27,360 TPA of Fe Mn (or) 20,520 TPA of Si Mn (or) 10,260 TPA of FeSi (or) 41,040 TPA of Pig Iron, Power generation through WHRB of DRI Kilns -10 MW, through FBC of 15 MW & 60,000 nos. of Fly Ash Brick making unit in addition to existing permitted MS Black Pipe, ERW precision Tube unit of 1,20,000 TPA & GI Pipe unit of 1,20,000 TPA by **M/s. Shree Nakoda Pipe Impex Pvt. Ltd.** located at Khamaria Village, Tilda Tehsil, **Raipur District, Chhattisgarh** [Online Proposal No. IA/CG/IND/256141/2021, File No. IA-J-11011/99/2021-IA-II(I)] – **Environment Clearance – regarding.**

2.14.1 M/s. Shree Nakoda Pipe Impex Private Limited has made an online application vide proposal no. IA/CG/IND/256141/2021 dated 02/03/2022 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 & non-ferrous), 1 (d) Thermal Power Plants, and 2(b) Iron Ore Beneficiation under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

2.14.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
24/03/2021	Standard TOR issued	Standard TOR	26/03/2021	25/03/2025

2.14.3 The project of M/s. Shree Nakoda Pipe Impex Private Limited located at Khamaria Village, Tilda Tehsil, Raipur District, Chhattisgarh State is for Establishing additional facilities consisting of I/O beneficiation plant of 0.8 MTPA capacity, Pellet plant of 0.6 MTPA, 4x100 TPD DRI Kilns to produce Sponge Iron of 1,20,000 TPA, Induction Furnace of 2x20 T to produce Hot Billets / M.S. Billets of 1,20,000 TPA, Rolling Mill to produce TMT bars / Wire Rod / Strips of 1,20,000 TPA through Hot Charging, manufacturing Ferro Alloy plant of 2x6 MVA capacity to produce 27,360 TPA of Fe Mn (or) 20,520 TPA of Si Mn (or) 10,260 TPA of FeSi (or) 41,040 TPA of Pig Iron, Power generation through WHRB of DRI Kilns -10 MW, through FBC of 15 MW & 60,000 nos. of Fly Ash Brick making unit in addition to existing permitted MS Black Pipe, ERW precision Tube unit of 1,20,000 TPA & GI Pipe unit of 1,20,000 TPA.

2.14.4 Environmental Site Settings:

<table>
<tr><th>SNo</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>16.281 ha (40.230 Acres)
[Private Land: 16.281 ha]
Existing: 3.938 ha
Proposed: 12.343 ha</td><td>Land use: Industrial land.</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF& CC, O.M. dated 7/10/2014.</td><td>The entire land (existing and proposed) 16.281 ha has been taken on lease for 21 years.</td><td>--</td></tr>
<tr><td>iii.</td><td>Existence of habitation &involvement of R&R, if any.</td><td>Project site: No habitation exists in the plant site
Study Area<table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>NaktiKhapri Village</td><td>0.8 kms.</td><td>NNW</td></tr><tr><td>Hamlet of NaktiKhapri Village</td><td>0.4 Kms</td><td>NNW</td></tr><tr><td>Khamaria Village</td><td>1.0 Km.</td><td>N</td></tr></table></td><td>--</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>21.47°34 N,</td><td>81.81553 E</td></tr><tr><td>B</td><td>21.4693 N,</td><td>81.8197 E</td></tr><tr><td>C</td><td>21.4691 N,</td><td>81.81846 E</td></tr><tr><td>D</td><td>21.46904 N,</td><td>81.81829 E</td></tr><tr><td>E</td><td>21.47024 N,</td><td>81.81841 E</td></tr><tr><td>F</td><td>21.4707 N,</td><td>81.8178 E</td></tr><tr><td>G</td><td>21.4700 N,</td><td>81.817536 E</td></tr><tr><td>H</td><td>21.46953 N,</td><td>81.81743 E</td></tr><tr><td>I</td><td>21.4690 N,</td><td>81.8163 E</td></tr><tr><td>J</td><td>21.46987 N,</td><td>81.8140 E</td></tr><tr><td>K</td><td>21.4702 N,</td><td>81.81408 E</td></tr><tr><td>L</td><td>21.4703 N,</td><td>81.8136 E</td></tr><tr><td>M</td><td>21.46997 N,</td><td>81.81357 E</td></tr><tr><td>N</td><td>21.4708 N,</td><td>81.8119 E</td></tr><tr><td>O</td><td>21.4719 N,</td><td>81.8128 E</td></tr><tr><td>P</td><td>21.47160 N,</td><td>81.81369 E</td></tr><tr><td>Q</td><td>21.4718 N,</td><td>81.8142 E</td></tr><tr><td>R</td><td>21.4716 N,</td><td>81.8154 E</td></tr></table></td><td>--</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>302 m above mean sea level</td><td>--</td></tr>
<tr><td>vi.</td><td>Involvement of Forest Land, if any</td><td>Nil</td><td>--</td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as studyarea</td><td><u>Project Site:</u> Nil

<u>Study area:</u><table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr></table></td><td></td></tr>
</table>

SNo	Particulars	Details	Remarks
		Jamuniya Nala | 1.8 Km | East Dhumma Nala | 3.3 Km | West Bhatapara Branch Canal | 2.4 km | W & S Jalso Dam | 2.5 km | WSW Village pond | 0.5 km | NW few other seasonal are flowing within 10 Km.	
viii.	Existence of ESZ/ ESA/ National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve/ Elephant Reserve etc. if any within the study area	Nill However, following forests are located in study area: Mohrenga PF – 5.3 Km/ SE Khaulidabri PF- 8.5 Km/SE	

2.14.5 The existing Project has obtained Consent from Chhattisgarh Environment Conservation Board (CECB) for manufacturing MS Black Pipe, ERW precision Tube unit of 1,20,000 TPA & GI Pipe unit of 1,20,000 TPA Chhattisgarh and obtained CTE vide no. 3917 / RO / TS / CECB /2019 dated 28/12/2019. Validity of the CTE is up to one year from the date of commissioning the consent facilities.

2.14.6 Implementation status of the existing EC:

S No	Unit (Product)	CTE permitted capacities vide dated 28/12/2019	Implementation Status
1.	MS Black Pipe / ERW precision Tube	1,20,000 TPA	Advanced stage of implementation
2.	GI Pipe unit	1,20,000 TPA	under implementation

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

Sl. No.	Plant Equipment/ Facility	Existing facilities as per CTE dated 28/12/2019 (A)		Proposed Units (B)		Final (Existing + Proposed) (A+B)		Remarks
		Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	
1	MS Black Pipe / ERW precision Tube	--	1,20,000 TPA (Under implementation)	--	--	--	1,20,000 TPA	--
2	GI Pipe unit	--	1,20,000 TPA (Under implementation)	--	--	--	1,20,000 TPA	--
3	I/O beneficiation	--	--	--	0.8 MTPA	--	0.8 MTPA	--
4	Pellet Plant	--	--	--	0.6 MTPA	--	0.6 MTPA	--
5	Sponge Iron	--	--	DRI Kiln 4x100 TPD	1,20,000 TPA	DRI Kiln	1,20,000 TPA	--

Sl. No.	Plant Equipment/ Facility	Existing facilities as per CTE dated 28/12/2019 (A)		Proposed Units (B)		Final (Existing + Proposed) (A+B)		Remarks
		Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	
						4x100 TPD		
6	Induction furnace with CCM & LRF (Hot Billets / M.S. Billets)	--	--	IF: 2x20 T	1,20,000 TPA	IF: 2x20 T	1,20,000 TPA	--
7	Rolling Mill with (TMT bars/Wire Rod/Strips)	--	--	400 TPD	1,20,000 TPA	400 TPD	1,20,000 TPA	85% Hot charging + 15% with Re-heating
8	Ferro Alloy Unit (SEAF) (Fe Mn (or) Si Mn (or) FeSi (or) Pig Iron)	--	--	2 x 6 MVA	Fe Mn 27,360 TPA or Si Mn 20,520 TPA or FeSi 10,260 TPA or Pig Iron 41,040 TPA	2 x 6 MVA	Fe Mn 27,360 TPA or Si Mn 20,520 TPA or FeSi 10,260 TPA or Pig Iron 41,040 TPA	--
9	Captive Power Plant	--	--	WHRB: 10 MW & AFBC: 15 MW	25 MW	WHRB: 10 MW & AFBC: 15 MW	25 MW	--
10	Fly Ash brick making unit	--	--	--	60,000 bricks /day	--	60,000 bricks /day	--

2.14.8 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:

S No	Raw Material	Quantity (TPA)	Sources	Mode of Transport
A	**For manufacturing I/O concentrate – 8,00,000 TPA**			
1	Iron ore	8,00,000	Nayagrah Iron ore Mines / NMDC, Bacheli, CG, Keonjhar, odisha	By rail & road (through covered trucks)
B	**For manufacturing Pellets – 6,00,000 TPA**			
1	Iron ore Concentrate	6,60,000	Inhouse generation	By Covered Conveyor
2	Bentonite	4,800	Raipur, Chhattisgarh	By Road (Covered Trucks)
3	Lime powder	36,000	Raipur, Chhattisgarh	By Road (Covered Trucks)
4	Coal (Bituminous)	6,000	Raipur, Chhattisgarh	By Road (Covered Trucks)

S No	Raw Material		Quantity (TPA)	Sources	Mode of Transport
5	Fuel (Anthracite Coal) or LDO / LSHS*		26,400 8,000 KL/year	Raipur, Chhattisgarh	By Road (Covered Trucks) By Road (in tankers)
C	**For manufacturing Sponge Iron – 1,20,000 TPA**				
1	Iron Ore (or) Iron ore Pellets		1,92,000 (or) 1,68,000	Nayagrah Iron ore Mines / NMDC, CMDC,Keonjhar, odisha (or) In-house generation	By rail & road (through covered trucks) By Covered Conveyor
2	Coal	Indian	1,56,000	SECL Chhattisgarh / MCL Odisha	By rail & road (through covered trucks)
		Imported	99,840	Indonesia / South Africa / Australia	Through sea route, rail route & by road
3	Dolomite		7,200	Mandla, MP	By road (through covered trucks)
D	**For manufacturing Hot Billets / MS Billets – 1,20,000 TPA**				
1	Sponge Iron		1,20,000	In plant generation	By Conveyor
2	Pig iron / Scrap		28,200	In plant generation / Bhilai, CG	By conveyor / By road (through covered trucks)
3	Ferro Alloys		1,320	In plant generationRaipur, Chhattisgarh	By Conveyor By road (through covered trucks)
E	**For manufacturing Rolled Products – 1,20,000 TPA**				
1	Hot Billets/ MS Billets MS Billets (purchased)		1,20,000 6,900	In house generation Siltara, Raipur, CG	Covered Conveyor By road (through covered trucks)
2	LDO / LSHS*		3,925 KL	Raipur, Chhattisgarh	By Road through tanker
	* 100% consumption in worst-case scenario				
F	**For Power Generation –FBC power plant of 15 MW**				
1	Coal	Indian	1,18,800	SECL Chhattisgarh / MCL Odisha	By Rail & Road through covered trucks
		Imported	76,040	Indonesia / South Africa (vizag port)	Through sea route, rail route & by road
2	Dolochar		24,000	In plant generation /	Covered Conveyor
G	**For Ferro Alloys: 2 x 6 MVA [SiMn (or) FeMn (or) FeSi (or) Pig Iron]**				
a	**For manufacturing Silico Manganese - 20,520 TPA**				
1	Manganese Ore		33,450	Balaghat, MP	By Rail & Road through covered trucks
2	FeMn Slag		12,680	In house generation	Covered Conveyor
3	LAM Coke		7,900	Dhanbad, jharkand Imported (from Vizag port)	By Road through covered trucks Through sea route, rail route & by road
4	Quartz		4,100	Gondia, Maharastra	By Road through covered trucks
5	Bag filter dust		2,050	In house generation	Pipeline
	(OR)				
b	**For manufacturing Ferro Manganese – 27,360 TPA**				

S No	Raw Material	Quantity (TPA)	Sources	Mode of Transport
1	Manganese Ore	62,250	Balaghat, MP	By Rail & Road through covered trucks
2	LAM Coke	9,985	Dhanbad, jharkand Imported (from Vizag port)	By Road through covered trucks Through sea route, rail route & by road
3	Quartz	820	Gondia, Maharastra	By Road through covered trucks
4	Bag filter dust	1,640	In house generation	Pipeline
	(OR)			
H	**For manufacturing Ferro Silicon – 10,260 TPA**			
1	Quartz	15,600	Gondia, Maharastra	By Road through covered trucks
2	Mill Scale	8,000	In house generation	conveyor
3	M.S. Scrap	360	Raipur, Chhattisgarh	By Road through covered trucks
4	LAM Coke	5,750	Dhanbad, jharkand Imported (from Vizag port)	By Road through covered trucks Through sea route, rail route & by road
5	Bag filter dust	615	In house generation	pipeline
	(OR)			
I	**For manufacturing Pig Iron – 41,040 TPA**			
1	HG Iron ore	60,535	Chhattisgarh/ Orissa	By Rail & Road through covered trucks
2	LAM Coke	20,110	Dhanbad, jharkand Imported (from Vizag port)	By Road through covered trucks Through sea route, rail route & by road
3	Lime stone	16,825	Chhattisgarh/ MP	By Road through covered trucks

2.14.9 The water requirement for the existing &proposed expansion project is estimated as 2000 m^3/day, out of which 490 m^3/day from ground water and 1510 m^3/day from Jalso (Janjgira) Tank / Shivnath River. The NOC from CGWA has been taken for ground water abstraction of 490m^3/day dated 21/01/2022 and permission for 0.73 MCM water has been taken from water resources department, Govt of Chhattisgarh letter dated 19/03/2021 and amended letter dated 08/04/2021.

2.14.10 Power required for the entire project will be approx. 35 MW. Out of which 25 MW will be sourced from Captive Power Plant & remaining 10 MW is from State Grid.

2.14.11 Baseline Environmental Studies:

Period	1st March 2021 to 31st May 2021
AAQ parameters at 8 locations	$PM_{2.5}$ = 23.1 to 46.2 µg/m^3 PM_{10} = 40.5 to 69.8 µg/m^3 SO_2 = 6.4 to 12.6 µg/m^3 NO_2 = 8.0 to 33.7 µg/m^3 CO = 388 to 1357 µg/m^3
AAQ modelling	PM_{10} = 2.31 µg/m^3 (1.15 km in NE) SO_2 = 5.18 µg/m^3 (1.15 km in NE)

<table>
<tr><td></td><td>NO_x = 6.55 µg/m^3 (1.15 km in NE)
CO = 4.88 µg/m^3 (1.15 km in NE)</td></tr>
<tr><td>Ground water quality at 8 locations</td><td>pH: 7.14 to 8.11
TSS: 0.2 to 0.4 mg/l
TDS: 425 to 666 mg/l
Total Hardness: 197 to 317 mg/l
Chlorides: 203 to 312 mg/l
Fluoride: 0.49 to 0.94 mg/l
Heavy metals (Iron -Fe): 0.12 to 0.22 mg/l</td></tr>
<tr><td>Surface water quality at 3 locations</td><td>pH: 7.42 to 7.74,
DO (in mg/l): 4.2 to 5.5,
TDS (in mg/l): 234 to 439,
BOD (in mg/l): 3.0 to 12.6
COD (in mg/l): 10.8 to 24.8</td></tr>
<tr><td>Noise levels (Day and Night)</td><td>44.60 to 59.50 dBA for the day time and
36.90 to 42.20 dBA for night time.</td></tr>
<tr><td>Traffic assessment study findings</td><td>• Traffic study has been conducted at Tilda – Simga Road which is 3.2 km from the plant site.
• Transportation of raw material, fuel & finished product will be done 100% by road.
• Existing PCU is 263 PCU/hr and existing level of service (LOS) is:
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>Tilda – Simga Road</td><td>263</td><td>833</td><td>0.31</td><td>B</td></tr>
</table>
• PCU load after proposed expansion project will be 331 PCU/hr (263 Existing + 68 Additional) and level of service (LOS) will be:
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Proposed V/C Ratio</th><th>LOS</th></tr>
<tr><td>Tilda – Simga Road</td><td>331</td><td>833</td><td>0.40</td><td>B</td></tr>
</table>
*Note: Capacity as per IRC-73:1980 Guideline for capacity for non-urban highways.

Conclusion: the level of service will remain same as “B” after including additional traffic due to proposed expansion project.</td></tr>
<tr><td>Flora and fauna</td><td>No Schedule -1 fauna and endangered Flora present within 10 km. radius of the site</td></tr>
</table>

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

S No	Waste / By product	Quantity (TPD)	Method of disposal	Agreement Details of Disposal
Solid Waste generation				
1	Tailings from I/O beneficiation	358 TPD (1,20,000 TPA)	Will be taken to filter press & recovered the water. Cake of tailing will be stored in tailing yard & it will give to nearby Ceramic Unit.	--
2	Ash from Pellet Plant	18 TPD (5,400 TPA)	Will be utilized own brick making unit.	--
3	Ash from Bituminous coal	1.0 TPD (300 TPA)	Will be utilized own brick making unit.	--
4	Ash from DRI	64 TPD (21,600 TPA)	Will be utilized own brick making unit.	--
5	DoloChar	72 TPD (24,000 TPA)	Used as fuel in captive AFBC boiler	--
6	Wet scrapper sludge	20 TPD (6,000 TPA)	Will be utilized own brick making unit.	--
7	Kiln Accretion Slag	4 TPD (1200 TPA)	Used in internal road construction &will be utilized own brick making unit.	--
8	FES & Bag filter dust	18.5 TPD	Will be utilized own brick making unit.	--
9	Slag from SMS	40 TPD (12,000 TPA)	Slag will be crushed and after recovery of iron, it will be used for road construction / utilised in brick making unit.	For laying Internal Roads & Own Brick making unit and Given to M/s. KOAS Ventures
10	Mill Scale from Rolling Mill	1.2 TPD (360 TPA)	Will be utilized in Ferro Alloy plant	Own Ferro Alloys unit
11	End Cuttings from Rolling Mill	12 TPD (3600 TPA)	Will be reused in Induction Furnace.	Recycled to IF
12	Slag from SiMn Manufacturing Process	45 TPD (15,046 TPA)	Will be given to Contractors for Road Construction/ land filling.	Given to M/s. KOAS Ventures
(OR)				
	Slag from FeMn Manufacturing Process	44.6 TPD (14,939 TPA)	Will be used in manufacture of Silico manganese as it	Recycled to Ferro Alloys unit

S No	Waste / By product	Quantity (TPD)	Method of disposal	Agreement Details of Disposal
			contains high MnO_2.	
		(OR)		
	Slag from FeSi Manufacturing Process	1.7 TPD (606 TPA)	Will be given to cast iron foundries.	---
		(OR)		
	Slag from Pig Iron Manufacturing Process	57.7 TPD (17,650)	Will be used in manufacture of cement	---
13	Ash from Power Plant (with Dolochar& Indian coal)	176.5 TPD (61,789 TPA)	Will be utilized own brick making unit.	Own Brick making unit
	Note: *Solid wastes such as Dolochar, accretion slag, Wet Scrapper sludge, SMS Slag, Tailings, Ferro Alloy slag will be stored in designated storage yard. Ash generated will be stored in silos only. There will not be any open storage of fly ash.*			
	Hazardous waste Generation			
1	Waste Oil	20 KL/Annum	This will be stored in covered HDPE drums in a designated area and will be given to SPCB approved vendors	--
2	Used batteries	--	given back to the supplier under buy back agreement with supplier	--

2.14.13 Public Consultation:

Date of advertisement	20/09/2021
Name of newspapers	Local newspaper (Hindi) Nav Bharat National newspaper (English) "Punjab Kesari"
Date on which Public Hearing conducted	21/10/2021
Venue	Vacant land located in front of site Nakoda Pipe Impex Private Limited, Bartori to BPCL Gas Plant Road, Khamariya, Tehsil Tilda, District Raipur (Chhattisgarh).
Presiding by	Additional District Magistrate, Raipur district.
Issues are	• Air emission & other Pollution Control measures • Employment to Locals • Arrangement of drinking water • Training for local unemployed youth • Plantation in surrounding villages

