

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

Summary record of the thirty sixth (36th) meeting of Re-Constituted Expert Appraisal Committee (REAC) held on 18-19th May, 2021 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.

The thirty sixth meeting of the Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environment Appraisal of Industry 1 Sector Projects was held on 18-19th May, 2021 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	18/05/2021	19/05/2021
1.	Dr. Chhavi Nath Pandey	Chairman	Present	Present
2.	Dr. M.K. Gupta, Director, CPPRI.	Member	Present	Present
3.	Dr. Siddharth Singh,	Member	Present	Present
4.	Dr. Jagdish Kishwan	Member	Present	Present
5.	Dr. Tejaswini Ananth Kumar	Member	Present	Present
6.	Dr. G.V. Subramanyam	Member	Present	Present
7.	Shri. Ashok Upadhyaya	Member	Present	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present	Present
9.	<i>Dr. Sanjay Deshmukh</i>	<i>Member</i>	<i>Absent</i>	<i>Absent</i>
10.	Prof. S.K. Singh	Member	Present	Present
11.	<i>Dr. R. Gopichandran</i>	<i>Member</i>	<i>Absent</i>	<i>Absent</i>
12.	Shri Jagannadha Rao Avasarala	Member	Present	Present
13.	Shri. J.S. Kamyotra	Member	Present	Present
Officials from MoEF&CC				
14.	Shri. Sundar Ramanathan	Member Secretary	Present	Present
15.	Dr. Mahendra Phulwaria	Scientist 'C'	Present	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 35th meeting held during 30th April, 2021 were confirmed by the EAC as already uploaded on PARIVESH.

18th May, 2021

36.1 Setting up of a Greenfield Integrated Steel Plant of 0.7 MTPA with Captive Power Plant of 70 MW by **M/s. Spintech Tubes Private Limited (STPL)** at Village Dhasal, Mamudpur & Bahadurpur, Tehsil Jamuria, **District Paschim Bardhaman, West Bengal** [Online Proposal No. IA/WB/IND/78705/2018; File No. J-11011/295/2018-IA.II (I)] – **Environment Clearance - regarding.**

36.1.1 M/s. Spintech Tubes Private Limited has made an online application vide proposal no. IA/WB/IND/78705/2018 dated 29/04/2021 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 & nonferrous) 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

36.1.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
25/09/2018	36 th meeting of EAC held on 9 th October, 2018 and 5 th meeting of REAC held on 27 th March, 2019.	Terms of Reference	01/05/2019

36.1.3 The project of M/s. Spintech Tubes Private Limited located at Village Dhasal, Mamudpur & Bahadurpur, Tehsil Jamuria, District Paschim Bardhaman, West Bengal is for Setting up of a Greenfield Integrated Steel Plant of 0.7 MTPA with Captive Power Plant of 70 MW.

36.1.4 Environmental Site Settings:

S No	Particulars	Details	Remarks
i)	Total land	97.16 ha [Private :83.01 ha Govt. :14.15 ha] [Agriculture :19.53 ha Others : 77.63 ha Grazing land : Nil]	Land use – The proposed site primarily consists of Poor crop land 56.72 ha (58.4%) followed by medium agricultural land 18.61 ha (19.2%), non-agricultural land 16.59 ha (17.1%), water bodies 4.32 ha (4.4%) & agricultural land 0.92 ha (0.9%).
ii)	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	54.57 ha already purchased and balance land would be in possession by September 2021. Consent from the land owners	-

S No	Particulars	Details			Remarks
		have been obtained for the private land.			
iii)	Existence of habitation & involvement of R&R, if any	No habitation exist at the site and hence R&R is not applicable			-
iv)	Latitude and Longitude of the project site	SN	Latitude	Longitude	-
		A	23°41'15" N	87°07'48" E	
		B	23°41'16" N	87°08'02" E	
		C	23°41'12" N	87°08'22" E	
		D	23°40'47" N	87°08'14" E	
		E	23°40'46" N	87°07'56" E	
		F	23°40'38" N	87°07'59" E	
		G	23°40'42" N	87°07'44" E	
v)	Elevation of the project site	106 m above MSL			-
vi)	Involvement of Forest land if any	Nil, no forest land involved			-
vii)	Water body exists within the project site as well as study area	<p>Project site: 2 numbers of ponds and one seasonal nalla.</p> <p>Study area: Ajay river - 7 km in South</p>			The seasonal rainfed nallah passing through the plant site would not be disturbed or diverted. The existing two ponds within the project area would be desilted to enhance its storage capacity and has been considered as rain water harvesting ponds.
viii)	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil			-

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

S No	Unit	Facility	Production (MTPA)
1.	Iron Ore Grinding Unit	1.2 MTPA	1.186
2.	Pellet plant	1 x 1.13 MTPA	1.13
3.	Sinter Plant	1 x 60 m ²	0.62

S No	Unit	Facility	Production (MTPA)	
4.	DRI plant (coal based)	3 x 500 TPD	0.495	
5.	Blast furnace	1 x 350 m ³	0.367	
6.	Submerged Arc Furnace	1 x 12 MVA (FeCr), 1 x 12 MVA (FeMn, SiMn)	0.0466	
7.	Chrome Ore Briquetting Plant	1 x 10 TPH	0.041	
8.	Steelmaking Shop (SMS)	4 x 25 T IF 1 x 50 T LF	1 x 50 T EAF 1 x 50 T LF	0.729
9.	Caster Shop	Billet Caster - 1 x 3 strand Billet/Bloom Caster - 1 x 3 strand	0.712	
10.	Mill	Bar mill: 1 x 0.25 MTPA Wire Rod Mill: 1 x 0.25 MTPA Wire drawing facility with 50% hot dip galvanizing: 0.03 MTPA Structural Mill with hot dip galvanizing: 1 x 0.2 MTPA	0.699	
11.	Captive Power Plant	BF gas based - 10 MW DR kiln off gas based WHRB - 37.5 MW Char & Coal based AFBC/CFBC boiler - 22.5 MW	70 MW	
12.	Air Separation Plant	1 x 180 TPD	180 TPD	

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

S. No.	Raw Material	Quantity required per annum, tons	Source	Distance from site (kms)	Mode of Transportation
1	Coke	219,920	Merchant cokery in India/abroad	300	Rail-Road, Sea-Rail-Road
2	Anthracite	18,384	International market - Australia	300	Sea-Rail-Road
3	Non coking Coal	400,950	Domestic market – WB, Jharkhand region	70	Rail-Road
4	Iron ore fines	1,597,228	Procured from the Joda-Barbil, Koira, Sundargarh mines and Jharkhand region	400	Rail-Road
5	PCI coal	36,750	International market - Australia	300	Sea-Rail-Road
6	Limestone	73,287	Purchased from mines in Sundergarh district, Odisha or quarries in Jukehi-Katni-Niwar area in Central India	700	Rail-Road
7	Calcined lime	48,132	Rajasthan, MP	1400	Rail-Road
8	Dolomite	82,698	Purchased from mines in Sundergarh district, Odisha & Baradwar regions in Chattisgarh	600	Rail-Road

9	Chrome Ore Fines	37,106	Procured from the mines in Sukinda regions, Odisha	350	Rail-Road
10	Chrome Ore lump	7,236	Procured from the mines in Sukinda regions, Odisha	350	Rail-Road
11	Manganese Ore	56,968	Procured from the mines of Manganese Ore India Limited in MP & Odisha	900	Rail-Road
12	Steam coal	143,416	Domestic (WB, Odisha, Jharkhand region)	70	Rail-Road
13	Bentonite	11,724	Domestic (Rajasthan)	1400	Rail-Road
14	Quartzite	21,395	Procured from West Bengal, Jharkhand, Odisha & Bihar	180	Rail-Road

36.1.7 The water requirement for the project is estimated as 8,256 m³/day, out of which 3,480m³/day from Ajay River and 3,480m³/day from Asansol Municipal Corporation will be obtained as fresh water requirement and the remaining requirement of 1,296m³/day will be met from the recycled effluent of the proposed project. The permission for drawl of water from river bed of Ajay River are obtained from Office of Geologist, SWID & Member Secretary vide Permit No. P2213064000030000001TSE & P2213064000030000002TSE dated 10/03/2021 and from Asansol Municipal Corporation vide Lr. No. 1623-LA dated 26/07/2018.

36.1.8 The power requirement for the project is estimated as 141 MW, out of which 64 MW will be obtained from the Captive Power Plant and rest 77 MW will be sourced from Grid (India Power Corporation Limited).

36.1.9 Baseline Environmental Studies:

Period	Summer Season: 12 th March, 2019 to 14 th June, 2019.
AAQ parameters at 8 locations	PM _{2.5} - 42.5 to 56.2 µg/m ³ PM ₁₀ - 65.2 to 94.3 µg/m ³ SO ₂ - 4.8 to 18.5 µg/m ³ NO _x - 16.5 to 45.8 µg/m ³ CO - 0.1 to 0.6 mg/ m ³
AAQ modelling (Incremental GLCs)	PM ₁₀ - 7.4 µg/m ³ PM _{2.5} - 2.9µg/m ³ SO ₂ - 14 µg/m ³ NO _x - 8.5 µg/m ³
Ground water quality at 8 locations	pH: 6.0 to 7.6, TDS: 480 to 1273 mg/l, Total hardness: 144 to 540 mg/l, fluoride: 0.1 - 0.1 mg/l, chloride: 17.23 to 167.01 mg/l, Heavy Metal (Lead: 0.01 to 0.01 mg/l, Arsenic: 0.01 to 0.01 mg/l)
Surface water quality at 8 locations	pH: 6.8 to 8.2, COD: 1888 -75.52 mg/lit, BOD: 5 - 26 mg/lit, DO: 4.8 to 6.0 mg/l.
Noise levels: 8 locations	53.5 to 71.3 Leq dB (A) for day time and 39.1 to 64.5 Leq dB (A) for Night time
Traffic assessment study findings	<ul style="list-style-type: none"> • Design capacity of Two Lane Roads: 15,000 PCU/day • Present traffic load at Ranisayer More i.e. confluence point of Dr. B. C. Roy Avenue and NH-2: 4,740 PCU/day.

	<ul style="list-style-type: none"> • Additional traffic load due to the project: 1,258 PCU/day. • Total traffic load in future due to project: 5,998 PCU/day (which is still within the carrying capacity of two lane roads of 15,000 PCU/day)
Flora and fauna	There is no Schedule – I species exist within the study area.

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

S No	Type of waste	Source	Quantity generated (TPA)	Mode of Treatment / Disposal
1	Char	DRI	89,100	Used to generate power in AFBC/CFBC boiler along with purchased steam coal
2	BF Slag	Blast Furnace	1,47,000	Granulation in Slag granulation plant and sell to cement manufacturers for production of Slag cement
3	Steelmaking Slag	SMS	1,59,318	Use in construction purposes mainly for filling of low-lying areas & road sub grade preparation, Brick manufacturing
4	BF Flue Dusts	Blast Furnace	5,513	Reuse in Agglomeration
5	Mill Scales	Mills	8,339	Reuse in agglomeration
6	Ferro alloy & SiMn and FeCr Slag	Ferro alloy	39,769	Used for filing of low-lying area after recovery of metallics, road construction
7	Caster scale	Caster	3,645	Reuse in agglomeration
8	Caster scrap	Caster	13,140	Recycle in induction furnace
9	Fly Ash	CPP	95,788	Sell to agencies for manufacture of pozzolona cement, bricks, etc
10	Bottom Ash	CPP	23,948	Would be stored in ash pond and used for road making/sale for brick manufacturing

36.1.11 Public Consultation:

Details of advertisement given	03/10/2020
Date of public consultation	04/11/2020
Venue	Jamuraia town Hall, Village & Tehsil Jamuria, District Paschim Bardhaman
Presiding Officer	Additional District Magistrate (General), Paschim Bardhman
Major issues raised	<ul style="list-style-type: none"> • Air and Noise pollution control measures • Development of local schools and roads • Employment and community hall

	<ul style="list-style-type: none"> • Ground water depletion waste water management. • Drinking water and health facility
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Point-wise Action plan as per MoEF&CC O.M. dated 30/9/2020

S No	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget, Rs in Lacs	Target date for implementation of action plan
1	Control measures of air pollution	ESP and Bag Filter will be installed to control the air pollution level within the norms. In addition, dry fog system and water sprinkler will be installed.	9000	Installed with process unit equipment
2	Development of local roads	Village road will be repaired and repairing work of existing road of Hizalgoda and Dhasna will be taken up in consultation with the District Administration.	150	2 km village road of Hizalgoda and 3 km for Dhasna in 2021-22 and 2 km village road of Hizalgoda and 3 km for Dhasna in 2022-23
3	Development of schools	As suggested by ADM, STPL will contribute to the plan prepared by local administration for Hizalgoda, Dhasna & Bahadurpur villages	135	@Rs. 15 lakhs for each village = Rs. 45 lakhs/year subject to approval of plan from 2021 to 2024
4	Good survival rate of trees	PP will take care of survival rate of the planted trees.	150	@ Rs. 50 lakhs/year from 2021 to 2024
5	Local employment	Local youth will be preferred as per their knowledge and skill. In addition, vocational training will be given for the employment to local.	300	@Rs. 100 lakhs for each village for 3 villages (Hizalgoda, Dhasal & Bahadurpur) from 2021 to 2024
6	Community hall	Requirement of community hall at Dhasal village will be taken up with the District Administration.	25	Fund will be provided through DM/ADM in 2021-22
7	Safety due to vehicle movement	Trained driver will be selected	-	-
8	Concern on ground water depletion	No ground water will be used for the proposed project. However, RWH will be constructed and recharge ground water	Included in EMP cost	-
9	Proper utilization of waste water	Waste water will be treated in the ETP and the treated water will be recycled into the plant.	Included in EMP cost	-
10	Water pipeline	Drinking water will be supplied through tankers for which a plan will be drawn in consultation with District Administration.	120	@Rs. 60 lakh/village for 2 villages (Bahadurpur & Bijaynagar) from 2021 to 2024
11	Development of hospitals	Health camp will be taken up in the villages at free of cost and requirement for development of hospital will be assessed by the District Administration and the same will be communicated by the District Administration.	120	Rs. 40 lakhs/year for Bahadurpur village from 2021 to 2024
12	Noise pollution	No impact of noise due to plant activity still greenbelt will be developed along the boundary	Already covered in 4	

36.1.12 The capital cost of the project is Rs. 3,200 crores and the capital cost for environmental protection measures including cost to address the public hearing issues and needs assessment is proposed as Rs. 239.69 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 6 crores. The employment generation from the proposed project is 6850 (Direct-1350, Indirect-5500). The detail of cost for environmental protection measures is as follows:

S No	Description of Item	Existing (Rs. In crores)	
		Capital Cost	Recurring Cost
1.	Water Conservation and Wastewater Treatment	80.00	1.80
2.	Air Pollution Control Measure	90.00	2.03
3.	Energy Conservation	9.00	0.25
4.	Solid Waste management	22.00	0.30
5.	Rainwater Harvesting	8.30	0.10
6.	Greenbelt Development	1.00	0.02
7.	On-line Monitoring & Environmental Laboratory	14.70	1.50
8.	Addressal of Public Consultation concerns	14.69	0.00
Total		239.69	6.00

36.1.13 Greenbelt will be developed in 32.06 ha which is 33 % of the total project area. A 15-100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 80,300 saplings will be planted and nurtured in 32.06 hectares in 5 years.