	• Provide support to the village & surroundings with CSR • Social & infrastructural development activities

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

S No	Major Activity Heads		Year of Implementation			Total Expenditure (Rs. in Lacs)
			2022-23 (Rs. in Lacs)	2023-24 (Rs. in Lacs)	2024-25 (Rs. in Lacs)	
A). Based on Need Based & SIA Study						
1	**Community & Infrastructure Development Programme**					
	i) Construction of public toilets	**Physical Nos. & village**	2 nos. toilets each in Khamaria, NaktiKhapri villages	2 nos. toilets each in Bartori, Tarashiv Villages	2 nos. toilets each in Gaitara, Konhari Villages	6
		Budget in Lacs	2	2	2	
	ii) Providing LED Street lighting with solar panels	**Physical Nos. & village**	10 nos. each in Khamaria& NaktiKhapri villages	10 nos. each in Bartori, Tarashiv Villages	10 nos. each in Gaitara, Konhari Villages	6
		Budget in Lacs	2	2	2	
					Total	**12**
2	**Education**					
	i) Providing Sport kits for schools	**Physical Nos. & village**	3 nos. Cricket, 3 nos. Carroms, 2 nos. Vollyball, 1 no. Table tennis Kits in Primary school @ Khamaria (V)	3 nos. Cricket, Carroms, Vollyball, Table tennis Kits Government Primary School, Chhataud (V)	---	4.0
		Budget in Lacs	2	2	---	
	ii). Construction of toilets in surrounding schools & its maintenance	**Physical Nos. & village**	----	3 nos. in Primary school @ Khamaria (V)	3 nos. in Government Primary School, Chhataud (V)	4.0
		Budget in Lacs	---	2.0	2.0	
	Additional facilities in School at Khamaria village	**Physical Nos. & village**	Renovation of School building & 4 nos. (6 m x 5m x 3 m) of class rooms in Khamaria (V)	Providing School Furniture for 3 nos. of class rooms in Khamaria (V)	Providing Computer & Library facilities in School of Khamaria (V)	**18**
		Budget in Lacs	10	4	4	
					Total	**25**
3	**Distribution of tricycles**	**Physical Nos.**	15 nos. of tricycles in Khamaria (V)	15 nos. of tricycles in	15 nos. of tricycles in	3.0

S No	Major Activity Heads		Year of Implementation			Total Expenditure (Rs. in Lacs)
			2022-23 (Rs. in Lacs)	2023-24 (Rs. in Lacs)	2024-25 (Rs. in Lacs)	
	for handicapped	**& village**		NaktiKhapri (V)	Konari (V)	
		Budget in Lacs	1	1	1	
4	**Primary Health Centre with Ambulance to Haladiabahal, Nimidha villages**	**Physical Nos. & village**	---	Primary Health Centre with Ambulance facility in Khamaria Village	---	**35**
		Budget in Lacs	---	35	---	
5	**RWH pits in the surrounding villages & De-siltation of ponds**	**Physical Nos. & village**	2 nos. in Govt. School, Khamaria Village 2 nos. in Panchayat Office	Increase of 1.0 m depth in storage due to De-siltation of pond in Khamaria Village (21°28'46.63" N, 81°49'36.78"E)	Increase of 1.0 m depth in storage due to De-siltation of pond in NaktiKhapri Village (21°28'32.42" N, 81°48'33.54"E)	28
		Budget in Lacs	3	15	10	
					TOTAL (A)	**104**
B). Based on Public Consultation/Hearing						
1	**Impart training to the local villagers for skill development.** ITI Centre along with necessary infrastructure for various vocational training program for employment generation in association with *National Skill Development Mission*	**Physical Nos. & village**	Training to unemployed youth 25 nos. from Khamaria (V) 25 nos. from NaktiKhapri (V) 25 nos. from Janjgira (V)	Training to unemployed youth 25 nos. from Tarashiv (V) 25 nos. from Konhari (V) 25 nos. from Bahesar (V)	Training to unemployed youth 25 nos. from Bartori (V) 25 nos. from Gaitara (V) 25 nos. from Khapri (V)	**90**
		Budget in Lacs	30	30	30	
2	Establishing Ground for Sports in the area with the Support of District	**Physical Nos. & village**	---	Ground for Sports in Khamaria village	---	**20**
		Budget in Lacs	---	20	---	

S No	Major Activity Heads		Year of Implementation			Total Expenditure (Rs. in Lacs)
			2022-23 (Rs. in Lacs)	2023-24 (Rs. in Lacs)	2024-25 (Rs. in Lacs)	
	administration.					
3	Provision of drinking water facility	**Physical Nos. & village**	RO plant each in Khamariya&Bartori Villages	RO plant each in Gaitara, Konhari Villages	RO plant each in NaktiKhapri, Tarashiv Villages	**36**
		Budget in Lacs	12	12	12	
4	Plantation development in surrounding villages	**Physical Nos. & village**	5000 plants near to the plant in Khamariya Village	5000 plants each in Gaitara, Konhari Villages	5000 plants each in NaktiKhapri, Tarashiv Villages	**18**
		Budget in Lacs	6	6	6	
					Total (B)	**164**
	Total (A+B)		**68**	**131**	**69**	**268**

2.14.14 The capital cost of the expansion project is Rs. 483 Crores and the capital cost for environmental protection measures is proposed as Rs. 69.5 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 8.13 Crores. The employment generation from the proposed expansion project is 900 direct & 500 Indirect. The detail of cost for environmental protection measures is as follows:

S No	Item	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Crores)
1.	**Air Emission Management**		
	ESPs	44	4.40
	Proposed Fume extraction systems with Bag filters	5.6	0.28
	Other APCS & conveyor systems	3.0	0.45
	Chimneys for proposed units	6.0	0.30
	Water Sprinklers	0.10	0.005
	Mechanical Dust Sweepers	0.30	0.03
2.	**Wastewater Management**		
	ETP	1.50	0.3
	STP	0.40	0.08
	Garland drains	0.30	0.03
	Settling ponds	0.02	0.002
3.	**Solid waste Management**		
	Fly Ash Handling & disposal	2.00	0.80
	Slag Handling & Disposal	0.20	0.05
	Hazardous waste storage & disposal	0.10	0.05
	Municipal solid waste storage & disposal	0.05	0.025
4.	Greenbelt development, Land scaping	0.25	0.09
5.	Noise Management	0.20	0.04
6.	RWH in Plant	0.05	0.005
7.	Fire Safety Systems	2.50	0.25

S No	Item	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Crores)
8.	**Environmental Monitoring**		
	CEMS	0.6	0.01
	CAAQMS	1.6	0.32
	Performance monitoring of APCS	--	0.01
	Environment Monitoring	--	0.14
9.	**Occupational Health & Safety**		30
	Dispensary with Ambulance facility	0.30	0.06
	Personal Protective Equipment's (PPEs)	0.40	0.40
	TOTAL	**69.47**	**8.128**
10.	Addressal of public consultant concern	2.68	--
	GRAND TOTAL	**72.15**	**8.128**

2.14.15 13.6 Acres (5.5 Ha.) of Greenbelt will be developed within the plant premises. 13,750 nos. of saplings will be planted within the plant premises 10 to 80 m wide greenbelt will be developed all around the plant. Local DFO will be consulted in developing the green belt. A three-tier plantation with 2500 trees / ha is proposed as per CPCB guidelines.

2.14.16 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.

2.14.17 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [Sl. No. 140, List of ACOs with their Certificate No: NABET/EIA/1922/SA0148valid till 21/09/2022].

Certified compliance report from CECB

2.14.18 The Status of compliance of CTE was obtained from CECB, Raipur vide letter dated 09/11/2021 after site visit conducted on 05/10/2021. As per compliance report of CECB, the construction work is going on at project site and no non-compliances have been reported by regional officer, CECB.

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

i. PP has provided the revised plant layout after incorporating uniform internal roads (9.0 m & 6.0 m wide) and 10-80 m wide green belt.

ii. PP has provided the justification for not obtaining environmental clearance for existing MS black Pipe, ERW precision tube unit "that there is no Induction Furnace, Electric Arc Furnace, Re-heating furnace involved for manufacturing MS Black Pipe, ERW precision Tube unit & GI Pipe unit. Hence **Environmental Clearance is not required** for these activities as the activity does not come under E.C. purview as per EIA Notification, 2006 & its amendments. Hence Consent has been obtained from CECB vide no. 3917 / RO / TS / CECB /2019 dated 28/12/2019".

iii. PP submitted the reason for occurrence of max. GLC of PM_{10}, SO_2, NOx at same distance in this particular case which is due to occurrence of Neutral stability condition for major part of the monitoring period**.** Due to this the Maximum GLCs of all the Parameters are observed at same distance and direction.

iv. PP submitted the traffic capacity as per the IRC 73: 1980 for highways (PCU/day).

v. PP has provided the revised table for rain water harvesting potential after including the runoff coefficient give as below:

S No	Area	Total Area (m^2)	Runoff Co-efficient	Rainfall (in M)	Rainwater Collection Potential (m^3)
1	Roof top area (plant facilities & Storage sheds)	47340	0.85	1.323	53236
2	Internal roads	6100	0.65	1.323	5246
3	Greenbelt	55000	0.15	1.323	10915
4	Water Storage	2000	1	1.323	2646
5	Open areas	10700	0.2	1.323	2831
	TOTAL	**121140**			**74,874**

vi. PP confirmed that, he will submit detailed study report on Decarbonization program consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies within 1 year.

vii. PP confirmed that he will be adopted 3 villages i.e. NaktiKhapri, Bartori&Konari Villages for undertaking Social Infrastructural developmental activities.

viii. PP has submitted the revised EMP budget as per requirement. Same has been updated at para 2.14.14 above.

Observations of the Committee

2.14.20 The Committee noted the following:

i. The Committee noted that the EIA/EMP report for the proposed 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. In the existing MS black Pipe, ERW precision tube unit there is no Induction Furnace, Electric Arc Furnace, Re-heating furnace is involved for manufacturing MS Black Pipe, ERW precision Tube unit & GI Pipe unit. Hence, existing units are reported to be not covered under the purview of the EIA, 2006.

iii. 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.

iv. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

Recommendations of the Committee

2.14.21 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 following 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. Tailings from Iron Ore beneficiation plant shall be dewatered in filter press and no slime /tailing pond shall be permitted.

ii. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.

iii. Three tier Green Belt shall be developed in a time frame of one year covering 600.16 ha area with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC. In addition, Block plantation shall be done on vacant land within the premises of the plant.

iv. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

v. 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.

vi. Submerged Arc Furnace shall be of closed type with 4th hole extraction system.

vii. 85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil or LSHS as a fuel.

viii. Dust emission from stacks shall be less than 30 mg/Nm^3.

ix. The water requirement after the proposed expansion project is estimated as 2000 m^3/day and shall be met from also (Janjgira) Tank / Shivnath River. No ground water abstraction is permitted.

x. Rain water harvesting shall be implemented to recharge/harvest water to the tune of 74874 m^3 as committed.

xi. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.

xii. 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:

ii. 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 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
iii. 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) 31st 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 by trees.

ii. Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage after offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

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. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.

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

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

X. Miscellaneous

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

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the

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

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

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

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

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

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

viii. The project 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.

2.15 Proposed Expansion of Aluminium Smelter Production Capacity from 16 LTPA to 18 LTPA without increasing the CPP capacity of 1215 MW by **M/s. Vedanta Limited** located at Village- Bhurkamunda, PO Kalimandir, **District Jharsuguda, Odisha** - [Online Proposal No. IA/OR/IND/236646/2017, File No. IA-J-11011/29/2007-IAII(I)] – **Reconsideration for Environment Clearance based on ADS reply– regarding.**

2.15.1 M/s. Vedanta Limited, Jharsuguda has made an online application vide proposal No. IA/OR/IND/236646/2017 dated 03/11/2021 along with copy of revised 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) under Category "A" of the schedule of the EIA Notification, 2006 and is appraised at the Central level.

Detail submitted by Project proponent

2.15.2 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
03/11/2017	The proposal was considered by EAC (Industry – I) during its 26th meeting held during 11-13th Dec 2017.	Terms of Reference (ToR) granted.	20/12/2017	19/12/2022*

**The validity of ToR is extended from 19/12/2021 to 19/12/2022 as per the provision of the MoEF&CC Notification dated 18/01/2021.*

2.15.3 The proposed expansion project of M/s Vedanta limited is located in Bhurkamunda Village, Jharsuguda Tehsil, Jharsuguda District, Odisha State is for setting up of additional 2 LTPA smelter plant for enhancement of production capacity of Aluminium Smelter from 16 LTPA to 18 LTPA.

2.15.4 Environmental site settings:

<table>
<tr><th>SNo</th><th>Particulars</th><th>Detail</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>834.236 ha
[Private Land: 834.236 ha]</td><td>Land use: Industrial</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>The expansion facility is proposed in existing project area of 834.236 ha Total land of 834.236 ha is in possession of the M/s. Vedanta Limited. No additional land is required for proposed expansion.</td><td>-</td></tr>
<tr><td>iii.</td><td>Existence of Habitation &Involvement of R&R ,if any.</td><td>Project site: NIL

Study Area:<table><tr><td>Habitation</td><td>Distance</td><td>Direction</td></tr><tr><td>Jhasruguda</td><td>0.2 km</td><td>NW</td></tr></table></td><td>No R&R applicable</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the Project site</td><td><u>Latitude Longitude</u>
21°49” 43.0’’N 84° 02’ 40.7’’ E
21°48” 32.2’’N 84°03’ 53.7’’ E
21°46” 52.5’’N 84°03’ 2.91’’ E
21°48” 6.51’’N 84°01’ 48.29’’E
21°49” 3.01’’N 84°01’ 30.55’’ E</td><td>Topo sheet No. - F44R13, F44R14 & F45M1, F45M2</td></tr>
<tr><td>v.</td><td>Elevation of the Project site</td><td>198 m to 216 m AMSL</td><td>-</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No</td><td>-</td></tr>
</table>

<table>
<tr><th>SNo</th><th>Particulars</th><th>Detail</th><th>Remarks</th></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td><u>Project site:</u>
Name-Kharkhari Nala

<u>Study area:</u><table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Bhedan River</td><td>0.3 Km</td><td>South</td></tr><tr><td>IB River</td><td>8Km</td><td>West</td></tr><tr><td>Hirakud Reservoir</td><td>8 Km</td><td>South</td></tr></table></td><td>At confluence of Kharkhari Nala with Bhedan river HFL of Kharkhari Nala is 192.5m AMSL.</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/national park /wildlife sanctuary /biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td>NIL</td><td>No existence of Eco-sensitive zone within study area</td></tr>
</table>

2.5.26 The existing project was accorded environmental clearance vide letter no. J-11011/29/2007-IA II(I) dated 11th June 2008 for 16 LTPA of Aluminium Smelter and CPP of 1350 MW. Consent to Operate for the existing unit was accorded by Odisha State pollution Control Board vide letter No. 5324 dated 27.03.2021. The validity of CTO is up to 31.03.2022.

2.5.27 Implementation status of the existing EC:

S No	Facilities	Units	As per EC dated 11/06/2008	Implementation	Production as per CTO
1	Aluminium Smelter	16 LTPA	J-11011/29/2007-IA II (I), dated 11th June 2008.	Implemented	16 LTPA
2	Captive Power Plant 1215 MW	9 x 135 MW	J-11011/29/2007-IA II (I), dated 11th June 2008.	9 x 135 MW implemented	1215 MW

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

S No	Name	Existing Units		Proposed Units		Total (Existing +Proposed)	
		Configuration	Production in TPA	Configuration	Production in TPA	Configuration	Production in TPA
1	Aluminium Smelter	1864 pots in 6 Potlines, 4x35TPH Green Anode Plant, 5 units of Bake Oven,	16,00,000 TPA	66 pots in Potline-6, 1x60TPH Green Anode Plant, 1x120 RPH Rodding Unit,	2,00,000	1930 pots in 6 Potlines, 4x35 TPH & 1x60 TPH Green Anode Plant,	18,00,000 TPA

S No	Name	Existing Units		Proposed Units		Total (Existing +Proposed)	
		Configuration	Production in TPA	Configuration	Production in TPA	Configuration	Production in TPA
		1x90 & 1x160 RPH of Rodding Unit, 3 units of Casting		1 unit of Casting		5 units of Bake Oven, 1x90, 1x160 & 1x120 RPH Rodding Unit, 4 units of Casting	
2	CPP	9 units of 135 MW each	1215 MW	-	-	9 units of 135 MW each	1215 MW

2.15.6 The details of the raw material requirement after proposed expansion along with its source and mode of transportation is given below:

S No	Raw Material	Quantity required per annum in TPA			Source	Distance from site (Km)	Mode of Transportation
		Existing	Expansion	Total			
1	Alumina	30,88,000	3,86,000	34,74,000	Captive, domestic & import	500	Road, Rail
2	Calcined petroleum coke	5,93,600	74,000	6,67,000	Domestic & import	564	Rail
3	Cryolite	3,200	400	3600	Domestic & import	564	Rail
4	Aluminium fluoride	32,000	4,000	36,000	Domestic & import	564	Road
5	Coal tar pitch	1,28,000	16,000	1,44,000	Domestic	60	Road
6	HFO	84,263 KLPA	5,060 KLPA	89323 KLPA	Domestic	350	Road

2.15.7 The existing water consumption for smelter & CPP complex is 3,933 m^3/hr and the additional water requirement for proposed expansion is 24 m^3/hr (576 m^3/day). The total water consumption after expansion will be 3957 m^3/hr which is within the drawl permission 40.9 cusecs (4,169.35 m^3/hr) from Hirakud reservoir. The renewal of agreement between M/s. Vedanta Limited and Govt. of Odisha for obtaining water from Hirakud Reservoir made on 26/08/2020 and validity of agreement is up to 21/04/2023.

2.15.8 The power requirement for 2 LTPA Aluminium Smelter is estimated to be 400M. total power requirement after proposed project will be 3615 MW which will be obtained from the 1215 MW from Captive power plant and 2400 MW TPP.

2.15.9 Baseline Environmental Studies

Period	March, 2021 to May, 2021
AAQ Parameters at 8 Locations	$PM_{2.5}$ =27.0to 42 µg/m^3 PM_{10} = 50.2 to 76.3 µg/m^3 SO_2 = 10.9 to 27.2 µg/m^3

<table>
<tr><th>Period</th><th>March, 2021 to May, 2021</th></tr>
<tr><td></td><td>NOx = 12.9 to 32 µg/m^3
CO =251.6 to 430.4 µg/m^3</td></tr>
<tr><td>AAQ Modelling (Incremental GLC)</td><td>PM_{10} =0.85µg/m^3
$PM_{2.5}$ =0.51µg/m^3
SO_2 =8.0µg/m^3
NOx =6.88µg/m^3
Fluorides =0.007µg/m^3
B(a)P =0.00008µg/m^3</td></tr>
<tr><td>Ground water quality at 8 Locations</td><td>PH =6.73 to 7.43
Total Hardness = 58 to 92 mg/l
Chloride =18 to 41 mg/l
Fluoride =0.12 to 0.31 mg/l
Heavy metals are within the limits.</td></tr>
<tr><td>Surface water quality at 8 Locations</td><td>PH =6.74 to 7.36
DO =6.8 to 7.4 mg/l
BOD =1.0 to 1.6 mg/l
COD = 4 to 12 mg/l</td></tr>
<tr><td>Noise levels</td><td>49.7 to 67.9 dB(A)for the day time
40.1 to 60.2dB(A) for the Night time.</td></tr>
<tr><td>Traffic Assessment study findings</td><td>

Traffic study has been conducted at Bhurakamunda to Jharsuguda Road which is ~1.5 km from the plant site.
Existing PCU is 156 PCU/hr and existing level of service (LOS) is:

<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>Bhurakamunda to Jharsuguda Road</td><td>156</td><td>833</td><td>0.187</td><td>A</td></tr>
</table>

PCU load after proposed expansion project will be 165 PCU/hr (156 Existing + 9 Additional) and level of service (LOS) will be:

<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Proposed V/C Ratio</th><th>LOS</th></tr>
<tr><td>Bhurakamunda to Jharsuguda Road</td><td>165</td><td>833</td><td>0.198</td><td>A</td></tr>
</table>
*Note: Capacity as per IRC-73:1980 Guideline for capacity for non-urban highways.