36.1.14 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.

36.1.15 Name of the EIA consultant: M/s M. N. Dastur & Company (P) Ltd. [S. No. 167, List of ACOs with their Certificate / Extension Letter no. Rev. 10, May 13, 2021].

36.1.16 The proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

36.1.17 The Committee noted the following:

- i. Coal Bed Methane or Producer gas shall be used as fuel in pellet plant. Producer Gas Plant details are not available in the EIA report.
- ii. Dry Blast Furnace gas cleaning has been proposed. Top Recovery Turbine (TRT) and BF Stove waste heat recovery are not proposed.
- iii. Action plan with the physical targets to address the issues raised during public hearing has not been submitted as per MoEF&CC O.M. dated 30/09/2020.

- iv. Post project PM₁₀ and NO_x concentrations in study area shall be more than 100/80 ug/m³ respectively at several stations. Control measures to reduce the same have not been elaborated.
- v. Raw material and final product will be transported by Road up to railway siding located at about 2.0 km from the project site and further it will be transported through railway. The carrying capacity of the railway siding facility has not been furnished in the EIA report.

Recommendations of the Committee

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

- i. Scheme for usage of Coal Bed Methane (CBM) instead of Producer Gas as a fuel shall be furnished.
- ii. Action plan for Hot Charging of billets up to 85-90 % shall be furnished. Balance rolling shall be done using Reheating Furnace operating on Light Diesel Oil (LDO).
- iii. Action plan for Steel Melting Shop (SMS) slag crushing and processing to generate aggregate for construction and fine sand for use in cement and brick making shall be furnished.
- iv. Revised action plan with physical targets to address the issues raised during public hearing as per MoEF&CC O.M. dated 30/09/2020 shall be submitted.
- v. Scheme to achieve PM emissions < 30 mg/Nm³, SO₂ and NO_x emissions less than 100 mg/Nm³ respectively from CPP shall be furnished.
- vi. Post project PM₁₀ and NO_x concentrations in study area is predicted more than 100/80 ug/m³ respectively at several stations. Control measures to reduce the same shall be submitted.
- vii. Action plan for transportation of materials through railway siding shall be explored and submitted.
- viii. PP shall submit confirmation on the following points:
 - PP shall install a state-of-the-art Waste Recycling Plant (WRP) to process various types of slags and wastes generated in the plant to recover and recycle metallics, fluxes, aggregates and boulders.
 - No ground water shall be abstracted.
 - Natural drainage system of the plant area shall not be disturbed.
 - FeCr slag shall be subjected to TCLP tests and only when Chromium level is within limit, it shall be used for construction otherwise it shall be sent to TSDF.
- ix. Scheme for, control of Dioxins/Furan emissions from sinter plants, and mercury emissions from power plants shall be submitted.
- x. PP shall provide details of specific water and power consumption post operation and energy conservation measures to be adopted in the steel plant.

36.2 Proposed Enhancement in production of existing sponge iron Plant capacity from 60,000 TPA to 2,70,000 TPA, Production of 135000 TPA Steel Billets, 120,000 TPA TMT Bars, Production of 26MW power through WHRB(16MW) and AFBC (10MW) Route and Production of 30 million Fly Ash Bricks per annum by **M/s. Shree Hari Sponge Private**

Limited located at Village Kendrikela, Tehsil Bonai, **District Sundergarh, Odisha** [Online Proposal No. IA/OR/IND/103521/2019; File No. J- 11011/186/2019-IA.II(I)] – **Environment Clearance – regarding.**

36.2.1 M/s. Shree Hari Sponge Private Limited has made an online application vide proposal no. IA/OR/IND/103521/2019 dated 28/04/2021 along with copy of EIA/EMP report and Form–2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

36.2.2 The detail of the ToR is furnished as below:

Date of Application	Consideration	Details	Date of Accord
21/05/2019	8 th meeting of Re-EAC (Industry 1) held on 26 th June, 2019	Terms of Reference	18/07/2019

36.2.3 The project of M/s. Shree Hari Sponge Private Limited located at Village- Kendrikela, Tehsil- Bonai, District- Sundergarh, Odisha State is for enhancement in production of existing sponge iron Plant capacity from 60,000 TPA to 2,70,000 TPA, Production of 135000 TPA Steel Billets, 120,000 TPA TMT Bars, Production of 26MW power through WHRB(16MW) and AFBC (10MW) Route and Production of 30 million Fly Ash Bricks per annum.

36.2.4 Environmental site settings

S No	Particulars	Details		
i.	Total land	22.26 ha i.e. 55 Acres [Private land: 30.05 Acres, Govt. land: 24.95 Acres (under land bank scheme of IDCO)] Existing Land – 30.05 Acres Industrial Land, Additional Land – 24.95 Acres (from IDCO) is under the process of acquisition		
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Additional Land – 24.95 Acres (from IDCO) is under the process of acquisition)		
iii.	Existence of habitation and involvement of R&R, if any.	No habitation within the plant premises. Hence, no R&R is involved.		
iv.	Latitude and the Longitude of project site	Site	Latitude	Longitude
		Point A	21°48'25.74"N	84°55'33.11"E
		Point B	21°48'24.91"N	84°55'25.23"E
		Point C	21°48'28.40"N	84°55'20.77"E

		Point D	21°48'35.62"N	84°55'24.59"E
		Point E	21°48'33.51"N	84°55'30.22"E
		Point F	21°48'31.46"N	84°55'33.63"E
		Point G	21°48'29.37"N	84°55'34.38"E
		Point H	21°48'25.74"N	84°55'33.11"E
v.	Elevation of the project site	85m AMSL		
vi.	Involvement of Forest land if any.	Nil		
vii.	Water body exists within the project site as well as study area	Project site: Nil Study area: Brahmani River: 2 Km, N		
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil		

36.2.5 The existing project was accorded Consent to Establish issued by Odisha State Pollution Control Board vide letter no 25558/IND-II-NOC-3286 dated 22/08/2005. Renewed Consent to Operate is accorded vide no. 3492/ IND-I-CON- 5279 dated 26/03/2018 and valid up to 31/03/2023. Since the CTE was accorded prior to 14/09/2006, EC is not required under the provisions of EIA Notification, 2006. Consent to Operate for the existing unit was accorded by Odisha State pollution Control Board vide Ir. no. 3492/IND-I-CON-5279 dt 26.03.2018. The validity of CTO is up to 31.03.2023.

36.2.6 Implementation status of the existing CTO:

S No	Facilities	Units	As per CTO dated 26/03/2018	Implementation Status as on 10.03.2021	Production as per CTO
1.	Sponge Iron (DRI) Kilns 2 x 100 TPD	TPA	60000	In operation	60000 TPA

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

S No	Name	Existing Units		Proposed Units		Total (Existing +Proposed)	
		Configurati on	Production TPA	Configuration	Production TPA	Configurati on	Production TPA
1.	Sponge Iron (DRI) Kilns	2x100 TPD	60000	2 x 350 TPD	210,000 TPA	2x100 TPD 2 x 350 TPD	270000
2.	Induction Furnace (Steel Melting)	--	--	3 x 15 Ton	1,35,000 TPA	3 x 15 Ton	3 x 15 Ton /1,35,000 TPA

S No	Name	Existing Units		Proposed Units		Total (Existing + Proposed)	
		Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
3.	Continuous Caster (for Billet making)	--	--	4m x 7m CCM		4m x 7m CCM	1,35,000 TPA
4.	Total Power	--	--				26.01 MW
5.	(steam from WHRB)	--	--	10 + 10 = 20 ton 30 + 30 = 60 ton	16 MW	10 + 10 = 20 ton 30 + 30 = 60 ton	16 MW
6.	(steam from CFBC)	--	--	50 Ton	10 MW	50 Ton	10 MW
7.	(including Solar Power)			10 kW	10 KW	10 kW	10kW
8.	Fly Ash Brick Making			30 million bricks/ annum		30 million bricks/ annum	30 million bricks/ annum
9.	Rolling Mill (for TMT Bar Production)			400 TPD	120000	400 TPD	1,20,000 TPA

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

Sl No	Raw Material Requirement	Consumption per annum			Source	Mode of Transport
		Existing	Proposed	Total		
1	Iron ore, Ton	96000	336000	432000	Odisha Mining Corporation	By covered trucks from OMC
2	Domestic Coal, Ton	30000	105000	136980	Mahanadi Coal Field, Talcher	By covered trucks from MCL
		0	1980			
3	Imported Coal, Ton	30000	105000	158760	South Africa, Indonesia etc.	By covered wagons & trucks
		0	23760			
4	Dolomite, Ton	3600	12600	16200	Open Market	By covered trucks
5	Pig Iron/ Scrap, Ton	0	29420	29420	Open Market	By covered trucks
6	Ferro Manganese, Ton	0	675	675	Open Market	By covered trucks
7	Limestone, Ton	0	4500	4500	Open Market	By covered trucks
8	Anthracite Coal#, Ton	0	2636	2636	Open Market	By covered trucks
9	Lime Sludge, Ton	0	8640	8640	Open Market	By covered trucks
10	Chemical Agent#, Ton	0	780	780	CFRI Dhanbad	By special tankers

36.2.9 The water requirement for the project is estimated as 1285 m³/day, out of which 15 m³/day of fresh water requirement will be obtained from the Bore well and the remaining

requirement of 1270 m³/day will be sourced from Brahmani River. In principle approval has been obtained for withdrawal of 0.745 cu.sec water from Brahmani River.

36.2.10 The power requirement for the project is estimated as 6088 MWh/ Annum (Existing); Expansion: 252814 MWh/ Annum, open access from Captive Power Plant of SHSPL and from WESCO.

36.2.11 Baseline Environmental Studies

Period:	01/10/2019 to 31/12/2019
AAQ parameters at 08 locations	PM _{2.5} = 30.04 to 58.04 µg/m ³ PM ₁₀ =50.21 to 85.11 µg/m ³ SO ₂ = 4.05 to 16.27 µg/m ³ NO ₂ = 12.24 to 25.34 µg/m ³
AAQ modelling	<u>Incremental GLCs in study area:</u> PM ₁₀ = 0.54 µg/m ³ PM _{2.5} = 0.0 µg/m ³ SO ₂ = 2.23 µg/m ³ NO _x =3.6 µg/m ³
Ground water quality at 08 locations	pH: 6.5 to 7.1, Total Hardness:44 to 308 mg/l, Chlorides:11.2 to 91.8 mg/l, Fluoride: 0.05 to 0.08 mg/l. Heavy metals are within the limits.
Surface water quality at 08 locations	pH: 7.0 to 7.8 DO: 7.1 to 7.9 mg/l BOD: 1.0 mg/l COD 5.0 mg/l
Noise levels	34 to 57 dB(A) for the day time and 39 to 69 dB(A) for Night time.
Traffic assessment study findings	Maximum trucks which would add to the existing traffic will be 47 trucks/ hour inward and 2 trucks/ hour outward for duration of 16 hours after the expansion of the plant.
Flora and fauna	There is no schedule I species exist in the study area.

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

Sl. No.	Waste	Solid waste Total in TPA			Management
		Existing	Proposed	Total	
1.	Dolochar	13800	48300	62100	Utilized in CFBC Boiler for Power generation
2.	ESP Dust	8400	29400	37800	Utilized for Brick manufacturing
3.	Wet Scrapper sludge	1200	4200	5400	Utilized for Brick manufacturing
4.	Bag filter dust	3600	12600	16200	Utilized for Brick manufacturing

Sl. No.	Waste	Solid waste Total in TPA			Management
		Existing	Proposed	Total	
5.	Acceration Dust	540	1890	2430	Utilized for Brick manufacturing
6.	IF Bag filter dust	Nil	8100	8100	Utilized for Brick manufacturing
7.	End Cut	Nil	3600	3600	Utilized in IF
8.	Fly ash/ bottom ash	Nil	55440	55440	Utilized for Brick manufacturing
9.	Non Magnetic slag	Nil	12960	12960	utilized for Brick
10.	Magnetic Slag	Nil	540	540	Utilized in IF

36.2.13 Public Consultation:

Details of Advertisement given	15/09/2020
Date of Public Consultation	16/10/2020
Venue	Madhupur Play Ground at Madhupur Kindrikela G. P. Tehsil Bonai, District Sundargarh.
Presiding Officer	Additional District Magistrate
Major Issues Raised	i. Air and Water Pollution ii. Solid waste and Waste water management iii. Permanent employment to local people iv. Development of the local area. v. Ground water abstraction and disturbed to natural drain. vi. Education and Health care facility vii. Plantation

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

Issues Raised by Public	Commitment of the Project Proponent	Time Bound Action Plan proposed	Budgetary provision
Environment Management Plan			
Air Pollution For Black Smoke and Dusts	<ul style="list-style-type: none"> In the existing plant ESP has already been installed and all air pollution control systems are running smoothly. Online monitoring system has been installed for stack monitoring. In expansion project ESP with ID fan will be installed Coal that will be used is African imported coal which is having low sulphur and low ash content. Water sprinklers will be installed along the internal roads and raw material storage yards. Regular water sprinkling will be carried out by tankers twice a day in the connecting road. 	For the existing plant the pollution control equipment has been already installed For the proposed plant all the pollution control measures will be installed as per the EMP before the commencement of production. Green belt development has been initiated by PP	50,00,000.00