Conclusion: the level of service will remain same as “A” after including additional traffic due to proposed expansion project.
</td></tr>
</table>

Period	March, 2021 to May, 2021
Flora & Fauna	Schedule I fauna, such as Monitor lizard, Indian Peafowl, & Indian Python are commonly found in the forest. Elephant, Sloth Bear are occasionally reported in the buffer zone of the project site. Site specific Wildlife Conservation Plan has been prepared and duly approved by PCCF (wildlife) & Chief Wildlife Warden, Odisha, vide letter no-4488/7 WL-FD & WLC-32/2021, dated 30/04/2021 with a financial forecast of Rs. 610.894 lakh for its implementation over a period of 10 years.

2.15.10 The details of solid and hazardous waste for the expanded plant generation along with its mode of treatment/disposal is furnished as below:

S No	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment /Disposal
1	Spent pot lining	Pot room	45,000 T	Disposed to authorized re-processors
2	Used oil/Spent oil	During Maintenance activity	562 KL	Disposed to Authorized recyclers
3	ETP sludge	ETP	585 T	Disposed to CHWTSDF
4	Anode butt	Carbon Plant	3,37,500 T	Internally recycled & disposed to Authorized Re-processors
5	Aluminium Dross	Cast house	39,375 T	Internal processing/recycling and disposed to authorized re-processors
6	Waste containing Oil	Maintenance activity	33.75 MT	Disposal through HW incinerator
7	Tar Containing wastes	Bake Oven	225 MT	Internal Recycling
8	Flue gas dust	Carbon Plant	129.375 MT	Internal Recycling/ Disposed to CHWTSDF
9	Housekeeping waste	Potline, Carbon Plant	2250 MT	Disposal in SLF/CHWTSDF/Internal Recycling
10	Rejected Filter bags (FTP)	Potline & Bake Oven	39,375	Incineration in HW incinerator/ Pots
11	Rejected ALF_3 bags	Pot line	39,375	Incineration in HW incinerator/ Pots
12	Asbestos waste	(Ladle cleaning and other units)	6.75 MT	Disposal in SLF/CHWTSDF
13	Coke dust	Bake Oven	2025 MT	Internal Recycling
14	Spent resin	Rectifier & DM plant	51.75 KL	Disposal in SLF/CHWTSDF

S No	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment /Disposal
15	Green anode ridge waste	Green Anode Plant (GAP)	67.5 MT	Internal Recycling/ Disposal in SLF/CHWTSDF
16	Green anode cooling decantation tank sludge	Green Anode Plant	6.75 MT	Disposal in SLF/CHWTSDF
17	Shot blasting dust	Rodding plant	6750 T	Disposed to SLF/CHWTSDF
18	Drain cleaning sludge	Carbon & pot room	281.25 MT	Disposed to CHWTSDF
19	Ladle cleaning residue	Ladle cleaning Shop	27,000 MT	Internal Recycling

2.15.11 Public Consultation:

Details of advertisement given	28/08/2020: Odia daily 'The Samaj' and English daily 'The Times of India'
Date of public consultation	30/09/2020
Venue	Government Upper Primary School, Kurebaga, Dalki in Jharsuguda district.
Presiding Officer	Shri Pradeep Kumar Sahoo, Additional District Magistrate, Jharsuguda
Major issues raised	• Emission of gas & fumes problem • Compensation for crop damage due to emission of gases • Road dust problem due to transport of ash • Employment for local affected people • Training and skill development programme for local youth • Employment for unskilled & illiterate local people • Contractual work to local people • Supply of drinking water • Provision of streetlight in the surrounding villages • Women empowerment

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

S No	Concerns Raised during Public Hearing	Physical Activity & Action plan for FY 2022	Tentative Budget in Rs. (Lacs)	Physical Activity & Action plan for FY 2023	Tentative Budget in Rs. (Lacs)	Total budget in Rs. lacs
1	Emission of Gas & fumes problem	Ordering for Fume Treatment Plant revamping including supply of equipment	1100	Revamping of Fume Treatment Plant (FTP 1, Smelter 1) by July 2022 and Balance 3 FTPs by March 2023.	3300	4400

S No	Concerns Raised during Public Hearing	Physical Activity & Action plan for FY 2022	Tentative Budget in Rs. (Lacs)	Physical Activity & Action plan for FY 2023	Tentative Budget in Rs. (Lacs)	Total budget in Rs. lacs
2	Compensation for Crop Damage due to emission of gases	Detailed study w.r.t Crop damage is being carried out by NRRI for 2 crop cycles	50	2nd Crop Cycle Study	-	50
		Distribution of 7 Quintal high yield variety of seeds, Fertilizers **(Completed)**		Training to Farmers on best agricultural practices for higher yield/production		
		Training Program to Farmers of 12 Villages				
3	Road dust problem due to transport of Ash	Construction and Commissioning of dedicated road for truck traffic to avoid entering Sunarimunda village and Jharsuguda town by July 2021 **(Completed)**	3100	Parking Plaza for 200 trucks entering and leaving the factory premises to be constructed at Brundamal with all facilities and amenities for drivers by Dec 2022	197	3297
		Installation of Wheel Wash System at the entry/exit of Factory premises by Dec 2022	80	-	-	80
4	Avenue Plantation & Other Afforestation	-	-	Plantation & Maintenance of 25,000 Saplings outside plant areas in consultation with DFO	100	100
Total			**4330**		**3597**	**7927**

Action plan for need base activity

S No	Concerns Raised during Public Hearing	Physical Activity & Action plan for FY 2022	Tentative Budget in Rs. Lacs	Physical Activity & Action plan for FY 2023	Tentative Budget in Rs. Lacs	Total budget in Rs. lacs
5	Formation of Environmental committee to address issues related to environment	Committee will be formed in consultation with district administration, SPCB, Local representative & company representative	-	-	-	-
6	Contractual work to local people	196 local contracts involving 52 local contractors	-	-	-	-

S No	Concerns Raised during Public Hearing	Physical Activity & Action plan for FY 2022	Tentative Budget in Rs. Lacs	Physical Activity & Action plan for FY 2023	Tentative Budget in Rs. Lacs	Total budget in Rs. lacs
7	Training & skill development for Local People.	Through Project Jeevika to enhance the income of farmers fraternity, covering 5 villages namely Gudigaon, Siriapalli, Keldamal, Bhagipalli, Bhurkamunda to 750 people	250	Through Project Jeevika to enhance the income of farmers fraternity, covering 5 villages namely Brundamal, Dalki, Katikela, Kumudapalli, Kurebaga to 750 people	250	500
		Skill development trainings to 150 numbers of youths through Vedanta Foundation from Banjari, Bhagipalli, Bhurkamunda, Brundamal	45	Skill development trainings to 450 numbers of youths through Vedanta Foundation from Dalki, Katikela, Kumudapalli, Sunarimunda, Gudigaon	135	180
		5,195 persons have been employed from Jharsuguda & Local affected villages	-	-	-	-
		More than 90% of our unskilled workforce is from Odisha	-	-	-	-
8	Health and establishment of medical college and hospital	Vedanta State of Art - Pathology & Diagnostic Centre at JSG benefiting >2.5 lac population providing services for BPL at free of cost & rest as per CGHS rates	2000	Vedanta State of Art Pathology & Diagnostic Centre at Laikera benefiting >2.5 lac population providing services for BPL at free of cost & rest as per CGHS rates	2000	4000
		COVID-19 initiatives for communities (distribution of ration, mask in large scale to community & frontline workers and Vaccine)	30	COVID-19 initiatives for communities (distribution of ration, mask in large scale to community & frontline workers and Vaccine)	20	50
		Supporting district COVID-19 Hospital - 100 bed + ventilators + lifesaving equipment	250	Supporting district COVID-19 Hospital - 100 bed + ventilators + lifesaving equipment	50	300
		COVID-19 support at state level	450	COVID-19 support at state level	50	500

S No	Concerns Raised during Public Hearing	Physical Activity & Action plan for FY 2022	Tentative Budget in Rs. Lacs	Physical Activity & Action plan for FY 2023	Tentative Budget in Rs. Lacs	Total budget in Rs. lacs
9	Supply of Drinking water	Drinking water supply through Overhead tank and pipelines in Banjari village to approx. 300 House Holds.	30	Drinking water supply in Siriapalli, Kurebaga to approx. 600 Households	70	100
10	Provision of streetlights in surrounding villages	Streetlights (including solar streetlights in 10 villages) 50 numbers in villages Orampada, Banjari, Tharkimal, Bhagipalli, Bhurkamunda	25	Streetlights (including solar streetlights in 10 villages) 50 numbers in villages Brundamal, Kurebaga, Kumudapalli, Gudigaon, Siriapalli	25	50
11	Road & Peripheral Development	Construction of RCC road 700 m & drainage facilities in Banjari village	100	Construction of RCC road 1300 m & drainage facility in Tharkimal village	200	300
		Cleaning/renovation of community ponds 17 numbers	43	Cleaning/renovation of community ponds 23 numbers	57	100
		Construction & Renovation of Community Centers/Place of worship/ Public gathering places around 4 core villages Kurebaga, Kherual, Brundamal, Bhurkamunda	100	Construction & Renovation of Community Centers / Place of Worship / Public gathering places around 6 core villages Banjari, Buromal, Badmal, Tharkimal, Gudigaon, Katikela	160	260
12	Education & Establishment of English Medium School	Partnering with State Govt. through "Mo School Abhiyaan" covering 4 Govt. Schools at Jharsuguda	80	-	-	80
		Renovation of 50 anganwadi for Nandghars covering 35 communities	200	Renovation of 50 anganwadi for Nandghars covering 35 communities	200	400
		Renovation of 10 school buildings + toilets	100	Renovation of 10 school buildings + toilets	100	200
			-	Developing 5 mini-science centre benefiting more than 1000 children	60	60

S No	Concerns Raised during Public Hearing	Physical Activity & Action plan for FY 2022	Tentative Budget in Rs. Lacs	Physical Activity & Action plan for FY 2023	Tentative Budget in Rs. Lacs	Total budget in Rs. lacs
13	Women Empowerment	Strengthening of SHG & promoting income generation activities through Subhalaxmi Cooperative Society - 5K members in 35 communities	300	Strengthening of SHG & promoting income generation activities through Subhalaxmi Cooperative Society - 5K members in 35 communities	300	600
Total			**4303**		**3377**	**7680**

2.15.12 The capital cost for the expansion project is Rs. 1240 Crores and the capital cost for environmental protection measures is proposed as Rs.96.16 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.5.80 Crores. The employment generation from the proposed expansion is 800 (250-direct & 550-indirect). The details of cost for environmental protection measures are as follows:

S No	Description of Item	Existing (Rs. In Crores)	
		Capital Cost	**Recurring Cost**
i.	Air Pollution Control/Noise	33.65	3.20
ii.	Water Pollution Control	55.50	2.60
iii.	Noise Management	0.90	-
iv.	Wildlife Conservation Plan Implementation	6.11	-
	Total	**96.16**	**5.80**
v.	Addressal to public consultation concerns	**156.07**	

2.15.13 Green belt has been developed in 275.29 ha which is 33% of the total project area. Local and native species have been planted with a density of 2500 trees per hectare. Total no. of 7,28,235 trees/saplings have been planted in 275.29 hectares within the industrial complex and ash pond area.

2.15.14 Name of the EIA consultant: M/s. Global Tech Enviro Experts Pvt. Limited [Sl. No. 102, List of ACOs with their Certificate No: NABET/EIA/2023/IA0066valid till 06/11/2023; Rev. 19, February 14, 2022].

2.15.15 Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration is given as below:

Writ Petition:

One Writ Petition was filed by Subrata Bhoi & others before the Hon'ble Orissa High Court on 24/09/2020 praying for deferring the public hearing scheduled on 30/09/2020 for the purpose of expansion of aluminium smelter from 16 LTPA to 18 LTPA. However, The Hon'ble High Court of Odisha disposed of the case by asking the petitioners to make a representation before the Collector, Jharsuguda. The Collector, after considering the said representation, passed an order dated 18/10/2020 in this matter holding, inter-alia, that 'the hearing conducted on 30/09/2020 about the proposed expansion of Aluminium Smelter at Bhurkamunda is considered smooth and complete.

The petitioners directly challenged the order dated 09/10/2020 passed by Single Judge before the SC, which vide order dated 26/07/2021 dismissed the SLP with liberty to approach High Court filing appeal before division bench. Thereafter, the petitioners filed Writ Appeal No. 711 of 2021 against the order dated 09/10/2020. The matter got listed on 15/12/2021 wherein the Court directed notice to be issued and passed and interim order stating that: *"if no environment clearance has been granted as of today, it shall not be granted till next date."* However, the Hon'ble High Court on 10/01/2022 heard the matter and disposed of the petition.

Parallelly, one Writ Petition was filed by P Ram Mohan Rao (WP 24790 of 2020) before the Orissa High Court with a prayer to defer the public hearing for the proposal for expansion of Smelter of Vedanta scheduled for 30/09/2020. The Hon'ble High Court heard the matter on 10/01/2022 and has disposed of the same. The Hon'ble High Court has also held that there is no legal impediment for the competent authority to proceed in accordance with law.

Another Writ Petition was filed by Ajay Kumar Patel (WP 25087 of 2020) before the Orissa High Court with a prayer to defer the public hearing for the proposal for expansion of Smelter of Vedanta scheduled for 30/09/2020. The Hon'ble High Court heard the matter for the first time on 20/01/2022 and has dismissed the matter.

- **NGT Case:**

  A petition was filed by Mr. Ajit Kumar Dhal, resident of Jharsuguda before the National Green Tribunal (NGT), Eastern Zone, Kolkata vide OA No. 10/2021/EZ on 28.01.2021 relating to the accidental spillage of fly ash on the petitioner's private plot at Junanimunda, Jharsuguda. The ash has been spilled during the monsoon because of the breach of one of the side slopes of permitted low lying area for reclamation. The entire spilled ash has been removed from the affected area and the said area has been reclaimed to its original condition at the cost of the company. Further, an amount of Rs. 5 Lakhs has been paid to the petitioner. A joint committee comprising of District Administration & Odisha State Pollution Control Board have submitted their report and the matter is awaiting procedural disposal from NGT and is listed for hearing on 08th April 2022.

- **Show Cause Notice**

  Under Section "5" of Environment (Protection) Act, 1986, a Show cause notice has been issued for non-compliance of stipulated Environmental Conditions vide F. No. J-11011/29/2007-IA.II(I) dated 01/09/2021 for which reply has been submitted vide letter No. VL/MOEF/006/2021-027 dated 29/09/2021 and additional action taken report submitted vide VL/MOEF/006/2021-031 on 23/10/2021.

Certified compliance report from Regional Office

2.15.16 The Status of compliance of earlier EC was obtained from Regional Office of MoEF&CC, Bhubaneswar vide letter no.101-405/EPE/1620dated 24/12/2020 after site visit carried out on 22/12/2020. Action Taken Report was submitted by Vedanta Limited to MOEF&CC, Regional Office on 05/01/2021. Based on the action taken report submitted, the Regional Office issued examination report vide Letter No. 101-405/EPE/91 dated 18/01/2021. The Integrated Regional Office, MoEF&CC, Bhubaneswar issued another examination of reply vide Letter No. 101-405/EPE/1335 dated 27/10/2021 on the basis of ATR report submitted by PP on 23/10/2021 against show cause notice issued Ministry letter dated 01/09/2021.

The details of the observations made by RO in the report dated 27/10/2021 along with its re-assessment/ present status is given as below:

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.		Re-assessment by RO
			EC date	Specific	
1	The fluoride consumption in the Smelter Plant is presently at 10.78 Kg/T Al, which is not in compliance to Charter on Corporate Responsibility for Environment Protection (CREP) guideline. Fluoride consumption shall be brought down to CREP standards of less than 10 kg/T.	The Project authorities have initiated action for reduction in the fluoride consumption by increasing the proportion of low sodium alumina. By this, it is contemplated by the project that the fluoride consumption would come down to 9.78 Kg/T from the present value of 10.78 Kg/T Al by Dec 2021. Further, as per action plan with implementation schedule, the project is to achieve a gradual decrease in the fluoride consumption over the next two years and finally achieve 8.88 Kg/T of Al by end of April 2023	11/06/2008	Specific condition vi &xvii	The condition has been complied with
2	Utilization of spent pot lining waste by the cement and steel industries are yet to be implemented.	As reported by the project authorities that SPL generated is being sent to an agency M/s Green Energy Resources, which is authorized for handling and recycling Hazardous Wastes for detoxification of SPL. This is in accordance with the SOP issued by CPCB. After detoxification, the agency in turn would send the material to various industries including cement and steel industries for its utilization. From the action plan, it is noted that the project has contemplated the utilization of SPL and the project is to achieve complete utilization of all the stock of SPL by end of Sept 2023.	11/06/2008	Specific condition ix	The condition has been complied with
3	Project proponent has only achieved green belt development in 27% of the total area as against the 33% requirement.	The project has carried out plantation of 3,32,893 saplings, which have been procured from the nurseries of OFDC, Jharsuguda and have planted over an area of 46.24 Ha within the industrial complex and around the ash pond. The density of plantation within the industrial complex is also undertaken. All this has been undertaken to achieve green belt of more than 27%.	11/06/2008	Specific condition xiii	The condition has been complied with

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.		Re-assessment by RO
			EC date	Specific	
4	Rainwater harvesting has not been carried out at the site by stating that the ground water table is high in the area and establishment of rainwater harvesting structures may lead to flooding in the area.	From the report, it is noted that developing rainwater harvesting recharge structures especially by the industries which fall under red category for which Aluminium smelter is one of them, is not recommended as per CGWA guidelines issued in Sept 2020. However, as a measure of water conservation and re-use the project authorities have developed facilities for roof top rainwater harvesting system which are seven in number within the complex with a total capacity of harvesting 10000 cubic meter water. One of the facilities have been commissioned, the rest 6 numbers of rainwater harvesting are to be completed by Nov 2021, so as to facilitate rainwater harvesting from next monsoon season.	11/06/2008	Specific condition xv	The condition has been complied with
5	Prior permission from the State Forest Department regarding impact of the existing project has been obtained till date.	It is noted that the project authorities have submitted the site-specific wildlife conservation plan to PCCF wildlife and Chief Wildlife Warden which has been approved by the authority on 30.04.2021 with a financial outlay of Rs. 610.894 lakhs to be spent for implementation by Forest department (Both Jharsuguda and Sambalpur Forest division) for this plan. Out of this amount, Rs. 530.904 Lakhs has already been deposited with DFO, Jharsuguda on 17.05.2021 towards the implementation of the Wildlife Conservation Plan for a period of 10 years. It is also stated that the mitigation measures for balance amount of Rs.79.99 lakhs will be executed by M/s Vedanta Ltd directly by March 2022.	11/06/2008	Specific condition xix	The condition has been complied with
5	Significant quantity of legacy ash stocks is still stored in the ash pond located at three different locations in the vicinity	From the report submitted, it is noted that the project authorities have been utilizing 115% Fly Ash utilization from the year 2017-18 onwards. It is	--	--	The condition has been complied with.

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.		Re-assessment by RO
			EC date	Specific	
	of the project site. No effort has been taken to quantify the legacy ash stocks and utilize the same.	also noted that there are 3 no. of Ash Ponds currently operational at Katikela, Kurebaga and Siriapalli catering to both CPP 1215 MW and TPP 2400 MW. It is also submitted by the project authorities that the ash being sent for utilization is stored/disposed to Ash Ponds by sending it through High Concentration Slurry Disposal (HCSD) system. Around 127.45 Lakh MT of Legacy Ash is stored in the Ash ponds for which the utilization is targeted to be completed within next 5 years. The project authorities have submitted a 5-year action plan for the fly ash being generated presently and also stored as legacy ash which is to be completed by the year 2026.			
7	SLF is provided inside the smelter complex. SLF is being implemented in two phases. Phase I of 5000 m3 capacity started in 2010 was capped in Sept 2013. Phase II of SLF is now in operation. It started in May 2014 and has 5285 m3 space. No details of the material filled in SLF or the capacity available were provided. No information on plan for post expansion of SLF capacity once the Phase II site is filled shall be furnished.	In the action taken report, the project authorities have submitted that no further expansion of SLF is required as all the wastes are being sent to RAMKY TSDF located at Sukinda. It is also submitted that the disposed in this SLF is proposed to be evacuated and disposed to authorized agency for detoxification.	--	--	The condition has been complied with
8	There are three ash ponds sites in operation and PP has proposed to acquire large area for ash disposal in spite of new Fly Ash notification to utilize 100 % ash. Further, PP mentioned that they were utilizing 100 % Fly ash since 2018 and the pond ash	It is submitted by the project authorities that a proposal for acquiring additional land for ash pond to be located at Gudigaon village has been approved by MoEF&CC in 2018 Amendment to EC for 2400 MW TPP (not for the aluminium smelter). The land has already been acquired by the project. It is submitted by	--	--	The condition has been complied with.

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.		Re-assessment by RO
			EC date	Specific	
	shall be liquidated in next five years: In view of this, seeking additional land for ash disposal found to be not justifiable.	them the ash pond has not yet been developed at this location and there is no plan to develop in future.			

2.15.17 M/s. Vedanta Limited, Jharsuguda had earlier made an online application vide proposal No. IA/OR/IND/185460/2007 dated 29/12/2020. The proposal was considered by the EAC in its meeting held on 18-20th January, 2021 wherein EAC recommended to return the proposal in its present form as consultant has drafted poor EIA/EMP report and intentionally tried to mislead the EAC. The consultant was warned not to mislead the Committee and not try to do such things in future. In case of further occurrence of the same, action against the consultant would be recommended.

2.15.18 M/s. Vedanta Limited, Jharsuguda has again made an online application vide proposal No. IA/OR/IND/222980/2017 dated 03/08/2021 along with copy of revised EIA/EMP report and Form–2 seeking Environment Clearance (EC) for the proposed expansion of Smelter Plant Capacity from 16 to 18 LTPA, 1215 MW CPP at Bhurkamunda village, District – Jharsuguda, Odisha under the provisions of the EIA Notification, 2006 for the project mentioned above.

2.15.19 The proposal cited above was considered by the EAC in its meeting held on 12-13th August, 2021. Wherein, EAC recommended to return the proposal in its present form and also recommended for issuance of show cause notice to PP on account of following non-compliances to the prescribed EC conditions.

i. The fluoride consumption in the Smelter Plant is presently at 10.78 Kg/T Al, which is not in compliance to Charter on Corporate Responsibility for Environment Protection (CREP) guideline. Fluoride consumption shall be brought down to CREP standards of less than 10 kg/t.
ii. Utilization of spent pot lining waste by the cement and steel industries are yet to be implemented.
iii. Project proponent has only achieved green belt development in 27% of the total area as against the 33% requirement.
iv. Rain water harvesting has not been carried out at the site by stating that the ground water table is high in the area and establishment of rain water harvesting structures may lead to flooding in the area.
v. Prior permission from the State Forest Department regarding impact of the existing project has been obtained till date.
vi. Significant quantity of legacy ash stocks is still stored in the ash pond located at three different locations in the vicinity of the project site. No effort has been taken to quantify the legacy ash stocks and utilize the same.
vii. Secured Land Fill (SLF) is provided inside the smelter complex. SLF is being implemented in two phases. Phase I of 5000 m^3 capacity started in 2010 was capped in Sept 2013. Phase II of SLF is now in operation. It started in May 2014 and has 5285 m^3 space. No details of the material filled in SLF or the capacity available were provided. No information on plan for post expansion of SLF capacity, once

the Phase II site is filled shall be furnished.

viii. There are three ash ponds sites in operation and PP has proposed to acquire large area for ash disposal in spite of new Fly Ash notification to utilize 100 % ash. Further, PP mentioned that they were utilizing 100 % Fly ash since 2018 and the pond ash shall be liquidated in next five years. In view of this, seeking additional land for ash disposal found to be not justifiable.

2.15.20 Accordingly, Show Cause Notice was issued to proponent on 01/09/2021. PP submitted the response to the SCN on 29/09/2021. Further, additional submissions were made on 23/10/2021. EAC has been requested by the Ministry to examine the SCN reply also while appraising the expansion proposal.

2.15.21 M/s Vedanta Limited, Jharsuguda made a revised online application vide proposal no. IA/OR/IND/236646/2017 dated 03/11/2021 along with copy of revised EIA/EMP report and Form–2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above.

2.15.22 The revised proposal was considered by the EAC in its meeting held on 11-12th November, 2021. The observations and recommendations of EAC are as follows.

2.15.23 The Ministry as well as the EAC members wherein receipt of a public representation on 12/11/2021 alleging that the unit is disposing of the fly ash in the nearby agricultural fields and causing pollution. In this regard, a case bearing no. 10/2021 is pending before the Hon'ble NGT, Eastern Zone.

Observations of the Committee held during 11-12th November, 2021

2.15.24 The Committee observed the following:

i. BOD in Surface Water quality has been indicated as 0.8 to 1.6 mg/l, the method used for analysis the BOD shall be furnished.

ii. EAC noted that the public representation mentioned at para 2.5.8 quoted a NGT court case (O.A. 10/2021/EZ) National Green Tribunal Eastern Zone Bench, Kolkata. The case is arising out of disposal of fly ash in the nearby agricultural land by the proponent causing damaging on the agricultural land. As per the Hon'ble NGT Order dated 2/09/2021, the inspection report filed by the Odisha State Pollution Control Board shows several violations of Consent conditions. In this regard, the Hon'ble NGT directed to file an affidavit inter-alia the Environmental Compensation assessed on account of damage caused to the environment.

iii. PP did not provide the information of said court case in Form 2 application and also did not disclosed during the presentation. EAC opined to seek an explanation from the PP in this regard.

iv. Project proponent has undertaken a study on the impact of the project on nearby agricultural fields.

v. Show Cause Notice was issued to the unit 1/09/2021 and as per the reply furnished, the unit is yet to comply with the following. Further, MoEF&CC is yet to take final view on the SCN issued to the unit.

   a. Current fluoride emission is at 10.78 Kg/T Al production and sought time till December 2021 to achieve reduced level.
   b. SPL refractory stock is 85,108 MT which is being stored in covered sheds as there is no mechanism is in place for disposal of SPL refractory stock.

c. Ash stock of 124 Lakh Metric Ton is unutilized and sought additional time for its liquidation by 31/03/2027.
d. Only one Roof Top Rainwater Harvesting (RTRW) has been commissioned and 6-RTRH, the construction activities are reported to be under progress.
e. Green belt development covering 33% of the project area will be achieved by Dec, 2021.

Recommendations of the Committee held during 11-12th November, 2021

2.15.25 In view of the foregoing and after detailed deliberation, the committee recommended to defer the proposal and sought the following additional information.

i. Ministry may forward the public representation to the project proponent. PP shall submit the point wise reply to the said public representation received on 12/11/2021 along with the requisite supporting documents. The details of environmental compensation made if any, shall also be submitted.
ii. Project proponent shall explain the reasons for not disclosing the court case details in Form 2 application (or) during the EAC presentation.
iii. PP shall submit the recommendation of interim report on impact of project on the crop by the plant and action plan to mitigate the impact on crop damage shall be submitted.
iv. PP shall submit the action plan for the liquidation 85000 MT SPL refractory waste inter-alia standard operating procedure for disposal of the same.
v. BOD in Surface Water quality samples have been reported as 0.8 to 1.6 mg/l, the method used for analysis the BOD parameter shall be furnished.

2.15.26 In addition to the afore mentioned ADS, information has also been sought on environment impacts occurred due to the non-compliances reported at para no. 2.15.21 above along with the remedial measures undertaken by the proponent on account of the said environment impacts.

2.15.27 The proponent submitted the ADS reply through PARIVESH on 02/12/2021 and 9/12/2021. Detail of ADS and point wise reply is given as below:

Reply of ADS given by project proponent submitted on 02/12/2021:

<table>
<tr><th>S No</th><th colspan="2">Details/ Information sought</th><th>Response by PP</th></tr>
<tr><td>1</td><td colspan="2">PP shall submit the point wise reply to the public representation received on 12/11/2021 along with the requisite supporting documents. The details of environmental compensation made if any, shall also be submitted.</td><td>The point wise response to the Public Representation is as mentioned below. It is to note that no such environmental compensation has been made in this regard.</td></tr>
<tr><td></td><td colspan="3"><table>
<tr><th>S No</th><th>Public representation point</th><th>Response by PP</th></tr>
<tr><td>i</td><td>At the outset, when Global Warming and Climate change is a big challenge for all nations and our Hon’ble Prime Minister has given his deliberation in Glasgow before a week regarding such, that time in India, our Experts and Statutory bodies are trying to promote the Corporate Houses by closing the eyes to all concerns for social impacts for their vested interest.</td><td>No Comments</td></tr>
<tr><td></td><td>The Experts Analysis Committee (EAC) formed by the Ministry of Environment Forest and Climate</td><td>M/s Vedanta Limited, Jharsuguda is going for an expansion of its Aluminium smelter plant</td></tr>
</table></td></tr>
</table>

S No		Details/ Information sought	Response by PP
		Change to regulate the Environmental Clearance to the Large-Scale Industries is going to be held on dated 12/11/2021, and it is the last meeting of the existing EAC members, being their tenure is turned out on dated 15/11/2021, so the Committee is going to sanction the Environmental Clearance to some Industries by not considering the logical and fundamental principles also. Let us take the example of M/s Vedanta Aluminium Limited, Jharsuguda, Odisha, who have applied for the expansion of 3million to 6million of their production, and in the agenda of EAC for dated 12/11/2021, it was not listed, but abruptly it was added in their list, while following matters are going to be taken on connivance in the EAC.	production capacity from 16 to 18 LTPA; and not from 3 million to 6 million.
		The same proposal was listed in the EAC meeting on last August and rejected because of noncompliance of the Company as well as pending cases in National Green Tribunal (NGT) for the mismanagement of the fly-ash of the Company, while those issues have neither complied nor the NGT has given clean chit to Vedanta, besides the Statutory bodies have given a report that the Company has given a commitment to comply all norms, is it a basis that, on a commitment of Corporate House, the norms to waived?	It is pertinent to note that the Company has formulated time bound action plans for compliance of these points raised by the Hon'ble EAC and has also submitted. Action Taken Report vide Letter No. VL/MoEF/006/2021 -031 dated 23/10/2021 to the MoEF&CC. In pursuance to the same, the Integrated Regional Office, Bhubaneshwar of the MoEF&CC has also examined all actions undertaken and has noted about significant progresses made by the Company vide its letter File No. 101 -4O5/EPE/1335 dated 27/10/2021. It is based on the above compliances that MoEF&CC has listed our proposal and considered our case for grant of EC in EAC meeting held on 12th November, 2021.
		The Public Hearing of the Company for such expansion has not been conducted in line with law, while the Public Hearing matter was pending in Hon'ble Odisha High Court and stay order was passed by Court for not to conduct Public Hearing, and interestingly, the day when Hon'ble Court has vacated the Stay Order, within one hour the Public Hearing was conducted and allowed to expand the Project is totally a "Sat-up" of official procedure.	It is humbly submitted that the Member Secretary, State Pollution Control Board, Odisha had published an advertisement on 27/08/2020 for conducting a public hearing on 30/09/2020 with respect to the proposed expansion of the aluminium smelter of the Company. The same was challenged before the Hon'ble High Court of Odisha vide WP (C) (PIL) No. 24669 of 2020 which was dismissed by a division bench vide Order dated 28/09/2020. Thereafter, another WP (C) No. 24789 of 2020 was filed seeking a stay on the public hearing and a stay order was granted by a single judge bench on 29/09/2020. However, on 30/09/2020, the stay was vacated and thus, the public hearing was conducted. It is pertinent to note that the Hon'ble High Court of Odisha vide its final Order in WP (C) 24789 of 2020 dated 09/10/2020 dismissed the petition and directed the District Collector, Jharsuguda to consider the representations of the Petitioner and

S No	Details/ Information sought		Response by PP
			pass necessary orders thereon in consultation with the stakeholders if another public hearing is to be conducted. In compliance of the same, the District Magistrate & Collector, Jharsuguda vide Order No. 17053/G&M dated 18/10/2020 passed an order stating that the public hearing conducted on 30/09/2020 with respect to the proposed expansion was conducted smooth and complete. It is also pertinent to note that the Hon'ble Supreme Court has also dismissed the Special Leave. Petition challenging the order of the Hon'ble High Court of Odisha dated 09/10/2020 vide its Order dated 26/07/2021. In the light of abovementioned facts and circumstances, it is humbly submitted that an effective public hearing was conducted for the proposed expansion of the aluminium smelter of the Company on 30/09/2020 which is in accordance with the law and with the MoEF&CC guidelines as well as the orders of the courts.
		If the peripheral agricultural lands have been damaged due to the fly ash decomposition of the existing 3 million tonnes production plant and case no. 10/2021/EZ is still pending in National Green Tribunal on the same matter, then can the members of EAC, imagine, what will be the consequences if the plant to be expanded up to 6 million tonnes?	At the outset, it is humbly submitted that the Company has applied for expansion of its aluminium smelter from 16 LTPA to 18 LTPA and not from 3 million tonnes to 6 million tonnes as mentioned in the public representation. Further, the Company has been achieving an average of 115% Fly Ash utilization in various avenues such as Cement manufacturing, Quarry filling, Road and Infrastructure Projects, Low lying area reclamation etc with due permission and complying to applicable rules and regulations. With respect to the referred case no. 10/2021/EZ, it is to note that a petition was filed by Mr. Ajit Kumar Dhal, resident of Jharsuguda before NGT, Eastern Zone, Kolkata vide OA no. 10/2021/EZ relating to accidental spillage of fly ash on the petitioner's private plot at Junanimunda, Jharsuguda. The ash has been spilled during monsoon because of breach of one of the side slopes of permitted low-lying area. The entire spilled ash has been removed from the affected area and the said area has been reclaimed to its original condition at the cost of the company. There has been no damage on the peripheral agricultural lands due to fly ash spillage and the expansion capacity as mentioned in the representation is not factual.
2	Project proponent shall explain the reasons for not disclosing the court case details in Form 2 application (or) during the EAC presentation.		The case pertains to accidental run off of Ash to a private land admeasuring 4.71 Acres and part of adjacent government land from our permitted low lying filling area during heavy monsoon. One portion of low-lying area duly filled with ash got breached due to heavy rains to a private land. The low-lying area filling is being done with due permission and in compliance with applicable

S No	Details/ Information sought	Response by PP
		rules and regulations. We have immediately removed the ash and cleaned the said affected area completely at our own cost. The area has been brought back to its original condition. As all remedial works/measures in this regard have been accomplished to the satisfaction of owners I petitioners at our own costs with due payments towards compensation to the owners of the affected land. Since the matter has been resolved/closed amicably and only procedural disposal from the Hon'ble NGT is awaited, hence the said case was inadvertently missed out in the Form 2. It is pertinent to note that there has been no stay in the matter and has no impact whatsoever on the expansion project.
3	PP shall submit the action plan for the liquidation 85000 MT SPL refractory waste inter-alia standard operating procedure for disposal of the same.	At present, A legacy stock of 85108 MT stored on concrete platform in covered sheds within plant premises. There is no Standard Operating Procedure (SOP) developed and approved by Central Pollution Control Board (CPCB) for disposal of SPL refractory Odisha State Pollution Control Board (OSPCB) has granted Consent to Establish (CTE) to M/s Tekno Processors LLP, for processing of Spent Pot Refractory Lining of Aluminium Smelter for production of Refractory Mortar & Ramming Mass having a capacity of 39266 MT subject to approval of technology and trial run by CPCB, Delhi. Once the SOP is developed and approved by CPCB which is expected by next 1 year, PP will be liquidating the entire stock along with the current generation of 1500 MT per month within next 3 years i.e., by Dec, 2025. However, PP is maintaining all safeguards for its proper storage to prevent any contamination by storing the same on concrete floors and under covered sheds having garland drains all around connected to ETP.
4	PP shall submit the recommendation of interim report on impact of project on the crop by the plant and action plan to mitigate the impact on crop damage shall be submitted.	ln view of the concerns raised during the public hearing PP is carrying out a study on the impacts of Primary and Secondary pollutants on soil and crops around our factory premises through ICAR - National Rice Research Institute (NNRI), Cuttack, Odisha. An interim preliminary half yearly report for the period from April - September 2021 on the study being conducted has been received. During the last EAC meeting held on 12/11/2021, it was suggested to expedite the study by adopting latest modelling techniques instead of doing it through the conventional method. Accordingly, PP has immediately approached NRRI about the same and an expert team is expected at PP's Jharsuguda site shortly for providing immediate recommendations for implementation based on the analysis results of collected samples for soil, water, air, forage and

S No	Details/ Information sought	Response by PP
		plants; thereby improving agricultural productivity as assured positively for earliest resolution of the issue.
5	BOD in Surface Water quality samples have been reported as 0.8 to 1.6 mg/l, the method used for analysis the BOD parameter shall be furnished	BOD of surface water was done using conventional titration method and found to be below detection limit. Therefore, a portable BOD meter (Model: HQ40 D) having a range to show BOD levels as low as 0.5 mg/l was used to measure BOD. Hence, the BOD value from the portable BOD meter was reported accordingly.

Reply of ADS given by project proponent submitted on 09/12/2021:

ADS Point: Submit additional information regarding environmental impact arisen out of non-compliances such as fluoride consumption, disposal of spent pot lining wastes, legacy ash stocks, rain water harvesting, green belt development, and recommendations of state forest department and respective remedial measures undertaken by the proponent.

Reply by PP:

A. For Fluoride Consumption:

There is no impact observed on the environment as we have taken requisite precautionary and remedial measures from time to time. Regular monitoring of air, water and soil quality is being carried out and the report is being submitted to OSPCB, CPCB and MoEF&CC periodically.

Broadly, the actions taken to keep the impacts on environment, on account of fluoride emissions in check are noted here below:

- Fume treatment Plants with dry scrubbers have been installed in Pot rooms and Bake Ovens for fluoride absorption and alumina enrichment.
- Real Time monitoring of Fluoride emissions is being done through CEMS. The fluoride emissions from the Fume treatment Plant stacks are being maintained well within the stipulated norms i.e., less than 0.65 mg/Nm^3 and reports confirming the same are being submitted to OSPCB monthly and to the Regional Office of the Ministry every six months.
- Surface as well as the groundwater quality is well within the standard limit as evident from the analysis reports and is monitored on a regular basis within plant premises and surrounding areas. The fluoride content from the courtyard is collected through drains and treated through ETP having adequate capacity and being controlled through RO technology. Zero Effluent discharge is being adhered to. As per data collected from 2014 to October, 2021 of, maximum fluoride in surface water is 0.52 mg/1 out of 7 locations and 0.53 mg/l in ground water out of 11 locations.
- The Forage fluoride reported in the surrounding areas during the last 5 years is less than 20 ppm against a limit of 40 PPM (average of 12 consecutive months) which indicates that the forage is not impacted by the fluoride emissions and are well within the notified limits for forage fluoride.
- Fluoride goes into the environment through stack and fugitive emissions and the balance fluoride is accumulated in the form of Spent Pot Lining (SPL) and bath material which gets recycled from time to time.
- Further, the periodic medical test results (Urine Fluoride report) of the people working in the plant (Pot rooms) indicates that there is no adverse effect due to fluoride on the health of the people. All the samples tested for urine fluoride are within

limit of ACGIH Pre shift value of 2mg/L and post shift value of 3 mg/l.