Issues Raised by Public	Commitment of the Project Proponent	Time Bound Action Plan proposed	Budgetary provision
	<ul style="list-style-type: none"> 33% green belt will be ensured with 3 tier plantation. 		
Noise pollution For existence of village close to the boundary of the industry/expansion project.	<ul style="list-style-type: none"> Low RPM turbine will be used in operation of power plant. 3 tier plantation program will be carried out for greenbelt development. Acoustics Foam panels of Best Industry Standard in the interior walls of Turbine Generator rooms to control noise pollution. 	With the commencement of expansion project	1,00,000.00
Management of solid waste	<ul style="list-style-type: none"> 80% of the existing solid waste materials are utilized in the expansion work of national highway. We have developed market and are also selling ALL freshly produced Dolochar. Last year we sold 14000 tons. We will continue to sell this till our CFBC becomes operational. So in a nutshell we are not adding up any stocks. Solid waste generated from DRI Kiln will be used as fuel in the power plant. Fly ash generated from power plant will be utilized for in house brick manufacturing purpose. 100% ash utilization will be ensured. Proposed expansion project will be designed on the concept of ZLD. 	All the existing Char has been given for construction of road. In the expansion unit the Slag generated will be utilized for brick making. Char will be completely utilized by CFBC boiler with the commencement of CFBC	Incorporated with EMP cost
Drainage of waste water (runoff water for char dumps)	<ul style="list-style-type: none"> Proper drainage system will be provided for waste water management. Around the raw material storage area a retaining wall of (1m*1m) and garland drain of 1m*0.5 will be constructed. The garland drain will be connected to the settling tank and the over flow water after settle will pass through the surface water drain to rainwater harvesting pond. 	The construction of drainage network with garland drains is under process and will be completed by end of 2021.	10,00,000.00
Water logging and disturbance of natural drainage pattern due to implementation of project.	<ul style="list-style-type: none"> Proper drainage network will be constructed within the plant premises. For the nearby water body hume pipe and underpass drainage system has been proposed. 	The construction of drainage network with garland drains is under process and will be completed by end of 2021.	10,00,000.00
Consumption of ground water	<ul style="list-style-type: none"> For existing plant required water is being drawn with due permission 	Water permission obtained from CGWB for the existing unit.	5,00,000.00

Issues Raised by Public	Commitment of the Project Proponent	Time Bound Action Plan proposed	Budgetary provision
	<p>which shall be discontinued with after expansion.</p> <ul style="list-style-type: none"> For proposed expansion plant the required water which will be drawn from Brahmani River with intake well and subsequently ground water withdrawal shall stop. In existing plant rain water harvesting pond of 0.6acre has already been in operation. For proposed project 4 acre of rainwater harvesting system will be installed. During the operation the ground water will be only utilized for drinking and domestic use only. 	<p>No ground water will be utilized for the proposed expansion project. Rain water pond will be constructed within a year of plant operation</p>	
Plantation	<p>33% (18.2 acre) green belt development will be ensured with 3 tier plantation programme. At present 800 no's of saplings has been planted over an area of 6.08acres. Detail green belt plan is attached in the EIA report A fruit orchard has been developed by the proponent over an area of 3 acres and this will be taken care of by the people of Nearest habitation a hamlet</p>	Already initiated	30,00,000.00
Peripheral Development			
Construction of village roads	Construction and maintenance of Village roads and road connecting to NH 23 to plant site will be carried out.	2021	45,00,000.00
Permanent employment of local people in the industry on priority basis and pay wage as per govt. base	<p>Employment will be given to the local people in expansion project on priority basis in unskilled category. For skilled category recruitment will be done as per requirements. Out of total 93 employees, 79 are from Bonei block. Within those 79, 30 are from Kendrikela Gram Panchayat. And out of those 30, 22 are from Kendrikela village itself</p>	Along with the commencement of the proposed expansion project.	
Renovation of clubs and Anganwadi	Renovation of clubs and Anganwadis will be done after 1 year of plant operation.	2022-2023	5,00,000.00
Drinking water facility	<p>For drinking water facility government schemes already been implemented. If required in future company will take care of those requirements. Proposed Piped water supply in nearby villages i.eKendrikala, Madhupur, Barhamusa</p>	2023-24	20,00,000.00

Issues Raised by Public	Commitment of the Project Proponent	Time Bound Action Plan proposed	Budgetary provision
Street light facility	Solar Street light facility will be provided. (20 Solar Lighting poles in Kendrikala village road)	2023-24	10,00,000.00
Free health care facility	Free health checkups of village people will be done twice a year.	With the commencement of project	3,00,000.00 per annum
Educational facility	In Kandikela Gram Panchayat school boundary wall construction and renovation will be done. Rain water harvesting system will be installed in school. Fruit plants will be planted in school boundaries. Laying of Water pipe line for gardening purpose will be done. School furniture will be renovated School annual day and sports day will be celebrated	Continuing	31,50,000.00
Problem of prevailing kidney disease in the area and financial assistance on medical expenses of person suffering.	Proper medication facility will be provided to person who will be affected in renal disease. Company will provide a vehicle for transportation of the person from the village to nearest Community Health center.	Within 1year of Plant operation	16,00,000.00

36.2.14 The capital cost of the expansion project is Rs 284.0 Crores and the capital cost for environmental protection measures is proposed as Rs 28.4 Crores (for expansion). The annual recurring cost towards the environmental protection measures is proposed as Rs 2.84 Crores (for expansion). The employment generation from the proposed expansion is 430. The details of cost for environmental protection measures is as follows:

Item	Cost (in Crore)
Cost of Air Pollution Control Devices/ System	15.0
Cost of Water conservation & Pollution Control	6.0
Cost of Solid Waste Management System	2.0
Green belt development	0.5
Noise Reduction Systems	0.5
Occupational Health Management	0.5
Risk Mitigation & Safety Plan	1.4
Setting Environmental Management Cell	0.5
Implementation of Controlling measures to minimise impacts due to transportation and traffic	1.0
Setting/ Modification Environmental Laboratory	1.0
Total	284

The estimated recurring cost of environmental mitigation measures for the proposed project has been estimated to be Rs. 2.8 crores. The annual estimated environmental mitigation costs include:

Budgetary Provision of Environmental Management Plan (Recurring Cost)

Item	Cost (in Lacs)
Air Pollution Control Systems	50.0
Water conservation & Pollution Control	70.0
Solid Waste Management System	40.0
Green belt development	10.0
Online/ Manual Monitoring Surveillance System	20.0
Noise Reduction Systems	10.0
Occupational Health Management	10.0
Risk Mitigation & Safety Plan	20.0
Environmental Management Department	30.0
Controlling measures to minimize impacts due to transportation and traffic	20.0
Grand Total	280 Lakhs

36.2.15 Green belt will be developed in 7.36 ha which is about 33% of the total project area. A 7.5 m wide green belt, consisting of at least 3 tiers around plant boundary will be developed as green belt 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 15000 saplings will be planted and nurtured in 7.36 hectares in 4 years.

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

36.2.17 Name of EIA consultant: M/s. Kalyani Laboratories Private Limited (KLPL). [Sr No. 91, List of ACOs with their Certificate / Extension Letter no. Rev. 10, May 13, 2021].

Certified compliance report from Regional Office:

36.2.18 The Status of compliance of earlier CTO was obtained from Odisha State Pollution Control Board vide letter no 494/CTO-0683 (P-II) dated 03/03/2021. As per the report, the project proponent is complying with the existing CTO conditions.

36.2.19 M/s. Shree Hari Sponge Private Limited has made an online application vide proposal no. IA/OR/IND/103521/2019 dated 04/03/2021. The proposal was considered earlier by the EAC (Industry 1) in its 32nd meeting of the Re-constituted EAC (Industry-I) held on 15-17th March, 2021. The observations and recommendations of EAC is given as below:

- i. The project proponent vide email dated 15/03/2021 expressed their inability to participate in the meeting and requested to reschedule the proposal in upcoming EAC meeting.
- ii. After deliberations, the Committee recommended that the proposal shall be listed for consideration in the forthcoming EAC meeting.