B. Disposal of Spent-Pot Lining wastes:

- The average SPL generation is around 37800 MT per annum. At present, there is a stock of around 33000 MT SPL Carbon and 87000 MT SPL refractory stored within our plant premises.
- SPL is currently stored in 4 no of covered sheds each of 40000 MT capacity. The SPL is being stored over a concrete platform within covered sheds where rainwater cannot enter at all. Thus, there is no chance of the stored SPL getting exposed to air or water and thus does not contribute to air or water pollution. However, as abundant precaution, these storage sheds have been provided with garland drains, which in tum are connected to the ETP. The ETP outlet is being monitored on regular basis and the results are well within the limits and treated effluent is being utilized within the plant.
- Around 5000 MT of SPL Carbon is also stored temporarily in the SLF (Phase II – 5285 m^3) under covered condition to prevent any leachate generation and the same will be evacuated and disposed to authorized agency for detoxification as per submitted plan. Leachate collection pit is in place for collection of leachates from SLF if any. Phase SLF having capacity of 5000 m^3 is already capped post obtaining approval from OSPCB.
- The groundwater quality around the SLF area is being monitored on regular basis and there is no contamination as evident for the reports being submitted to OSPCB and MoEF&CC.
- SPL Carbon is being currently sent to authorize re-processors with a plan to liquidate the entire legacy stock by September, 2023 as per action plan submitted to EAC on 12th November, 2021. SPL Refractory portion is currently getting stored in accordance with permission granted by OSPCB since there are no approved SOPs for its treatment and utilization. As informed earlier, work is under progress for SOP development with CPCB and developing vendor partner for disposal. As committed earlier, we expect the SOP to be developed within one year and are committed to dispose off the entire stock by December 2025. Storage of refractory portion of SPL is also being ensured with all precautions as for carbon portion and thus ensuring no impacts on the environment.

C. Legacy ash stocks:

- The annual fly ash generation is approximately around 9 - 9.5 MT/ Annum. PP is achieving an average of 115% fly ash utilization over the past 4 years where in PP has utilized about 39 Lakh MT of Legacy ash and for this year also, PP is on track to achieve more than 100% ash utilization as per fly ash notification 2009 and its subsequent amendments.
- PP has been utilizing ash in various avenues such as Cement manufacturing, Quarry filling, Road and Infrastructure Projects, Low lying area reclamation etc. with due approvals and complying to applicable rules and regulations.
- There are 3 no. of Ash Ponds currently operational at Katikela, Kurebaga and Siriapalli catering to both CPP 1215 MW and TPP 2400 MW. Around 127.45 Lakh MT of Legacy Ash is stored in the Ash ponds for which the utilization is targeted to be completed within next 5 years as committed by us in the last EAC meeting on 12'° November.

- The ash ponds have been properly designed and constructed having HDPE liners at the bottom to prevent seepage of water into groundwater. Free board is also maintained so as to prevent overflow of ash to the surrounding areas. The embankments are designed and maintained so as to avoid breaching under the most meteorological conditions.
- PP has adopted High Concentration Slurry Disposal System (HCSD) to dispose ash to the ash ponds which is an environment friendly technique for ash disposal. The quantum of surplus water is minimal resulting in very less surplus water available for seepage or even pumping back.
- Dust Suppression measures such as water sprinkling through mobile tankers is being carried out specially during the dry season. Ash laden trucks are covered with tarpaulin to avoid spillage.
- Regular monitoring of Air, Water & Soil quality is being carried out in the Ash Pond rea. From the above, it can be seen that there is no adverse impact on the environment due to ash disposal in the ash dykes.

D. Rainwater harvesting

- As per CGWB Ground Water Yearbook 2019- 2020 (Sept 2020) South-Eastern Region, Bhubaneswar, the ground water level in Jharsuguda region varies from 2.80 m to 8.50 m below ground level. The Post monsoon levels rise to 2 mbgl.
- The groundwater levels within the smelter complex as measured during the baseline monitoring in the pre monsoon season were found to be 2.53 — 3.18 mbgl.
- As per CGWA guidelines, Sep 2020, the industries falling under hazardous category should not implement any recharge measures within the plant premises. Therefore, we have installed and commissioned 7 no. of Roof Top Rainwater Harvesting systems with a total capacity of harvesting around 10000 m3 of rainwater and re-use the water in the plant which is around 0.01% of the water being drawn from the Hirakud reservoir.
- Further, during monsoon, the rainwater/surface run off collected in the plant premises is collected through storm water drains to the storm water reservoirs which act as a settling pit. The water collected during the 1% showers is treated through ETP for reuse and surplus treated water is discharged.
- In addition, PP has also augmented the capacity of 18 no's of community ponds in the surrounding villages by restoring & cleaning of the same and raising of embankment. Thus, there was no adverse impact on the environment on account of delayed compliance of this condition.

E. Green belt development:

- PP had covered around 27% of the total area with plantation as green cover till March 2021. Green cover helps in arresting of particulate matter. Although overall green cover area was little less than the stipulated norm of 33%, but no such major impact was observed in the ambient air quality.
- During the last 3 months, PP has carried out plantation of 3,55,556 saplings. This includes 116538 no. of saplings planted on 46.24 ha area (balance 6%) thereby achieving 33% green cover. Around 1,00,000 saplings planted in Katikela Ash Pond area. Further, PP has increased the plantation density to about 2500 trees/ hectare.
- As a remedial measure, PP is going to increase the green cover area beyond 33% by developing green cover on reclaimed ash ponds over an area of 40 Ha by Aug 2023,

plantation on additional land (37.5 Ha) outside plant premises in consultation with DFO, Jharsuguda by July 2024.

F. Recommendations of State Forest Department and respective remedial measures undertaken:

- The Principal Chief Conservator of Forests, (Wildlife) and Chief Wildlife Warden, Odisha has approved the site-specific wildlife conservation plan on 30/04/2021 with a financial forecast of Rs. 610.894 lakhs to be spent for implementation by the Forest Department (Both Jharsuguda and Sambalpur Forest Division) for this plan.
- Accordingly, as per the demand raised by the Divisional Forest Officer, Jharsuguda, an amount of Rs. 530.904 lakhs have been deposited on 17/05/2021 towards implementation of the abovementioned plan over a period of 10 years. The plan is under implementation by Forest Department. The mitigation measures for the balance amount of Rs. 79.99 Lakhs will be executed by Vedanta Ltd directly by March, 2022.
- All our raw materials and finished goods are being transported through dedicated roads and railway tracks without disturbing nearby forests and/or wildlife.
- PP is regularly interacting with the forest department and no negative feedback have been reported by them w.r.t impact on the nearby forests.

2.15.28 The said ADS replies as well as the reply submitted with respect to the Show Cause Notice dated 1/09/2021 was placed before the 49th REAC (Industry- 1 Sector) meeting held on 16-17th December, 2021 for taking appropriate view on the expansion proposal and the show cause notice.

2.15.29 During the course of meeting, EAC came across an Order dated 15/12/2021 of Hon'ble High Court of Odisha in Writ Appeal No. 711 of 2021 (SubratBhoi Vs State of Odisha) pertaining to the public hearing held for the instant expansion proposal wherein Hon'ble Court "directed that if no environment clearance has been granted as of today, it shall not be granted till next date listed on 10th January, 2022". Further, the Committee inferred that the said case was registered in the Hon'ble High Court on 7/09/2021 and no information has been furnished by the project proponent either in Form 2 application submitted vide proposal no. IA/OR/IND/236646/2017 dated 03/11/2021 or during the EAC meeting held on 11-12th November, 2021 and response to the ADS replies submitted on 2/12/2021 & 9/12/2021. The EAC took a serious view on the approach of the project proponent regarding repeated suppression of the court cases' information which are essential for due-diligence by the EAC for taking appropriate view on the expansion proposal as well as the show cause notice issued by the Ministry on 1/09/2021.

2.15.30 In this regard, project proponent claimed during the meeting that they became aware of the existence of court case bearing Writ Appeal No. 711 of 2021 only on 15/12/2021. Hence, the case details could not be made available.

Observations of the Committee held on 16-17th December, 2021

2.15.31 The Committee noted the following:

i. As per the Order dated 15/12/2021 of Hon'ble High Court of Odisha in Writ Appeal No. 711 of 2021 (Subrat Bhoi Vs State of Odisha) pertaining to the public hearing held for the instant expansion proposal wherein Hon'ble Court ***"directed that if no***

environment clearance has been granted as of today, it shall not be granted till next date. List on 10th January, 2022".

ii. The aforesaid case was registered in the Hon'ble High Court on 7/09/2021 and no information has been furnished by the proponent neither in the EC applicationnor during the EAC meeting held on 11-12th November, 2021 and response to the ADS replies dated 2/12/2021 & 9/12/2021.

iii. Project proponent is repeatedly suppressing the information regarding court cases relevant to the proposal under consideration which are essential for due-diligence by the EAC for taking appropriate view on the expansion proposal as well as the show cause notice issued by the Ministry on 1/09/2021. Thus, the project proponent is repeatedly trying to mislead the EAC as well as the Ministry with a malafide intention to obtain expansion EC by deliberately suppressing the vital information essential for due-diligence of the project. Further, it appears that there may be more number of court cases pending before different Hon'ble Courts pertaining to the project under consideration.

Recommendations of the Committee held on 16-17th December, 2021

2.15.32 In view of the foregoing and after deliberations, the Committee recommended to defer the consideration of the proposal and reply to the show cause notice dated 1/09/2021 till the outcome of the Writ Appeal No. 711 of 2021, pending before the Hon'ble High Court of Odisha at Cuttack or as directed by the Hon'ble High Court of Odisha from time to time. Further, the project proponent shall submit explanation regarding the suppression of the information regarding the status of court case at Odisha High Court (Writ Appeal No. 711 of 2021) and all other court cases relevant to the proposal under consideration. An affidavit containing details of all the court cases pending before different Hon'ble Courts pertaining to the project under consideration should also be submitted. All these submissions by the PP shall be considered along with their response to SCN dated 1/09/2021.

2.15.33 In this regard, additional information has been sought from the proponent and the same was submitted by the proponent on 01/03/2022 and 11/03/2022 through PARIVESH. The submissions made by the proponent are summarized as below:

A. Status of compliance to the issues raised in Show Cause Notice dated 01/09/2021.

In respect to show cause notice point wise response given by PP is as below:

SCN point No 1: Current fluoride emission is at 10.78 Kg/T of Al production and sought time till December 2021 to achieve reduced level.

Response of PP: The fluoride consumption in the Smelter Plant is presently at 10.00 Kg/T of Aluminium as reported last in the month of Jan 2022. The fluoride consumption for the last 4 months is as mentioned below:

S No	Month/Year	Specific Consumption (kg/T of Al)
1	September 2021	11.26
2	October 2021	0.92
3	November 2021	10.36
4	December 2021	9.94

5	January 2022	10.00

Further, PP will continue to work on the action plan to reduce fluoride consumption further given as below:

Table: The action plan with updated status for bringing it down to less than 10 Kg/T Al as per CREP guideline

S No	Key Focus Area	Control Measures	Methodology	Target Date	Investment (Crores)	Impact (Kg/T)	Fluoride consumption (Kg/T)	Status/ Remarks
1	Input Control	Procurement of low sodium content alumina	Increasing the proportion of low sodium alumina.	Dec'21	70.0	1.0	9.78	Continuous, At present, Fluoride Consumption is in the range of 10 Kg/ T of Al (Jan'22)
2A	Emission Control	Fume Treatment Plant (FTP 1) Revamping in smelter 1	Improved re-circulation feeder	Jul'22	11.0	0.1	9.68	Contract placed. Supply material is expected at site by March 2022. Balance site work is in progress
2B	Emission Control	Fume Treatment Plant Revamping in Smelter (Balance 3 FTPs)	Improved re-circulation feeder	March'23	33.0	0.3	9.38	--
3	Performance improvement	Smart Pot Implementation through GE	Advanced Analytics by Pot Digital Twin	March'23	25.0	0.1	9.28	Work in progress
4	Thermal Balance Optimization	Development of Indigenous Pot Controller	Tweaking the pot controller logic to get better AIF3 feed control and thermal balance	April'23	24.0	0.4	8.88	Pot Controller has been developed. It has been implemented on few pots

SCN point No 2: SPL refractory stock is 85,108 MT which is being stored in covered sheds as there is no mechanism in place for disposal of SPL refractory stock.

Response of PP: PP has disposed a total of 30060 MT SPL Carbon in the current financial year 2021-22. The current stock of SPL Carbon is about 26911 MT and SPL refractory is around 92053 MT. While SPL carbon is being disposed to OSPCB authorized agency which in turn is sending the detoxified material for further utilization in various industries including Cement and Steel industries, SPL refractory stock is being stored in covered sheds for disposal once approved SOP and disposal mechanism is in place. PP has been disposing SPL Carbon at an average rate of 3500 MT/month as committed to EAC during our earlier meeting and is evident from the table below:

S No	Month/Year	SPL Carbon Disposal (MT)
1	September 2021	4054

S No	Month/Year	SPL Carbon Disposal (MT)
2	October 2021	4564
3	November 2021	3595
4	December 2021	4737
5	January 2022	4174

Further, PP has also been granted authorization for disposal of SPL (Carbon & Refractory) to cement plants for co-processing as per CPCB approved guidelines. Additionally, Consent to Establish has been granted to M/s. Tekno Processors LLP for processing of SPL refractory lining of Aluminium smelter for production of refractory mortar & ramming mass for a capacity of processing around 40000 MT SPL refractory per annum.
PP has committed to liquidate the entire stock including current generation of SPL Carbon by September, 2023 and SPL refractory by December, 2025.

SCN point No 3: Ash stock of 124 Lakh Metric Ton is unutilized and sought additional time for its liquidation by 31/03/2027.

Response of PP: The current stock of Ash is around 112.5 Lakh Metric Ton which will be utilized as per our earlier submitted action plan. However, we are in advanced stages for exploring ash utilization in mine void filling and are committed to utilize the entire legacy stock by end of FY 2026 as committed to EAC during last meeting and as per the recent fly ash notification & guideline dated 31st December, 2021.

S No	Month/Year	Ash Generation (T)	Ash Utilization (T)	Ash Utilization (%)
1	September 2021	742406	706180	95
2	October 2021	629089	851876	135
3	November 2021	530685	945233	178
4	December 2021	570464	911732	160
5	January 2022	625368	802376	128

SCN point No 4: Green belt development covering 33% of the project area will be achieved by Dec 2021.

Response of PP: PP has done a plantation of 363968 nos. of saplings by end of December, 2021 thereby covering the entire smelter complex with 33% green cover in an area of 275 ha and having a total plantation of 728235 and survival rate of more than 93%.
Further, PP requested the forest department to supply us with 1,60,000 saplings this year for plantation during the monsoon.

SCN point No 5: Only one roof top rainwater harvesting (RTRW) has been commissioned and 6 RTRH, the construction activities are reported to be under progress.

Response of PP: PP has successfully completed the installation and commissioning of total 7 nos. of roof top rainwater harvesting facilities in November, 2021 with a capacity of harvesting more than 11000 m^3/annum. Also, PP conducting surface run off management study to harvest more surface run off water to be collected in ponds.

B. Information sought on environment impacts occurred due to non-compliances as **reported at para 2.15.4 above along with the remedial measures undertaken by the**

project proponent on account of the said environment impacts.

PP has submitted the detailed information on environment impacts occurred due to non-compliances along with the remedial measures undertaken vide our earlier letter no. VL/MOEF/006/2021-039 dated 8/12/2021 as mentioned at para 2.15.12 above. Further, in this regard an independent study was also carried out by IIT Kanpur on the environmental impacts arising out of the non-compliances. The findings of the said study are summarized as below:

Sl. No.	Environmental Indicator	Levels		Statistically Significant Trend	Remarks
		Reported	Standards/ international practices		
1	Fluoride Consumption	10.74kg/T (2021)	-	No Trend	Data show 14% decrease
2	SPL generation	16.60kg/t (2020)	22kg/t[(a)]	No Trend	Generation:36320 ton Sold: 11212t (2020-21) Including Legacy SPL
3	Fluoride uptake by forage(measured)	19 ppm	40 ppm	No trend at 5 locations and increasing trend at five locations	Reported Fluoride levels in the grass near other Aluminium smelter 16-70 ppm [©]
4	Fluoride in ground water	0.31-0.53 mg/L	1.5 mg/L [(d)]	No Trend	Complies with drinking water standards
5	Fluoride in surface water	0.16-0.49 mg/L	1.5 mg/L [(d)]	No Trend	Complies with drinking water standards
6	Fly Ash Utilization	100% from last 3 years	-	-	Complies with the fly ash notification. Legacy fly ash utilization is under progress.
7	Soil fluoride and deposition	65 to 100 mg/kg	90-190 mg/kg _(c)	Not done	Limited data for trend analysis
8	Fume Control: dry scrubbing and bag filters	99.7-99.8%	-	-	Exceptionally high control efficiency
9	Fluoride emissions	0.46 kg/t	0.52 kg/t [(a)] 0.65 kg/t [(b)]	Not done	Emissions are below the world average
10	Fluoride Balance	Fresh Fluoride: 11.47 kg/t	-	-	Pathways for fluoride distribution and losses fully established.
11	Fluoride uptake by vegetations	6.69 ppm	-	-	Based on the modelling, vegetation concentration is not likely to exceed 40 ppm 9MOEFCC Standard) even during critical periods of the years after expansion.

<u>Final recommendations of study report by IIT Kanpur</u>

a. Detoxify the stored SPL and utilize (value recovery or other means) in a time-bound manner.
b. Enhance the utilization of legacy fly ash in a time-bound manner in line with the new notification 31st December, 2021.
c. The area of sampling and analysis of fluoride in soil and forage should extend up to 10 kilometers radius of plant premises covering upwind and downwind directions. Further fluoride sampling and analysis should be taken quarterly at the

nearest irrigated lands growing crops, vegetables, and other products of human consumption.

d. The major emissions are from the pot room roof. The sampling frequency should be increased, and sampling is done at multiple locations.

e. The Vedanta Limited, Jharsuguda should continuously explore advanced technologies, operations, and quality of raw material to further reduce the fresh fluoride intake (less than 10 kg/t of Al) and emissions.

C. The project proponent shall submit explanation regarding the suppression of the information regarding the status of court case at Odisha High Court (Writ Appeal No. 711 of 2021) and all other court cases relevant to the proposal under consideration. An affidavit containing details of all the court cases pending before different Hon'ble Courts pertaining to the project under consideration should also be submitted:

PP submit that there has been always a bonafide disclosure by PP that there has been no willful suppression of information. PP would like to bring in kind attention that while the above-mentioned case had been registered on 07/09/2021, no notice had been issued nor the copy of the Writ Appeal was served on us by the Appellant in the ensuring period.

Therefore, PP was not aware of the filing of the case in the Hon'ble Orissa High Court at Cuttack. PP came to know about the said case only on 15/12/2021 when the case was listed for the very first time. It is further submitted that the copy of the Writ Appeal was served to us only on 15/12/2021 as per the directions of the Hon'ble High Court.

The Writ Appeal No. 711 of 2021 along with WP (C) No. 24790 of 2020 was heard on 10/01/2022 by the Hon'ble bench of Justice Jaswant Singh and Justice MS Sahoo whereby the Hon'ble High Court has disposed off both the Writ Appeals. Furthermore, the Hon'ble High Court has also held that there is no legal impediment for competent authority to proceed in accordance with law. A copy of the Hon'ble Orissa High Court orders dated 10/01/2022 and 20/01/2022 along with the affidavit containing details of all the court cases pending before different Hon'ble Courts pertaining to the project under consideration has been submitted in response to ADS

2.15.34 The Ministry and EAC was in receipt of the public representation dated 23/03/2022. Point wise reply and affidavits has been submitted by PP given as below:

S. No.	Representation points	Reply of Company
1.	That, M/S Vedanta Aluminium Limited coming under Jharsuguda district state of Odisha has illegally capture more than 2500 acers forest land with the support of IDCO government of Odisha inside plant without forest diversion of MOEF (Forest land capture copy enclosed) and manage two times production from beginning to till date without the approval of MOEF a gap of 13 year's this excess production matter came to the knowledge of public then the company try to maintain the process of environment clearance from MOEF, Vedanta completely violate the norms and conditions of MOEF.	We have acquired 2061 acres for the Aluminium Smelter and 1215 Captive Power Plant and have not encroached on any forest land. It is humbly submitted that there is no forest land inside the Smelter and CPP Complex as has been alleged by the Complainant. Further, the Company is producing aluminium within the permitted capacity as per the Consent to Operate (**CTO**)granted by the State Pollution Control Board, Odisha which is in accordance with the Environment Clearance (**EC**) granted by MoEF&CC, New Delhi on 11.06.2008. It is also submitted that we are compliant tothe norms and conditions

S. No.	Representation points	Reply of Company
		as stipulated by the MoEF&CC and other statutory authorities from time to time. Subsequently, the Company was granted CTO to operate the Plant. Accordingly, it is for the last 13 years that the Company is operating and producing aluminium within the permitted capacities.
2.	That, Jharsuguda district state of Odisha where the M/S Vedanta Aluminium LIMITED situated the complete district under the grip of pandemic corona time the public of the locality facing terrible condition due to lack of proper treatment but the said company manage foul game with conduct a public hearing on dt.30/09/2020 only to obtain the extension environment clearance certificate from MoEF&CC in back door. That, being a responsible registered environmental organization, we demand for a high level inquiry about physical verification of false and fabricated afforestation report which was submitted by the company in MOEF and complete proceedings of expansion public hearing High court case conspiracy W.A no.711 of 2021 and its related supreme court S.L.P(c) No.5140/2021 of the plant and conspiracy of all expansion related issues from beginning to till date.	With reference to allegations levelled on conducting the public hearing, it is submitted that the public hearing has been conducted as per the applicable provisions and statutory process of all regulatory agencies. The basic issue of conduct of public hearing was before the Orissa High Court in WP (C) No. 24789 of 2020 (Subrat Bhoi v State of Odisha &Ors.), wherein the Hon'ble High Court referred the matter to Collector, Jharsuguda vide order dated 09.10.2020. In compliance with the order of the Hon'ble Orissa High Court, the Collector has passed an order dated 18.10.2020 holding that the public hearing conducted on 30.09.2020 for the proposed expansion of the Company is smooth and complete. The order of the Hon'ble High Court was challenged before the Hon'ble Supreme Court in SLP (C) No. 5140 of 2021. The matter was heard on 26.07.2021 and the Hon'ble Supreme Court dismissed the SLP with the liberty to approach High Court by filing an appeal before division bench of Orissa High Court. Thereafter, the petitioners filed Writ Appeal No. 711 of 2021 against the order dated 09.10.2020. The Hon'ble High Court on 10.01.2022 heard the matter and has disposed of the petition. It is pertinent to note that WP (C) No. 24669 of 2020 (Anchalik Paribesh Surakhya Sangh v State of Odisha &Ors.) ***represented by the Complainant Himself Sri Satyanarayan Rao***was filed praying for the deferment of the public hearing to be conducted on 30.09.2020claiming that the same was being done during the pandemic and effective public hearing could not take place. The Division Bench of the Hon'ble High Court comprising of the Chief Justice, after detailed hearing on the merits, dismissed the petition with the following observation: *"9. In view of the above, we do not see any*

S. No.	Representation points	Reply of Company
		reason to accept the stands taken by the petitioner and to interfere in the matter. The writ petition lacks merit and is accordingly dismissed." Parallely, 2 similar petitions viz. WP (C) No. 24790 of 2020 (P Ram Mohan Rao v Union of India &Ors.) and WP (C) No. 25087 of 2020 (Ajay Kumar Patel v State of Odisha &Ors.) were filed before the Orissa High Court for deferment of the public hearing scheduled on 30.09.2020. The Hon'ble High Court heard WP (C) No. 25087 of 2020 on 20.01.2022 and has dismissed the matter. The Hon'ble High Court heard WP (C) N0. 24790 of 2020 on 10.01.2022 and has disposed of the same with the following direction: *"6. Thus, it is clear that there is no legal impediment for the competent authority, to proceed in accordance with law."*
3.	That, being a responsible registered environmental organization, we demand for a high level inquiry about physical verification of false and fabricated afforestation report which was submitted by the company in MOEF and cross check the complete proceedings of expansion public hearing High court conspiracy W.A. No.711 of 2021 and its related supreme court S.L.P (C) No.5140/2021 of the plant.	We would like to apprise the Hon'ble EAC and MoEF&CC that we have done afforestation/plantation to the extent of 3,63,968 number of saplings during the year 2021-22 thereby achieving 33% green cover. With reference to the proceedings of public hearing for the proposed expansion of the Company, the Collector, Jharsuguda vide order dated 18.10.2020 has concluded that the public hearing conducted for the proposed expansion has been smooth and complete. The Hon'ble Supreme Court has dismissed the SLP (C) No. 5140 of 2021 vide order dated 26.07.2021. Thereafter, the petitioners filed Writ Appeal No. 711 of 2021 against the order dated 09.10.2020. The Hon'ble High Court heard the matter on 10.01.2022 and accordingly, disposed of the case maintaining that the public hearing is in order.
4.	That, there are two smelter and power plant in our JHARSUGUDA district namely M/S Vedanta Aluminium & power Limited, At:-Bhurkamunda dist-Jharsuguda purely private owned company and a state government owned PSU company Odisha Power Generation Corporation Limited, Ib Thermal Power Station , Banharpali district - Jharsuguda. But sorry to say the state government owned PSU company OPGC Banharpali Jharsuguda pay all dues, royalty, revenue cess, labour cess and water cess (payment copy	It is humbly submitted that the Company is in full compliance of the BOCW and Cess Act and we have paid 6.84 Crores payable for the construction of the project and the Company has communicated the same to the District Labour Officer, Jharsuguda vide letter dated 29.01.2021. Apart from above, the Company is regularly making payments including royalty, tax, cess, etc. to the authorities.

S. No.	Representation points	Reply of Company
	enclosed for reference) in other hand the private owned M/S Vedanta Aluminium LIMITED refuse to pay the dues/ royalty/ tax/cess inspite of repeated request by the revenue authority and play round foul game in the name of court case. OPGC Banharpali Jharsuguda pay all projects cost's 1% labour CESS dues but Vedanta Aluminium limited suppress the labour cess and royalty issue with the blessings and support of state government and file a case in High court of Odisha in W.P(C) No.15924 of 2009 the said case is dismissed on dt.4/09/2010(High court dismissed copy enclosed for your reference),once again the company challenge the High court order in supreme court of India in SLP (CIVIL) No.27411 this is also dismissed on dt.18/10/2016(SLP dismissed copy enclosed) but the execution authority office of the labour commissioner JHARSUGUDA government of Odisha remain silent instead of collection of labour cess.	
5.	That, an order of High court in WP(C) No.2660 of 2015 and order copy of revenue and disaster management department no.9542/23 March 2019 Forwarded to RDC, collector, DFO, sub collector, Tahasildar JHARSUGUDA for necessary action, according to this letter District office: Jharsuguda (Revenue section) order no 3054/dt.4/05/2019 withdraw the forest land permission around 48.68 decl plot no.188 under khata no.108 Bhurkamunda under Jharsuguda Tehsil but sorry to say the all official process is till date only in ice-box	At the outset, it is humbly submitted that the Plot No. 188 under Khata No. 108 in Mouza Bhurkamunda, is falling outside the premises of the plant of the Company. Additionally, it is submitted that the Sub-Collector, Jharsuguda has passed an order dated 06.09.2017 in EA Case No. 03 of 2014 and has held that there is no physical encroachment by the Company on Plot 188 and other plots of Khata No. 108 of Mouza Bhurkamunda. It is to note that the order of the Sub-Collector is a judicial order and the same has never been interfered with by way of an appeal in any forum.
6.	That, the pollution condition of the Jharsuguda district is alarming situation due to overburden industrialization, the environment of the district unable to afford the load of extra expansion of existing plants or any other new industry, already our Jharsuguda district recorded as a most polluted city in India and latest forest growth of Jharsuguda is only 14% instead of actual 35% according to the population ratio. The side effects of illegal waste and coal fly Ash of Vedanta reflected in all restricted/prohibited zone like Gochar land, Agricultural land, forest land and destroy the nearby water bodies like IB, Bheden, Mahanadi, Banjari nalla, kharkharinalla, Hatia nalla alongwith upstream branches of historical Hirakud reservoir with coal fly Ash which guidelines reclamation of lowland fixed by CPCB and SPCB everywhere in entire district ash ashash and causes of different disease. Now the historic	It is humbly submitted that we have been handling and disposing of wastes including fly ash as per the statutory guidelines and after obtaining necessary permission from SPCB, Odisha. The statements in the representation have been made to mislead the forum and defame the Company. The Company has been established with the due approval and is operating with all the requisite clearances. It is submitted that the Company is committed to the best Environment Management Systems including Air, Water and Solid Waste Management. The Environment Management, Energy Conservation and Sustainability practices of the Company have been recognized by the Government and also by the various trade bodies / associations. We have also laid down procedures and standard operating practices

S. No.	Representation points	Reply of Company
	Hirakud reservoir in danger condition due illegal coal fly Ash disposal	regarding Air, Water and Waste Management and have been certified with Integrated Management Systems (IMS) comprising of ISO 9001, ISO 14001 and ISO45001. It is also submitted that the Company embarked on its sustainability journey more than a decade ago and as a part of overall design and framework, we recognize Environment, Social and Governance (ESG) as an important pillar that guides our business decisions. We aim not only to be ESG compliant but aspire to become an Industry leader in having sustainable operations and governance.
7.	That, the Vedanta Aluminium LIMITED failed to maintain the guidelines of MoEF&CC which was fixed in first public hearing held on 2008 and maintain everything with the illegal support of state government and local political mafias in gun point.	The Company has submitted the compliance status of all the conditions of the EC granted on 11.06.2008 to the Hon'ble EAC during the appraisal of the proposed expansion of the Aluminium Smelter from 16 LTPA to 18 LTPA.
8.	That, the Vedanta Aluminium limited not maintain the proper guidelines of Ash management and overlooked entire norms and conditions of MoEF&CC from beginning. The company killed more than 2500 acre high density natural forest in kurebaga, katikela, Sibrampur, kumuda Pali siriapali, Kali bahal,parmanpur, sodamal, junanimunda and a NGT case no.10/2021 also pending in eastern region National Green Tribunal Kolkata in this case also the company manage everything with the blessings and blind support of JHARSUGUDA district administration (copy enclosed) and purchase the applicant with money.	The Company has a robust ash management system with a competent team comprising of environment and technical professionals for sustainable disposal of ash generated from its Thermal Power Plants. In furtherance, we have ensured more than 100% utilization of fly ash generated in the past 4 years and are committed to utilize the entire legacy ash stock by end of FY 2026 as committed to the Hon'ble EAC in line the recent fly ash notification & guidelines dated 31st Dec 2021 issued by the MoEF&CC. With respect to OA 10 of 2021 (Ajit Dhal v State of Odisha), it is submitted that the Company has already removed the spilled ash from the affected land and reclaimed it to the original status. The area has been inspected by the Joint Committee comprising of the District Collector, Jharsuguda and Regional Officer, Jharsuguda of the State Pollution Control Board, Odisha which has submitted an affidavit before the Hon'ble NGT stating that all ash has been removed by the Company at its own cost and all the recommendations of the Joint Committee have been complied with by the Company. Apart from above, the Joint Committee has also advised that a study may be carried out to verify the geotechnical strength of earthen embankment by National Accreditation Board for Testing and Calibration Laboratories (NABL) certified Laboratories or Institute of National Repute like NITs/IITs by Vedanta at its own cost for

S. No.	Representation points	Reply of Company
		which we have already initiated the study through IIT Bhubaneshwar.

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

M/s. Vedanta Limited has confirmed in the form of affidavit dated 22/03/2022 about court case related to project cited above and correctness of data/ information submitted in reply of public representation dated 23/03/2022 as mentioned at para 2.15.22 above.

Observations of the Committee

2.15.36 The Committee noted 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 also found the baseline data and incremental GLC due to the proposed project within NAAQ standards.
ii. The EAC also deliberated on the certified compliance report of RO and action taken report submitted by PP, written submissions, public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.
iii. The EAC found that the response submitted by PP on additional detail sought by EAC in earlier meeting was satisfactory.
iv. Affidavits and a point wise reply to the public representations submitted by PP were satisfactory.
v. The Committee also deliberated upon the reply submitted by the proponent against the show cause notice 01/09/2021. The committee satisfied with the SCN replies.
vi. The committee noted that there are schedule 1 species present in study area for which PP has obtained approved conservation plan dated 30/04/2021 with a budget of Rs. 610.894 lakh for its implementation over a period of 10 years.
vii. The Committee noted that M/s. Vedanta Limited engaged to IIT, Kanpur as the competent agency for carried out the impact study of Fluoride, SPL, Legacy Ash and Fluoride Mass Balance at Vedanta limited, Jharsuguda. After completion of study IIT, Kanpur made recommendation as given below:
    a. Detoxify the stored SPL and utilize (value recovery or other means) in a time-bound manner.
    b. Enhance the utilization of legacy fly ash in a time-bound manner in line with the new notification 31st December, 2021.
    c. The area of sampling and analysis of fluoride in soil and forage should extend up to 10 kilometers radius of plant premises covering upwind and downwind directions. Further fluoride sampling and analysis should be taken quarterly at the nearest irrigated lands growing crops, vegetables, and other products of human consumption.
    d. The major emissions are from the pot room roof. The sampling frequency should be increased, and sampling is done at multiple locations.
    e. The Vedanta Limited, Jharsuguda should continuously explore advanced technologies, operations, and quality of raw material to further reduce the fresh fluoride intake (less than 10 kg/t of Al) and emissions.

Recommendations of the Committee

2.15.37 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 following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to Aluminum smelter based on project specific requirements. Further, the EAC also recommended that SCN issued to project proponent on 01/09/2021 may be withdrawn.

A. Specific conditions

i. The project proponent shall abide by all orders and judicial pronouncements, made from time to time in OA No. 10/2021/EZ pending before the National Green Tribunal (NGT), Eastern Zone, Kolkata.

ii. The poly-aromatic hydrocarbons (PAH) from the carbon plant (anode bake oven) shall not exceed 2 mg/Nm^3. The data on PAH shall be monitored quarterly and report shall be submitted regularly to the Ministry/Regional Office at Bhubaneshwar and Odisha Pollution Control Board.

iii. A nallah is passing through the project site, PP shall maintain the nallah in its natural form and provide the green buffer zone of 10 m on both side of the nallah.

iv. Particulate fluoride emissions shall not be more than 0.65 mg/Nm^3 and fugitive particulate fluoride emissions from pot room shall not be more than 1.85 mg/Nm^3.

v. Project proponent shall maintain the Fluoride consumption less than 10 kg/tone of Aluminium production by April, 2022 and reduce further at 8.0 kg/t by April, 2023 as committed by PP.

vi. Three tier Green Belt shall be developed in a time frame of one year covering 33% of total area with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. This shall include development of green belt of 50 width from the project site towards the Jharsuguda village located at 0.2km from the site. In addition to this, following activities shall also be undertaken as committed by the proponent:
   - Green cover on reclaimed ash ponds over an area of 40 Ha shall be developed by June 2022.
   - PP shall undertake plantation over 37.5 ha outside plant premises in consultation with DFO, Jharsuguda.

vii. Present stock of SPL carbon (36320 T) and legacy SPL stock shall be liquidated by Sep, 2023 as committed.

viii. Refractory SPL stock (40000 T) stored in covered shed on concrete floors shall be disposed of Dec, 2025 as committed.

ix. PM levels shall be less than 30 mg/Nm^3 for all units under expansion. In case of older units, PP shall initiate retrofitting/modification action to achieve the PM emission level of 30 mg/Nm^3 by October, 2024.

x. Wastes shall be sent to RAMKY TSDF located at Sukinda. Further, waste disposed in this SLF shall be evacuated and disposed to authorized agency for detoxification as committed by PP.

xi. PP shall use Roof Top Rainwater Harvesting systems with a total capacity of around 10000 m^3 of rainwater and re-use the water in the plant.

xii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium sector shall be strictly implemented.
xiii. PP shall utilize 100% ash as per Fly Ash Notification 2021 and its subsequent amendments. Further, legacy ash shall be utilized completely by 31/05/2027 as committed by PP.
xiv. Dust Suppression measures such as water sprinkling through mobile tankers is being carried out especially during the dry season. Ash laden trucks are covered with tarpaulin to avoid spillage.
xv. Regular monitoring of Air, Water & Soil quality shall be carried out in the Ash Pond area.
xvi. Performance monitoring of pollution control equipment shall be taken up yearly and compliance status in this regard shall be reported to RO.
xvii. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.
xviii. The area of sampling and analysis of fluoride in soil and forage should extend up to 10 kilometers radius of plant premises covering upwind and downwind directions. Further, fluoride sampling and analysis should be taken quarterly at the nearest irrigated lands growing crops, vegetables, and other products of human consumption.
xix. The major emissions are from the pot room roof. The sampling frequency should be increased, and sampling is done at multiple locations. The laser-based advance technology shall be adopted to continuously monitor gaseous fluoride emissions from pot rooms on real time basis by March, 2023.
xx. Wheel Washing mechanism shall be provided in entry and exit gates with complete water recirculation system
xxi. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface

B. General Conditions

I. Statutory compliance:

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

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as 4 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 labs recognized under Environment (Protection) Act, 1986.
iii. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
iv. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;
v. The project proponent shall provide wind shelter fence and chemical spraying on the raw material stock piles;
vi. Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, and cement bagging plants.
vii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
viii. Adopt measures to recover fluoride gas from electrolytic cells and recycle the same in the process.
ix. Practice use of low-Sulphur tars for baking anodes.
x. Make efforts to increase the life of pot lining through better construction and operating techniques.
xi. Design the pot roofs with louvers and roof ventilators

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 742 (E) dated 30thAugust 1990 and further amended vide G.S.R 46 (E) dated 3rd February 2006(Aluminium); S.O. 3305 (E) dated 7th December 2015(Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
iii. 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. Water meters shall be provided at the inlet to all unit processes in the cement plant.
vi. The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

ii. 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;

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

VI. Waste management

i. Used refractories shall be recycled.

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

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.

ii. Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

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. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.

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, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

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

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

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

viii. The project 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.

2.16 Establishment of Iron ore beneficiation (8,00,000 TPA), Pellet Plant (6,00,000 TPA), DRI Kilns (6,60,000 TPA), Induction Furnace with matching LRF & CCM (Billets/ Ingots/ Hot Billets) (2,97,000 TPA), Rolling Mill (TMT Bars/ Structural Steel) (3,63,000 TPA), Ferro Alloy Unit 2 x 9 MVA (FeSi-14000 TPA/ FeMn-50400 TPA/ SiMn-28800 TPA/ FeCr-30000 TPA), WHRB based Power Plant – 50 MW (4 x 12.5 MW), FBC based Power Plant - 24 MW(2 x 6 MW & 1 x 12 MW) & Brick Manufacturing unit (58,000 Bricks/Day) & Briquetting Plant (200 Kg/Hr.) by **M/s. Karnikripa Power Private Limited** located at Khairjhitti&Koajhar Village, **Mahasamund Tehsil & District, Chhattisgarh**. [Online Proposal No. IA/CG/IND/208264/2021; File No. IA-J-11011/154/2021-IA-II(I)] – **Environment Clearance – regarding.**

2.16.1 M/s. Karnikripa Power Private Limited has made an online application *vide* proposal no. IA/CG/IND/208264/2021 dated 05/03/2022 along with copy of EIA/EMP Report, Form - 2 and 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), 2(b) Mineral Beneficiation and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

2.16.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
08/04/2021	35th EAC held on 30th April 2021	TOR issued	17/05/2021	16/05/2025

2.16.3 The project of M/s. Karnikripa Power Private Limited located in Khairjhitti & Koajhar Village, Mahasamund Tehsil & District, Chhattisgarh State is for Establishment of Iron ore beneficiation (8,00,000 TPA), Pellet Plant (6,00,000 TPA), DRI Kilns (6,60,000 TPA), Induction Furnace with matching LRF & CCM (Billets/ Ingots/ Hot Billets) (2,97,000 TPA), Rolling Mill (TMT Bars/ Structural Steel) (3,63,000 TPA), Ferro Alloy Unit 2x9 MVA (FeSi-14000 TPA/ FeMn-50400 TPA/ SiMn-28800 TPA/ FeCr-30000 TPA), WHRB based Power Plant – 50 MW (4x12.5 MW), FBC based Power Plant - 24 MW(2x6 MW & 1x12 MW) & Brick Manufacturing unit (58,000 Bricks/Day) & Briquetting Plant (200 Kg/hr).