36.2.20 Accordingly, the proposal was considered by the EAC (Industry 1) in its 33rd meeting held on 30-31st March, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee held during 30–31st March, 2021

36.2.21 The Committee noted the following:

- i. PH was held on 16.10.2020. As per the PH proceedings, local people had a general complaint that PP has not spent any money in past thirteen years on social welfare. The issues raised during the public hearing have not been adequately addressed in the final EIA report.
- ii. No efforts have been made to explore availability of surface water to avoid ground water abstraction for the proposed expansion.
- iii. Dolochar generated from existing DRI kiln is not used for power generation. Further, the dolochar and ESP bag house dust is being dumped in a 10-acre yard which is not a sound environment practice.
- iv. Approach road to the plant from NH is katcha and internal plant roads are also not paved.
- v. 20 KLD of domestic waste water is envisaged to be discharged into soak pits. No concrete plan is mentioned in EIA report for treatment of domestic wastewater.
- vi. Garland drains have not been proposed around the raw material storage yard and no settling pit is provided to trap the run off material.
- vii. Only 20 % of plant area is covered with green belt with a density of 2000 trees per hectare as against mandatory green belt requirement of 33% of the plant area.
- viii. Total land requirement is 55 acres, out of which 30.05 acres is in possession of PP. balance 24.95 acres of land is yet to be acquired which is under process by IDCO.
- ix. Plant layout is not an engineering drawing. No dimensions are given and NORTH is shown as WEST. Layout is not showing new kiln installations.
- x. EIA Report has following deficiencies:
 - a. Cover page does not indicate plant capacity and the month in which EIA has been finalized.
 - b. Scope does not cover installation of 14000 TPA slag crusher and the same is also not covered in TOR.
 - c. Section 6.10 and 6.11 do not cover the TOR point # 9 pertaining to Corporate Environment Policy as per requirement. Chapter 6 is not supposed to address TOR # 9.
 - d. WHRB proposed is only 16 MW while it should be 20 MW for 2x100 TPD and 2X350 TPD kilns.
 - e. Hot charging of billet has not been proposed. RHF using FO has been proposed.
 - f. Layout plan submitted in section 2.13 of EIA and the one shown in Form 2 are different.
 - g. Section 2.13 of Chapter 2 of EIA report is not presented as per the requirement of EIA Notification 2006.
 - h. Criteria for selection of soil sampling stations in section 3.1.1 have not been given. Physical parameters tested and reported in table 3.6 are not complete. In view of this, fresh analysis of soil samples needs to be carried out.
 - i. Out of 8 SW samples collected, 6 are from village ponds in rural Odisha. TDS in these samples varies from 76 to 140 ppm; BOD is less than 1.0 mg/L; COD is less than 5; DO is between 7.1 to 7.6 mg/L. BOD values correspond to coliform levels of 1600 MPN/100cc. No explanation is available in the report for the observed quality of SW. It is also not clear as to which method has been

- used to determine BOD in less than 1 ppm range. In view of this, fresh analysis of surface water samples needs to be carried out.
- j. Criteria for selection of AAQ stations have not been defined.
 - k. Environment Baseline and Socio-economic data have not been interpreted. No quality check has been performed on the data collected.
 - l. Impacts and Mitigation measures suggested in Chapter 4 are generic and not quantified in specific terms applicable to the project.
 - m. EMP Chapter 10 does not give specific details in quantified terms of the Impacts that are supposed to be managed administratively in post project scenario as per the requirement of EIA notification 2006.
 - n. Action plan to address the issues raised during public hearing is not as per the requirement of MoEF&CC O.M. dated 30/09/2020.
 - o. PH issues have not been addressed to formulate EMPs for social welfare and infrastructural work.
 - xi. Incomplete information is provided in Form 2 (For instance in section 5, 13, 21, 29, 30 etc.,) which needs to be revisited.

Recommendation of the Committee held during 30–31st March, 2021

- 36.2.22 In view of the foregoing observations at para 36.2.21 and deliberations, the committee recommended to return the proposal in its present form to address the shortcomings mentioned above
- 36.2.23 It was apprised to the EAC that MoEF&CC has issued a Show Cause Notice to the EIA consultant - M/s. Kalyani Laboratories Private Limited (KLPL) on 22/04/2021 for this project as the consultant has submitted the EIA report with several technical deficiencies. Reply to the SCN is still awaited from the consultant.
- 36.2.24 M/s. Shree Hari Sponge Private Limited has made again an online application vide proposal no. IA/OR/IND/103521/2019 dated 28/04/2021. The proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

- 36.2.25 The Committee noted the following:
- i. In the revised EIA report, the observations made by the EAC in its meeting held on 30-31st March, 2021 have not been addressed satisfactorily.
 - ii. Selection of AAQ stations has been carried out wrongly and in light of this revised AAQ modelling needs to be carried out.
 - iii. Revalidation of AAQ data by collecting one-month fresh AAQ data at appropriate locations needs to be carried out. Thereafter, fresh AAQ modelling shall be carried out.

Recommendations of the Committee

- 36.2.26 In view of the foregoing and after deliberations, the Committee recommended to return the proposal in its present form to address the shortcomings as enumerated above.

36.3 Integrated Steel Plant (3.5 MTPA) including Captive Power Plant (295 MW) by **M/s. Aaress Iron and Steel Private Limited** at village Halavarthi, Tehsil Koppal, **District Koppal, Karnataka**– [Online Proposal No. IA/KA/IND/27952/2015, File No. J- 11011/161/2015-IA-II.(I)] - **Reconsideration for Environment Clearance based on ADS reply** - regarding

36.3.1 M/s. Aaress Iron and Steel Limited (AISL) made an online application vide proposal no. IA/KA/IND/27952/2015 dated 21/01/2019 in prescribed format (Form -2) along with copies of EIA/EMP report and other documents for seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous), 4(b) coke oven plants, 2(b) mineral beneficiation and 1(d) thermal power plants under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

Details submitted by the project proponent

36.3.2 The detail of the ToR is furnished as below:

Date of Application	Consideration	Details	Date of Accord
03/06/2015	43 rd meeting of EAC (Industry) held on 2-3 rd July, 2015	Terms of Reference	22/07/2015
24/04/2018	32 nd meeting of EAC (Industry I) held on 11-13 th June, 2018	Extension validity of ToR	18/06/2018

36.3.3 The proposed project of M/s. AISL is located in Villages Halavarthi, Basapur, Koppal, Kidadal, Ginigera , Tehsil Koppal, District Koppal, State Karnataka is for setting up of a new Integrated Steel Plant for production of 3.5 MTPA along with 295 MW CPP.

36.3.4 Environmental site settings

S No	Particulars	Details
i.	Total land	812.89 acres
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Entire 812.89 acres has been acquired by the proponent through Karnataka Industrial Area Development Board (KIADB) and is under the possession of the project proponent.
iii.	Existence of habitation & involvement of R&R, if any.	There is no R&R involved.
iv.	Latitude and Longitude of the project site	15°19'34.32"N to 15°20'52.49"N and 76°12'09.78" E to 76°13'58.16"E
v.	Elevation of the project site	515 m AMSL
vi.	Involvement of Forest land if any.	Nil
vii.	Water body exists within the project site as well as study area	Project site: Nil Study area: Tungabhadra Reservoir : 9km in SE

S No	Particulars	Details
viii.	Existence of ESZ/ ESA/ national park / wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil.