2.16.4 Environmental Site Settings:

SNo	Particulars	Details	Remarks
i.	Total land	50.57 ha (124.95 Acres) [Private land: 50.57 ha]	Land Use: Agriculture
ii.	Land acquisition	Agreement have been entered with	--

<table>
<tr><th>SNo</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td>details as per MoEF&CC O.M. dated 7/10/2014</td><td>landowners for 40.71 Ha. (100.59 acres) of land. and remaining 9.86 Ha. (24.366 Acres) of land is under process</td><td></td></tr>
<tr><td>iii.</td><td>Existence of habitation &involvement of R&R, if any.</td><td>No habitation exists in the project site<table><tr><td>Habitation</td><td>Distance</td><td>Direction</td></tr><tr><td>Khairjhit</td><td>0.5 km</td><td>SE</td></tr><tr><td>Tenduwahi Alias Nawagaon</td><td>0.7 km</td><td>NE</td></tr><tr><td>Gopalpur</td><td>1.2 km</td><td>SSW</td></tr></table></td><td>--</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>S No</th><th>Latitude</th><th>Longitude</th></tr><tr><td>1.</td><td>21°12'28.18"N</td><td>82° 8'39.08"E</td></tr><tr><td>2.</td><td>21°12'32.06"N</td><td>82° 8'33.26"E</td></tr><tr><td>3.</td><td>21°12'38.75"N</td><td>82° 8'26.88"E</td></tr><tr><td>4.</td><td>21°12'42.24"N</td><td>82° 8'26.73"E</td></tr><tr><td>5.</td><td>21°12'37.84"N</td><td>82° 8'6.70"E</td></tr><tr><td>6.</td><td>21°12'49.39"N</td><td>82° 8'7.08"E</td></tr><tr><td>7.</td><td>21°12'56.72"N</td><td>82° 8'12.34"E</td></tr><tr><td>8.</td><td>21°12'59.15"N</td><td>82° 8'19.25"E</td></tr><tr><td>9.</td><td>21°12'58.36"N</td><td>82° 8'27.31"E</td></tr><tr><td>10.</td><td>21°13'3.12"N</td><td>82°8'29.91"E</td></tr><tr><td>11.</td><td>21°12'45.59"N</td><td>82° 8'37.23"E</td></tr><tr><td>12.</td><td>21°12'33.93"N</td><td>82° 8'37.66"E</td></tr><tr><td>13.</td><td>21°12'29.58"N</td><td>82° 8'40.81"E</td></tr><tr><td>14.</td><td>21°12'32.22"N</td><td>82° 8'40.72"E</td></tr><tr><td>15.</td><td>21°12'35.99"N</td><td>82° 8'38.48"E</td></tr><tr><td>16.</td><td>21°12'41.80"N</td><td>82° 8'38.30"E</td></tr><tr><td>17.</td><td>21°12'40.09"N</td><td>82° 8'43.20"E</td></tr><tr><td>18.</td><td>21°12'37.83"N</td><td>82° 8'44.49"E</td></tr><tr><td>19.</td><td>21°12'35.38"N</td><td>82° 8'42.11"E</td></tr></table></td><td>--</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>274 to 281 m AMSL</td><td>--</td></tr>
<tr><td>vi.</td><td>Involvement of Forest Land, if any</td><td>Not Forest land is involved in the project site.</td><td>--</td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td><u>Project Site</u>:<table><tr><th>Water Body</th><th>Distance</th></tr><tr><td>Unused Canal</td><td>Ending into the project site (in South West Direction)</td></tr><tr><td>Tributary of Dhaskut Nala</td><td>Passing through the site on the Eastern side.</td></tr></table><u>Study area:</u><table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Water pond</td><td>0.4 km</td><td>ESE</td></tr><tr><td>Water Pond</td><td>0.35</td><td>NNE</td></tr></table></td><td>--</td></tr>
</table>

SNo	Particulars	Details			Remarks
		Kurar river	2.6 Km	South	
		Kurar Water Reservoir	3.8 Km	SE	
		Mahanadi river	8.5 Km	NW	
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 forests are located within study area: Tumgaon RF: 0.5 Km – SW Sirpur RF: 1.28 Km – East Kukradih RF: 3.8 Km – NW Sorid PF: 4.1 Km – S Loharidih PF: 7.6 Km – SE			---

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

S No	Plant Equipment/ Facility	Unit	Configuration	Capacity	Remarks
1	Iron ore Beneficiation (Beneficiated ore)	TPA	--	8,00,000 (Throughput)	--
2	Pellet Plant (Pellet)	TPA	--	6,00,000	--
3	DRI Kilns (Sponge Iron)	TPA	4x500 TPD	6,60,000	--
4	Induction Furnace (Billets / Ingots / Hot Billets)	TPA	6x15 T	2,97,000 TPA	--
5	Rolling Mill (TMT bars / Structural Steel)	TPA	1x1100 TPD	3,63,000 TPA	(85 % Hot charging with Hot Billets and remaining 15% through RHF with LDO as fuel)
6	Ferro Alloys Unit (FeSi / FeMn / SiMn / FeCr)	TPA	2x9 MVA	FeSi-14,000 or FeMn-50,400 or SiMn-28,800 or FeCr-30,000	--
7	Brick Manufacturing Unit	Bricks / Day	--	58,000	--
8	Briquetting Plant*		200 Kg/Hr	--	--
9	Power Plant	MW	WHRB: 4x12.5 FBC: 2x6 +1x12	74	--
***** As stipulated in TOR letter vide Additional TOR no. vii					

2.16.6 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:

S No	Raw Material		Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
1.	**For Iron Ore Beneficiation Plant (8,00,000 TPA – throughput capacity)**					
a)	Iron ore fines		8,00,000	Chhattisgarh / Orissa	~ 600 Kms.	By rail & road (through covered trucks)
2.	**For Pellet Plant (Pellets) - 6,00,000 TPA**					
a)	Iron Ore Concentrate		6,20,000	Own generation	---	Through covered conveyers
b)	Bentonite		4,800	Gujarat	~ 600 Kms.	By rail & road (through covered trucks)
c)	Limestone		9,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
d)	Anthracite Coal		6,000	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
3.	**For DRI Kilns (Sponge Iron) – 6,60,000 TPA**					
a)	Pellets (100 %)		9,90,000	Own generation & purchased from outside	---	Through covered conveyers & By road (through covered trucks)
	or					
b)	Iron ore (100%)		10,56,000	Barbil, Orissa NMDC, Chhattisgarh	~ 500 Kms.	By rail & road (through covered trucks)
c)	Coal	Indian	8,58,000	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
		Imported	5,50,000	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route &by road (through covered trucks)
d)	Dolomite		33,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
4.	**For Steel Melting Shop (Billets/ Ingots/Hot Billets) – 2,97,000 TPA**					
a)	Sponge Iron		3,00,000	Own generation	---	Through covered conveyers
b)	MS Scrap / Pig Iron		45,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
c)	Ferro alloys		15,000	Own generation	---	By road (through covered trucks)
5.	**For Rolling Mill through Hot charging (Rolled Products) – 3,63,000 TPA**					
a)	Hot Billets / Billets / Ingots		3,88,400	Own generation	---	----
b)	LDO / LSHS		20,000	Nearby	~ 100 Kms.	By road

S No	Raw Material		Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
			Kl/annum	IOCL Depot		(through Tankers)
6.	**For FBC Boiler [Power Generation 2 x 6 MW & 1 x 12 MW]**					
a)	Indian Coal (100 %)		1,42,560	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	OR					
b)	Imported Coal (100 %)		91,381	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
	OR					
c)	Dolochar + Indian Coal	Dolochar	1,98,000	In plant generation	---	through covered conveyors
		Indian Coal	43,560	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	OR					
d)	Dolochar + Imported Coal	Dolochar	1,98,000	In plant generation	---	through covered conveyors
		Indian Coal	26,208	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
7.	**For Ferro Alloys (2 x 9 MVA)**					
6 (i)	*For Ferro Silicon – 14,000 TPA*					
a)	Quartz		24300	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
b)	LAM coke		18900	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	MS Scrap / Mill scales		4230	Inhouse Generation	---	By road (through covered trucks)
d)	Electrode paste		360	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
e)	Bagfilter dust		200	Own generation	---	---
6 (ii)	*For Ferro Manganese – 50,400 TPA*					
a)	Manganese Ore		68400	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	LAM coke		19800	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Dolomite		8100	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS Scrap / Mill scales		7200	Inhouse Generation	---	By road (through covered trucks)

S No	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
e)	Electrode Paste	630	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Bagfilter dust	1000	Own generation	---	---
6 (iii)	*For Silico Manganese – 28,800 TPA*				
a)	Manganese Ore	48600	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	LAM Coke	16200	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	FeMn. Slag	30294	In house generation	---	----
d)	Dolomite	7380	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
e)	Electrode paste	630	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Quartz	7740	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
g)	Bagfilter dust	200	Own generation	---	---
6 (iv)	*For Ferro Chrome – 30,000 TPA*				
a)	Chrome Ore	56700	Sukinda, Odisha Import, South Africa	~ 500 Kms. ~ 600 Kms. (from Vizag Port)	By road (through covered trucks) From Port By Road (through covered Trucks)
b)	LAM Coke	19800	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Quartz	8100	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS Scrap / Mill Scale	2700	Inhouse Generation	---	By road (through covered trucks)
e)	Magnetite / Bauxite	5400	Chhattisgarh / Maharashtra	~ 500 Kms.	By road (through covered trucks)
f)	Electrode Paste	540	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
g)	Bagfilter dust	1200	Own generation	---	---

2.16.7 Water requirement for proposed project is estimated as 2155 m^3/day and same will be sourced from Kurar River, which is at distance of 2.6 Kms. Application has been submitted to Water drawl permission from Water Resource Department, Chhattisgarh and same is

under process. State Investment Promotion Board (SIPB) has issued an assurance letter as per MoU enter with Govt. of Chhattisgarh, for supply of water from Kurar River vide letter no. 967/SIPB/2021/784 dated 27/08/2021.

2.16.8 The total power requirement for the proposed project will be about 65 MW, this will be met from the Captive power plant of 74 MW. Remaining 9 MW will be exported to the state grid.

2.16.9 Baseline Environmental Studies:

<table>
<tr><td>Period</td><td>1st March, 2021 to 31st May, 2021</td></tr>
<tr><td>AAQ parameters at 8 locations</td><td>$PM_{2.5}$ = 20.1 to 30.9 µg/m^3
PM_{10} = 33.4 to 51.5 µg/m^3
SO_2 = 6.9 to 11.5 µg/m^3
NO_x = 7.2 to 14.6 µg/m^3
CO= 375 to 865 µg/m^3</td></tr>
<tr><td>Incremental GLC</td><td>PM =1.7 µg/m^3 (1.3 km in NE)
SO_2= 8.67 µg/m^3 (1.3 km in NE)
NO_x= 9.99 µg/m^3(1.3 km in NE)
CO = 3.68 µg/m^3(1.3 km in NE)</td></tr>
<tr><td>Ground water quality at 8 locations</td><td>pH: 7.3 to 7.8
TSS:1.2 to 2.3 mg/l
TDS: 264 to 448 mg/l
Total Hardness: 190 to 295 mg/l
Chlorides: 115 to 206 mg/l
Fluoride: 0.25 to 0.35
Heavy metals (Iron -Fe): 0.021 to 0.029 mg/l</td></tr>
<tr><td>Surface water quality at 7 locations</td><td>pH: 7.2 to 7.8,
DO (in mg/l): 4.4 to 7.6,
TDS (in mg/l): 174 to 255,
BOD (in mg/l): 2.1 to 3.5,
COD (in mg/l): 7.7 to 14</td></tr>
<tr><td>Noise levels (Day and Night)</td><td>45.4 to 55.6 dBA for day time and
36.8 to 45.7 dBA for night time</td></tr>
<tr><td>Traffic assessment study findings</td><td>• Traffic study has been conducted at NH-6 which is adjacent to the plant site.
• Transportation of raw material, fuel & finished product will be done 100% by road.
• Existing PCU is 375
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>NH-6</td><td>375</td><td>833</td><td>0.45</td><td>C</td></tr>
</table>
• PCU load after proposed expansion project will be 498 PCU/hr (375 Existing + 123 Additional) and level of service (LOS) will be:
<table>
<tr><th>Road</th><th>V</th><th>C</th><th>Proposed V/C Ratio</th><th>LOS</th></tr>
</table></td></tr>
</table>

	<table><tr><td></td><td>**(Volume in PCU/hr.)**</td><td>**(Capacity in PCU/hr.)**</td><td></td><td></td></tr><tr><td>NH-6</td><td>498</td><td>833</td><td>0.6</td><td>C</td></tr></table> *Note: Capacity as per IRC-106:1990 Guideline for capacity for roads. **Conclusion**: the level of service will remain same as "C" after including additional traffic due to proposed expansion project.
Flora and fauna	No schedule-1 fauna and endangered species of flora within the study area.

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

S No	Waste / By product	Quantity (TPA)	Proposed method of disposal	Agreement Details of Disposal
A	**Solid waste**			
1.	Tailing from I/O Beneficiation	2,00,000	Will be taken to filter press & recovered the water. Cake of tailing will be stored in tailing yard & it will give to nearby Ceramic Unit.	--
2.	Ash from Pellet Plant	18,000	Will be utilized in the proposed Brick Manufacturing Unit	Own Brick making unit
3.	Ash from DRI	1,18,800	Will be utilized in the proposed Brick Manufacturing Unit	Own Brick making unit
4.	Dolochar	1,98,000	Will be used in proposed FBC power plant as fuel.	Used as fuel in captive FBC boiler
5.	Kiln Accretion Slag	5,940	Will be used in road construction & utilized in the proposed brick manufacturers.	Own Brick making unit
6.	Wet scrapper sludge	30,360	Will be used in road construction & utilized in the proposed brick manufacturers.	Own Brick making unit
7.	SMS Slag	29,700	Slag from SMS will be crushed and iron will be recovered & then remaining non - magnetic material being inert by nature will be used as sub base material in road construction.	For laying Internal Roads & Own Brick making unit
8.	End Cuttings from Rolling Mill	10,890	Will be reused in the SMS	Recycled to IF

S No	Waste / By product	Quantity (TPA)	Proposed method of disposal	Agreement Details of Disposal
A	**Solid waste**			
9.	Mill scales from Rolling Mill	7,260	Mill scales will be utilized proposed Ferro alloys manufacturing units.	Own Ferro Alloys unit
10.	Ash from Power Plant (with Indian Coal + dolochar)	1,38,402	Will be utilized in the proposed brick manufacturing unit	Own Brick making unit
11.	Slag from FeMn	30,294	Will be reused in manufacture of SiMn as it contains high SiO_2 and Silicon.	--
12.	Slag from FeSi	1,000	Will be given to Cast iron foundries	--
13.	Slag from SiMn	30888	will be used for Road construction / will be given to slag cement manufacturing	--
14.	Slag from FeCr	27,918	Will be processed in Zigging plant for Chrome recovery. After Chrome recovery, the left-over slag will be analyzed for Chrome content through TCLP test, if the Chrome content in the slag is within the permissible limits, then it will be utilized for Road laying /brick manufacturing. If Chrome content exceeds the permissible limits, it will be sent to nearest TSDF.	--
B	**Hazardous waste Generation**			
15.	Used Oil &Waste Oil	35 KL/ Annum	will be given to CECB approved Recyclers.	--
16.	Used batteries	--	will be given back to the supplier under buyback arrangement	--

2.16.11 Public Consultation:

Details of advertisement given	05/09/2021; Punjab Keshari and NayiDuniya
Date of Public Consultation	07/10/2021
Venue	Project Site, Khairjhitti Village, Tehsil & District Mahasamund, Chhattisgarh
Presiding Officer	Additional District Magistrate, District Mahasamund
Major issues raised	• Pollution Problem • Employment • Greenbelt development • Social & infrastructural development activities

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

S No	Major Activity Heads	Years (Rs. In Crores)					Total Expenditure (Rs. In Crores)
		1st	2nd	3rd	4th	5th	
A	**Based on need based & SIA study**						
1	Community & Infrastructure Development Programme						
	• Construction of Public Toilets 10 nos. (2 nos. in Khairjhiti Village, 2 nos. in Bhoring Village, 2 nos. in Kauwjhar Village, 2 nos. in Pirda Village and 2 nos. in Tumgaon Village) @ 3.0 lakhs	0.06	0.06	0.06	0.06	0.06	0.3
	• Providing LED Street light with solar panel in 10 no. of villages (15 no. in each village) of Khairjhitti, Bhoring, Kauwjhar, Pirda, Tumgaon, Malidih, Gurudih, Kukradih, Tenduwahi, Amawas) @ Rs. 3.0 Lakhs.	0.06	0.06	0.06	0.06	0.06	0.3
	• Providing proper drainage & sanitation facilities in 5 nos. of villages (Khairjhitti, Bhoring, Kauwajhar, Malidih, Gurudhi village) @ Rs. 15 Lakhs	0.15	0.15	0.15	0.15	0.15	0.75
	• Providing 1 no. of Grabage collection van in each village of Tumgaon, Khairjhitti, Kauwajhar, Bhoring& Acholi villages @ Rs.5.0 Lakhs for each van	0.05	0.05	0.05	0.05	0.05	0.25
2	• Education & Scholarship programmes						
	• Providing furniture, computers, library, sports equipment etc. for nearby local schools of 5 villages (Tumgaon, Acholi, Bhoring, Birkoni, Chhaporadih) @Rs. 10.0 Lakhs in each village	0.1	0.1	0.1	0.1	0.1	0.5
	• Providing Model Anganwadi Centre in consultations with State Women and Child Development Department in Tumgaon, Khairjhitti&Achholi @ Rs.10.0 Lakhs	0.1	---	0.1	---	0.1	0.3
	• Renovation of school building (Tumgaon&Khairjhitti) – Rs. 20 Lakhs each school)	0.2	--	0.2	---	---	0.4
	• Construction of 2 nos. of multiple toilets in the schools of each of 5 villages (Tumgaon, Acholi, Bhoring, Birkoni, Chhaporadih) @Rs. 2.5 Lakhs per toilet i.e Rs. 15.0 Lakhs	0.05	0.05	0.05	0.05	0.05	0.25
	• Distribution of tricycles to handicapped students (In Mahasamund Mandal) 100 nos. @ Rs.5,000	0.05	---	---	---	---	0.05
3	Medical & health related activities						
	• Providing dedicated Ambulance with emergency equipment's to address the emergency needs @Rs. 20 Lakhs	0.2	---	---	---	---	0.2
	• Further strenghthening of Primary Health Center in Khairjhitti&Tumgaon Villages @ Rs.20 Lakhs each	---	0.2	---	0.2	---	0.4
4	Financial support to farmers in Tumgaon, Acholi, Bhoring, Birkoni, Chhaporadih Villages & Provide fertilizers to improve the soil supplement such as N,P,K	0.2	0.2	0.2	0.1	0.1	0.8

S No	Major Activity Heads	Years (Rs. In Crores)					Total Expenditure (Rs. In Crores)
		1st	2nd	3rd	4th	5th	
5	RWH pits & De-Siltation of ponds (5 nos. in each village) in the surrounding in 3 nos. of villages of Khairjhitti, Kauwajhar, Tumgaon, Bhoring, Achholi) @ 5.0 Lakhs each	0.25	---	0.25	---	0.25	0.75
B	**Based on Public Consultation / Hearing**						
1	Impart training to the local villagers for skill development: 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.) in Khairjhitti, Kauwajhar, Malidih, Tumgaon, Bhoring	0.4	0.4	0.4	0.4	0.4	2
	• Assistance will be provided to Women Self Help groups in the Khairjhitti, Kauwajhar, Malidih, Tumgaon, Bhoring villages (Rs. 15 Lakhs)	0.15	0.15	0.15	0.15	0.15	0.75
	Total	**2.02**	**1.42**	**1.77**	**1.32**	**1.47**	**8.00**

2.16.12 The capital cost of the project is Rs.880 Crores and the capital cost for environmental protection measures is proposed as Rs.63.30 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.2.14 Crores. The employment generation from the proposed project is 850 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)
1.	**Air Emission Management**		
	ESP	21.00	1.00
	4th Hole (for SEAF) & Fume Extraction Systems with Bag filters for SMS facility	10.00	0.5
	Other APCS (SOx& NOx control) & Conveyor systems	8.00	0.01
	Stacks / Chimney	10.00	0.02
	CEMS	0.60	0.01
	CAAQMS (4 nos.)	1.60	0.005
	Mechanical Dust Sweepers	0.80	0.01
	Water Sprinklers	0.50	0.005
	Environment Monitoring	--	0.10
	Sub Total	**52.50**	**1.67**
2.	**Wastewater Management**		
	ETP	2.00	0.04
	STP	0.50	0.01

S No	Particulars	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Crores)
	Settling Ponds	0.20	0.005
	Sub Total	**2.70**	**0.055**
3.	**Solid waste Management**		
	Ash Handling & Disposal (Pneumatic converyer system)	4.00	0.04
	Hazardous waste storage & disposal	0.10	0.01
	Construction of Pucca platform for storage	0.50	0.005
	Sub Total	**4.60**	**0.055**
4.	Greenbelt development, Land scaping, Noise Management, RWH etc.	**2.00**	**0.06**
5.	Occupational Health & Safety (including Dispensary with Ambulance facility)	**1.50**	**0.30**
TOTAL		**63.30**	**2.14**

2.16.13 Greenbelt will be maintained in 16.69 Ha. (41.2 acres) of land. 3 tiers greenbelt around plant boundary will be developed as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare.

2.16.14 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.

2.16.15 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [Sl. No. 140, List of ACOs with their Certificate No: NABET/EIA/1922/SA0148valid till 21/09/2022].

Observations of the Committee

2.16.16 The committee noted the following:

i. There is water canal within the project site, PP shall obtain the NOC from the irrigation department, Govt. of Chhattisgarh with a plan to maintain the canal in its original condition.
ii. Natural nala is present within project site. Conservation measures to protect the same has not been submitted.
iii. At 0.5 km from project site there is a reserved forest. PP shall provide the additional measures to protect the same.
iv. PP has mentioned IRC 106: 1990 guideline for the road capacity which is not correct. PP shall revise the same.
v. Response to the issues raised during the public hearing in verbatim has not been submitted and also not addressed in the EIA report.
vi. Action plan to address the public hearing issues is not as per Ministry's O.M. dated 30/09/2020.PP shall provide the action plan with physical targets in monitorable data.
vii. Project proponent shall prepare layout plan showing all internal roads minimum 6m width and 9m turning radius with proper looping for smooth traffic flow including fire tender as per NBC. Road network shall connect all service areas in layout. This

drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing.

viii. Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.

ix. Budget allocation for PH action plan is lower side, PP shall revise the same.

x. Maximum GLC level for PM, SO_2, NO_X are reported at same location. The air modeling carried out needs to be revisited.

Recommendations of the Committee

2.16.17 In view of the foregoing and after deliberations, the Committee recommended the proposal to be returned in its present form to address the shortcomings enumerated above in para 2.16.16 and submit revised application as per the provisions of EIA Notification, 2006.

2.17 Proposed 2.4 MTPA (2x1.2 MTPA) Iron ore Pellet Plant and Producer Gas Plant of 5x6500 Nm^3/hr by **M/s. Narbheram Power and Steel Private Limited** located at Village- Tanto, Tehsil Barbil, **District Keonjhar, Odisha.** [Online Proposal No. IA/OR/IND/ 259943/2022; File No. IA-J-11011/241/2021-IA-II(I)] – **Amendment in Terms of Reference – regarding**

2.17.1 M/s. Narbheram Power and Steel Private Limited has made an online application vide proposal no. IA/OR/IND/ 259943/2022 dated 05/03/2022 along with Form 3, revised Form-1 and PFR seeking amendment in standard Terms of Reference accorded by the Ministry vide letter no. IA-J-11011/241/2021-IA-II(I) dated 31/08/2021. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non- ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central level.

Details submitted by the project proponent

2.17.2 M/s. Narbheram Power and Steel Private Limited had Proposed 2.4 MTPA (2x1.2 MTPA) Iron ore Pellet Plant and Producer Gas Plant of 5x6500 Nm^3/hr at Village- Tanto, Tehsil Barbil, District Keonjhar, Odisha. Application for ToR was submitted to MoEF&CC, New Delhi on 01/08/2021. The proposal was considered in EAC (Industry- 1 Sector) meeting held on 12-13th August, 2021. Accordingly, ToR letter was issued vide letter no. IA-J-11011/241/2021-IA-II(I) dated 31/08/2021.

2.17.3 The instant proposal of M/s. Narbheram Power and Steel Private Limited is for seeking following amendment in the ToR dated 13/08/2021:

S No	Plant/ Equipment/ Facility	As per ToR dated 13/08/2021	Final capacity & (Configuration) after amendment	Remarks
1	Iron Ore pellet plant	Configuration: 2x1.2 MTPA Technology: Straight Grate Technology	Configuration: 2x1.2 MTPA Technology: 1x1.2 MTPA Grate Kiln Technology &	Change in technology with same final capacity.

S No	Plant/ Equipment/ Facility	As per ToR dated 13/08/2021	Final capacity & (Configuration) after amendment	Remarks
			1x1.2 MTPA Straight Grate Technology	
2	Producer Gas Plant	5 x 6500Nm^3/hr	5 x 6500Nm^3/hr	No change

2.17.4 **Any other amendment required:**

S No	Particular	Description as per Approved ToR	Description after Amendment	Remarks
1	Project area	**Total: 17.013 ha** Forest land; 9.712 ha Non-forest land: 4.027 ha Land records not available: 3.274 ha	**Total: 14.84 ha** Forest land: 7.769 ha Non-forest land: 3.798 ha Land records not available: 3.273 ha	--

Observations of the Committee

2.17.5 The Committee noted the following:

i. M/s. Narbheram Power and Steel Private Limited had obtained ToR letter vide no. IA-J-11011/241/2021-IA-II(I) dated 31/08/2021 for proposed 2.4 MTPA (2x1.2 MTPA) Iron ore Pellet Plant and Producer Gas Plant of 5x6500 Nm^3/hr at Village-Tanto, Tehsil Barbil, District Keonjhar, Odisha.

ii. Now, PP submitted the proposal to amend the technology of Pellet plant and revised the total project area as mentioned at para 2.17.3 and 2.17.4 above.

Recommendations of the Committee

2.17.6 In view of the foregoing and after deliberations, the Committee recommended for amendments in ToR dated 31/08/2021 as mentioned at para 2.17.3 and 2.17.4 above. All other terms and condition shall remain the same as mentioned in ToR letter no. IA-J-11011/241/2021-IA-II(I) dated 31/08/2021.

2.18 Revised configuration of modernization-cum-expansion of 7.0 MTPA Bhilai Steel Plant by **M/s Steel Authority of India Limited (SAIL)** located at Bhilai, **District Durg, Chhattisgarh**. [Online Proposal No. IA/CG/IND/260774/2022; File No. J-11011/28/2007-IA-II(I)] – **Amendment in Environment Clearance – regarding.**

2.18.1 M/s. Steel Authority of India Limited (SAIL) has made online application vide proposal no. IA/CG/IND/260774/2022 dated 11/03/2022 along with addendum EIA/EMP report, and Form 4 seeking amendment in the Environment Clearance accorded by the Ministry vide letter no. J-11011/28/2007-IA-II(I) dated 24/05/2019 under the provisions of the EIA Notification, 2006 for the project mentioned above.

Details submitted by Project proponent

2.18.2 The existing project of M/s. SAIL was granted environmental clearance from Ministry vide letter no. J-11011/28/2007-IA-II(I) dated 24/05/2019 for Revised configuration of

modernization-cum-expansion of 7.0 MTPA Bhilai Steel Plant at Bhilai, District Durg, Chhattisgarh.

2.18.3 As mentioned in the said EC, the older production units BF-1, SMS1, BBM & RMP-1 are to be phased-out gradually within three years from the grant of EC. It was envisaged by M/s. SAIL BSP that the above units are required to be in operation till the stabilization of new units like BF-8, SMS-III installed under expansion plan there by meeting the hot metal, flux & steel requirements of Steel making units & rolling mills. As per the configuration envisaged in the EC, BSP has phased-out the older production units SMS-1 & BBM by March-2021, earlier than permitted period. During the period i.e., from 2019 to 2022, BSP planned sequential capital repairs of BF-4, 5, 6 & the three kilns of RMP-II, to maintain the health of the furnaces and kilns for sustained production. As per the EC configuration, BSP also planned to phase-out Blast Furnace-1 & Refractory Material Plant-1 by May-2022.

2.18.4 The present proposal of M/s. SAIL is for seeking amendment in EC for extension of time period for operation of BF-1 and RMP-1 for another three years i.e. upto May, 2025 as sequential capital repair of BF-6 could not be taken-up due to restrictions imposed owing to the COVID-19 pandemic. Travel restriction of foreign experts, restricts in import of carbon blocks and some other spares from border sharing countries (China and other countries) as per GoI guidelines, led to adding further delay in carrying out the repairs.

2.18.5 The implementation status of the proposed units envisaged in the EC dated 24/05/2019 along with the amendment sought is given as below:

SN.	Units	As per EC dated 24/05/2019		Amendment sought as per present proposal	Remarks
		1st Three years	After Three Years		
A	**Blast Furnace**				
1	BF 1 with CDI (1033 m^3) i**n operation for three years for undertaking sequential capital repair of BF 4,5 & 6 along with stabilization of BF 8**	BF 1 with CDI (1033 m^3) i**n operation for three years.**	Phased out	**Will be in operation for another 3 years to sustain production till May'2025.***	Time extension for another three years for operation of BF-1 to sustain production during repairs of capital repairs of BF-6 and other repairs of BF-4,5,7. Sequential capital repair of BF-6 could not be taken-up due to restrictions imposed owing to the COVID-19 pandemic. Travel restriction of foreign experts, restricts in import of carbon blocks and some other spares from border sharing countries (China and other countries) as per GoI guidelines, led to adding further delay in carrying out the repairs.
	BF 2 with TIS (1033 m^3) - Phased Out	Phased Out	Phased Out	**No Change**	Phased Out
	BF 3 with TIS	Phased Out	Phased Out	**No Change**	Phased Out

SN.	Units	As per EC dated 24/05/2019		Amendment sought as per present proposal	Remarks
		1st Three years	**After Three Years**		
	(1033 m^3) - Phased Out				
	BF 4, 1719 m^3 **Capital Repair**	BF 4, 1719 m^3	BF 4, 1719 m^3	**No Change**	Considering the limited repairs carried out in Blast furances-4 & 5 during the COVID period, there will be requirement of further repairs of BF-4 to maintain the health and sustain production after the capital repairs of BF-6. These repairs are likely to be completed by May-2025.
	BF 5, 1719 m^3 **Capital Repair**	BF 5, 1719 m^3	BF 5, 1719 m^3	**No Change**	Considering the limited repairs carried out in Blast furances-5 during the COVID period, there will be requirement of further repairs of BF- 5 to maintain the health and sustain production after the capital repairs of BF-6. These repairs are likely to be completed by May-2025.
	BF 6, 1719 m^3 **Capital Repair**	BF 6, 1719 m^3	BF 6, 1719 m^3	**No Change**	Capital Repair planned in 2022-2023 (Oct'2022 to Sep'2023)
	BF 7, 2363 m^3	BF 7, 2363 m^3	BF 7, 2363 m^3	**No Change**	-
	BF 8, 4060 m^3 with TRT	BF 8, 4060 m^3 with TRT	BF 8, 4060 m^3 with TRT	**No Change**	-
	Total Hot Metal = 7.5 Million Tonnes Per Annum			**No Change**	-
**** Production as per EC 2019 is 7.5 Million tonnes per annum of Hot Metal. Yearly Hot metal production will not exceed is 7.5 Million tonnes***					
B	**RMPs**				
	RMP I **in operation alongwith SMS-I for three years till stabilization of SMS III & BF 8**	**RMP I in operation for three years**	-	**Will be in operation for another 3 years to sustain production till May'2025. (Will be operated intermittently to meet the shortfall in flux supply from RMP-2 during repairs of the kilns)****	Request for time extension for operation of RMP-1 to sustain production during repairs of kilns at RMP-2
	RMP - II ● 2x 330 TPD + 1 x 144 TPD Lime kiln	**RMP-II** ● 2x 330 TPD + 1 x 144 TPD Lime kiln	**RMP-II** ● 2x 330 TPD + 1 x 144 TPD Lime kiln	**No Change**	-
	RMP III 5x450 TPD lime and dolo kiln for	**RMP III** 5x450 TPD lime and dolo kiln for SMS-III	**RMP III** 5x450 TPD lime and dolo kiln for	**No Change**	-

SN.	Units	As per EC dated 24/05/2019		Amendment sought as per present proposal	Remarks
		1st Three years	After Three Years		
	SMS-III		SMS-III		
	Refractory Material = 1.58 MTPA			**No Change**	**-**
*****Production as per EC 2019 is 1.58 Million tonnes per annum of Refractory Material. Yearly production will not exceed is 1.58 Million tonnes***					

2.18.6 The various environmental projects under EMP being implemented at BSP for reduction of emissions are

a. Replacement of Multi-cyclones (wet scrubbers) by ESPs at Sinter Plant-II for control of Stack emission.
b. ESP based de-dusting system at SP-II for work-zone/fugitive emission control
c. Up-gradation of waste gas ESP of M/c-1 of SP-III for control of Stack emission.
d. Cast house De-fuming system in Blast Furnace-7 for control of work-zone emissions in cast house
e. Replacement of wet scrubbers with Bag-filters at RMP-II for control of Stack emissions
f. Installation of secondary Emission control system/Dog-House for Convertors at Steel Melting Shop-II

2.18.7 PP has reported that green belt developed within and around the BSP project area is 1840 ha with about 4,412,182 trees planted up to 2021. Greenbelt along plant boundary (in available space) has already been developed, which will be further re-strengthened. Local and native species are planted with a density of 2500 trees per hectare. In the next five years for further strengthening the green cover / plantation in BSP project area and in surrounding about 50000 saplings will be planted and nurtured in a surrounding area.

2.18.8 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.

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

i. SAIL, Bhilai Steel Plant has given undertaking given as below:
   a. The total Hot metal production from Blast Furnaces shall not exceed 7.5 Million tons/Annum as per the existing Environmental clearance
   b. The total flux production from RMPs shall not exceed 1.58 Million tons/Annum as per the existing Environmental Clearance
   c. The emissions from these units shall not exceed the prescribed stack emission norms of 50 mg/Nm^3.

Observations of the Committee

2.18.10 The Committee noted the following:

i. M/s. SAIL has obtained environmental clearance from Ministry vide letter dated 24/05/2019 for Revised configuration of modernization-cum-expansion of 7.0 MTPA Bhilai Steel Plant at Bhilai, District Durg, Chhattisgarh.
ii. In the instant proposal M/s. SAIL requested to ministry for extension of time period to operate BF-1 and RMP-1 for another three years (i.e. up to May, 2025) as mentioned at para 2.18.4 and 2.18.5 above.
iii. The EAC deliberated on the written submissions submitted by the proponent and found it satisfactory.

Recommendations of the Committee

2.18.11 In view of the foregoing and after deliberations, the Committee recommended for amendments in EC dated 24/05/2019 as mentioned at para 2.18.4 above with following additional specific conditions. All other terms and condition shall remain the same as mentioned in EC letter no. J-11011/28/2007-IA-II(I) dated 24/05/2019.

i. PP shall not exceed the overall capacity of Blast furnaces i.e.7.5 MTPA and Refractory Material Plant i.e. 1.58 MTPA as mentioned in EC dated 24/05/2019.
ii. Emissions from BF- 1 and RMP-1 units shall not exceed the prescribed stack emission norms.

****

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 <u>all</u> the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in <u>all</u> 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_{10}, $PM_{2.5}$, SO_2, NO_X, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre/dominant wind direction, population zone and sensitive receptors including reserved forests.

iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.

iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.

v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.

vi. Ground water monitoring at minimum at 8 locations shall be included.

vii. Noise levels monitoring at 8 locations within the study area.

viii. Soil Characteristic as per CPCB guidelines.

ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.

x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule/I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio/economic status of the study area.

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

i. Assessment of ground level concentration of pollutants from the stack emission based on site/specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail/cum road transport or conveyor/cum/rail transport shall be examined.

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

8. **Occupational health**

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

9. **Corporate Environment Policy**
   i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
   ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
   iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
   iv. Does the company have system of reporting of non/compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. 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).

<u>The following general points shall be noted:</u>

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

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

ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA/EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA/EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The 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_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

ADDITIONAL ToRs FOR PELLET PLANT

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

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 is acquisition, nearby (in 2/3 km.) water body, population, with in 10km other industries, forest, eco/sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)
viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio/economic condition of the nearby population
ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
x. Likely impact of the project on air, water, land, flora/fauna and nearby population
xi. Emergency preparedness plan in case of natural or in plant emergencies
xii. Issues raised during public hearing (if applicable) and response given
xiii. CSR plan with proposed expenditure.
xiv. Occupational Health Measures
xv. Post project monitoring plan

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Email **Sundar Ramanathan**

Re: ZERO DRAFT MOM OF 2ND EAC HELD DURING 22-23RD MARCH 2022

From : chairman eac ind 1 <chairman.eac.ind.1@gmail.com> Tue, Apr 05, 2022 03:00 PM

Subject : Re: ZERO DRAFT MOM OF 2ND EAC HELD DURING 22-23RD MARCH 2022

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

Cc : sshemant 801 <sshemant_801@rediffmail.com>, Member Secretary CPCB <mscb.cpcb@nic.in>, DGM <directorgeneral.imd@imd.gov.in>, Santasabuj Das <director-nioh@gov.in>, NCCBM DIRECTOR GENERAL <dg@ncbindia.com>, JK PANDEY <jkpandey@cimfr.nic.in>, tejaswini acf <tejaswini.acf@gmail.com>, dshome61@gmail.com, jaikrishnapandey@gmail.com, ranjit met <ranjit.met@nitjsr.ac.in>, ranganathan metals <ranganathan.metals@gmail.com>, Dr.S.Raghavan Scientist C ROHCS NIOH Meghaninagar Ahmedabad <raghuharihar@gov.in>, raghuharihar@yahoo.co.in, rajuevr60@gmail.com, ranjitnitj@gmail.com, sksinghdce@gmail.com

Dear Mr. Sundar,

Please refer to your email dated 5 April 2022 at 1:26 PM regarding final Minutes of the Second EAC meeting held on 22-23 March 2022.

The final minutes sent by you through this email are approved.

It is requested to upload the same on Parivesh.

Best Wishes

Rajive Kumar

Chairman EAC-Industry-1