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

S. No.	Plant Units	Proposed unit configuration		Final Plant Configuration
1	Coal Washery	1x3.0 MTPA	-	1x3.0 MTPA
2	Ore Beneficiation Plant	1.2 MTPA	-	1.2 MTPA
3	Pellet Plant with coal gasifier unit	1x1.2 MTPA	-	1x1.2 MTPA
4	Sinter Plant	1x144 m ² 1.29 MTPA	1x324 m ² 3.8 MTPA	(1x144)+(1x324) m ² 5.09 MTPA gross sinter
5	Coke Oven	1x0.68 MTPA 2x55 Ovens 5.5 m tall	1x1.5 MTPA 2x65 Ovens 7.0 m tall	2.1 MTPA Coke Oven battery 2x55 ovens 5.5 m tall + 2x65 ovens 7.0 m tall
6	Blast Furnace	1x1681m ³ BF 1.2 MTPA	1x3814 m ³ BF 2.6 MTPA	1x1681m ³ +1x3814 m ³ BF 3.8 MTPA hot metal
	BF slag	343,000	788,000	1,131,000 TPA
7	SMS			
a)	EOF(Energy Optimizing Furnace)/ BOF (Basic Oxygen Furnace)	2x65 T EOF	2x180 T BOF furnaces	(2x65)T EOF+ 2x180T BOF
b)	LF (Ladle Furnace)	2x65 T	1x180 T	2x65 T +1x180 T
c)	VD / RH Degasser	2x65 T VD	1x180 T RH Degasser	2x65 T VD +1x180 T RH Degasser
f)	Billet Caster/ Bloom Caster	2x3 Billet Caster + 1x2 Bloom caster	-	2x3 Billet Caster +1x2 Bloom caster
h)	Slab Caster	-	2x1 strands slab caster	(2x1) Strand
8.	Billet & Bar Mill	0.25 MTPA	-	0.25 MTPA
9.	Bar & Rod Mill	0.60 MTPA	-	0.60 MTPA
10.	Hot Strip Mill	-	2.5 MTPA slab input	2.5 MTPA slab Input

S. No.	Plant Units	Proposed unit configuration		Final Plant Configuration
11.	Cold Rolling Mill with continuous Pickling Line	-	1.00 MTPA hot coil input	1.00 MTPA hot coil input
12.	Hot Dip Galvanizing / Galvalume Unit	-	0.4 MTPA CR coil input	0.4 MTPA CR coil input
13.	Colour Coating Unit	-	0.2 MTPA Galvanizing Coil Input	0.2 MTPA Galvanizing Coil Input
14.	Oxygen Plant	1x550 TPD	1x1100 TPD	1650 TPD
15.	Lime Plant (Out Sourced)	2x300 TPD	1x600 TPD	1200 TPD
16.	Dolo Plant (Out Sourced)	1x300 TPD	-	300 TPD
17.	Captive Power Plant(CPP)	1x70 MW from CFBC based Boiler+ 6 MW TRT from BF-1	2x100MW conventional based on washed coal + 12 MW TRT + 7MW WHRB based	295 MW CPP from CFBC/WHRB/TRT/coal reject/middling/washed coal
18.	Material Handling Plant	Matching	Matching	Matching

36.3.6 The water requirement of the project is estimated as 20.93 MGD. Initially 10 MGD for steel project and 2.55 MGD for pellet plant is being sanctioned by the Government of Karnataka vide order Number: CI 511 SPI 2005 dated 22/03/2006 and Letter No : JA:SUM:E 04 MTB2018 dated 04/02/2020. Accordingly, the agreement being executed with Government of Karnataka. Further the 8th SHLCC, Government of Karnataka has given permission vide proceedings dated 23.02.2007 for drawl of additional 5 MGD water from Tungabhadra River. In addition, PP have applied for 40 MGD water from the Upper Krishna project Vide our letter NO: AISL / WRS — KR/2009-10-01 dated 4/12/2009 along with the proposed route MAP for drawl of water. Detailed project report and the check list was forwarded by Asst Executive Engineer, water investigation sub-Division, Belgaum to Executive engineer, water investigation sub-Division, Dharwad for further Needful action. In this regard, PP informed that they have adequate water resources from Upper Krishna project for fulfilling the 5 MGD additional requirement of the project.

36.3.7 The power requirement of the project is estimated as 366000 KVA, and will be met from Captive Power Plant.

36.3.8 Baseline Environmental Studies

Period:	Summer Season: 01/03/2016 to 29/05/2016 Additional one month baseline environmental studies was also conducted during the period of February-March 2019
AAQ parameters at 09 locations	PM ₁₀ = 36 µg/m ³ to 63 µg/m ³ PM _{2.5} = 15 to 35 µg/m ³ SO ₂ = 7 to 20 µg/m ³ NO _x = 12 to 31 µg/m ³ .
AAQ modelling	<u>Incremental GLCs in study area for:</u> PM = 20.3 µg/m ³ SO ₂ = 10.7 µg/m ³ NO _x = 19.43 µg/m ³
Ground water quality at 08 locations	pH:7.26 to 8.03 Total Hardness: 295 to 450 mg/l Chlorides: 23 to 570 mg/l Fluoride: 0.8 to 1.67 mg/l
Surface water quality at 06 locations	pH: 7.26 to 7.5; DO: 5.2 to 5.7 mg/l and BOD: 1.2 mg/l to 2.2 mg/l
Noise levels at 09 locations	36.4 to 57.4 dBA for daytime and 34.0 to 47.5 dBA for night time.
Flora and fauna	There are no schedule- I species exist in the study area.

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

Solid Waste	Total generation at full capacity (TPA)		Utilization and mode	Disposal
	Phase-1	Phase-2		
Coal/coke dust	11,854	12,653	100% utilized in coal blend charge in the coke oven complex	Nil
Undersize coke	26,000	59,200	100% utilized in sintering plants as a bed material for heat energy	Nil
Tar sludge	240	256	To be used along with coal charge in the coke ovens	Nil
Acid sludge from by-product units	100	100	-	To be neutralized and disposed as landfill.
Lime sludge from PCM	450		To be used as neutralizing agent	Nil
Iron bearing dusts from dust catchers/ESPs/Bag filters	232,980	556,669	To be used along with the charge mix in the sintering plants. The design has provisions to use these.	Nil
Blast Furnace granulated slag	362,208	822,298	To be sold to cement plants for making blast furnace slag cement	Nil

Solid Waste	Total generation at full capacity (TPA)		Utilization and mode	Disposal
Steel making slag	150,000	324,000	Only iron bearing portion of the steel slag would be recovered and iron to be used in steel making. A small % of the steel slag can be used in Blast furnace as source of lime.	These would be used as landfills either inside the plant or in the neighborhood
Iron oxide from acid regeneration plant of Cold rolling mills		40,000	To be sold to users like Ferro magnet industry, iron powder industry etc.	Nil
Power plant fly ash	127,360	490,758	To be sold to fly ash brick makers and cement plants making fly ash cements	Nil
Power plant Bottom ash	31,840	122,689	Cannot be used in the processes adopted.	To be used as land fill
Arising of skull/scraps	94,197	191,315	To be used in steel making for re-melting.	Nil
Rejects after Two stage WHIMS treatment in the fine ore beneficiation plant.		4,44,188 (Dry)	To be temporarily stocked at the designated site in the plant and later transported to a nearby ore mine pit for re-filling and green development.	Phase-1: Phase-2: 4,44,188 t
Refractory wastes	10,880	26,849	Un-contaminated (80%) bricks will be sold (for construction) or crushed to be used as mortar.	About 20% of the waste bricks which are contaminated with slag/skull etc. would have to discarded and dumped in landfills.
Muck/sludge/wastes	5,050	7,750	Cannot be re-used	
Total arising	1,053,159	3,098,723	174,066 (16.53%)	870,968 (28.2%)

36.3.10 Public Consultation:

Details of Advertisement given	28/04/2018
Date of Public Consultation	28/05/2018
Venue	Adjacent to plant site at Village Halavarthi, tehsil & District Kopal, Karnataka
Presiding Officer	Deputy Commissioner, Koppal District
Major Issues Raised	Land related issues

Public hearing action plan as per MoEF&CC O.M. dated 30/09/2020

Sl.	Activities	Yr1	Yr2	Yr3	Yr4	Yr5	Total (Rs. In Crs)
	Villages	Halavarthi, Basapur, Kidadal, Koppal, Ginigera					
1	Infrastructure for Health and Sanitation	0.35	0.35	0.90	0.90	1.25	3.75
2	Infrastructure for Education & Training	0.55	0.55	0.85	0.95	0.85	3.75
3	Public Infrastructure Development such as drinking water, road making, drainage system in nearby villages.	2.75	3.75	4.75	8.75	8.75	28.75
4	Afforestation programs	0.25	0.25	0.5	0.75	0.75	2.5
5	Implementation of scheme for Soil and Water Conservation	0.35	0.35	0.95	1.05	1.05	3.75
6	Training centre for computer education and tailoring etc.	0.30	0.30	0.60	0.60	0.70	2.5
	Total	4.55	5.55	8.55	13	13.35	45.0

36.3.11 The capital cost of the project is Rs. 17,979 Crores and the capital cost for environmental protection measures is proposed as Rs. 800 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 107.5 Crores. The employment generation from the proposed project is 3811 Nos.

S No	Environmental Protection Measures	Capital Cost (Rs. Crores)	Recurring Cost per annum in Crores
1.	Air & Noise Pollution Control	400	50
2.	Water Pollution Control	80	15
3.	Environment Monitoring Programme	5.0	0.46
4.	Green Belt	8.0	0.10
5.	Others (Solid waste management, ventilation / air conditioning, fire fighting etc.)	307	42
	Total	800	107.56

36.3.12 Greenbelt will be developed in about 33 % of the total acquired area. 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.

36.3.13 A Special Leave Petition bearing no 20866-20886 of 2012 and 21310-21329 of 2012 is pending before the Hon'ble Supreme Court with respect to 109.03 acres of land (Survey No. 295/2, 298, 299, 300/A, 300/B, 130/AP1, 130/AP2, 132/B, 133, 140, 140/P1, 147,150/B, 155/3, 155/B, 156/2, 170/D, 172/A, 172/B, 172/P3, 172/P4, 171/AA1, 172/H, 172/F, 172/P5 out of 922.19 Acres. In this regard, the Hon'ble Supreme Court vide Order dated 27/02/2012 directed to maintain status quo by all concerned with respect to the land of the owners. The

matter is presently under sub-judice. In view of this, AISL has excluded the 109.03 acres from the proposed project area and assure to abide by the directions of the Hon'ble Supreme Court.

36.3.14 Name of EIA consultant: M/s. Pollution and Ecology Control Services. [Sr No. 72, List of ACOs with their Certificate / Extension Letter no. Rev. 10, May 13, 2021].

36.3.15 M/s. Aaress Iron and Steel Limited (AISL) made an online application vide proposal no. IA/KA/IND/27952/2015 dated 21st January, 2019. The proposal was considered earlier by the EAC (Industry 1) in its 4th meeting of held on 20-22nd February, 2019. The observations and recommendations of EAC is given as below:

Observations of the Committee held during 20-22nd February, 2019

The Committee noted that the proposal per se has merit from environmental perspective; However, EIA/EMP submitted to the Ministry is not in accordance with the QCI/NABET norms.

Recommendation of the Committee held during 20-22nd February, 2019

After detailed deliberations, the Committee recommended to reconsider the proposal after revising the EIA/EMP report by incorporating the following points:

- i. Structure of the EIA/EMP report and signature of the functional area experts shall be in accordance of the QCI/NABET requirement.
- ii. Point wise compliance to the specific, generic and additional ToR conditions shall be ensured after incorporating one-month fresh environment data (physical).
- iii. Details regarding case filed before the Hon'ble Supreme Court and its present status shall be submitted.

36.3.16 The proposal was reconsidered by EAC-(Industry I) in 8th EAC meeting on 26th June, 2019. The observations and recommendations of EAC is given as below:

Observations of the Committee held during 26th June, 2019

The Committee noted that total land requirement for the project is 1917.6 acres out of which 922.1 acres is under possession of the proponent while 995.50 acres is under acquisition by KIDAB. Further, it is noted that a litigation is pending before the Hon'ble Supreme Court for 109.3 acres of land which is part of 922.1 acres land under possession of the project proponent wherein the the Hon'ble Court has directed to maintain status-quo. The project proponent has no permission for withdrawal 4170 KLD of water, the total daily water requirement for the project, from Tungbedra reservoir

Recommendation of the Committee held during 26th June, 2019

After detailed deliberations and considering the matter being sub-judice, the Committee recommended not considering the project at this stage. In accordance with the decision of EAC, the proposal was kept in abeyance.

36.3.17 Project proponent has submitted the representation to the Ministry on 24.09.2019 and mentioned the following.

- i. M/s Aaress Iron and Steel Ltd is in total possession of 922.1 acres which was acquired by Karnataka Industrial Area Development Board (KIADB) and handed over to the project proponent vide letters KIADB/AE/2392/2007-08 dated 10.03.2008 and KIADB/AE/3060/2009-10 dated 15.01.2010 for 1st phase of 1.0 MTPA capacity steel plant.
- ii. The State High Level Committee (SHLC), Government of Karnataka has considered and cleared the project vide GO No: C1274 SPI 2016, Bengaluru dated 20.10.2016 for enhancing capacity to 3.5 MTPA steel plant and given in principle approval for acquiring the land of notified survey numbers to an extent of 995.5 acres through KIADB for 2nd phase in addition to the land in possession, i.e 922.1 acres.
- iii. In accordance with OM of the Ministry vide F.No.22-76/2014–IAIII dated 07.10.2014, full acquisition of the land is not the prerequisite for consideration of the case for EC, there should be some credible document to show the status of Land acquisition with respect to project site when the case is brought before the concerned EAC. Only 109.03 acres land was adjudicated by the farmers after the acquisition process between Government of Karnataka and the farmers.

36.3.18 After examination of the same, the Ministry asked project proponent to submit details of court cases including copies of orders and petitions, complete land details with survey numbers, layout plan of the project along with depiction of land under possession /in process of acquisition/ adjudicated, alternative layout vide letter dated 15/01/2020.

36.3.19 Revised layout plan which avoids adjudicated land of 109.3 acres, along with details of the court cases and the layout with survey numbers were submitted by project proponent vide letter dated 13/02/2020. The same was examined and referred to Legal Monitoring Cell (LMC) in the Ministry for comments. LMC opined that the revised layout plan is legally in order since, there is no dispute involved in the revised plan. Therefore, the same may be taken into account for further consideration of the project. In view of aforementioned facts and with the approval of competent authority, the proposal was placed before the EAC in 19th meeting of Re-constituted EAC (Industry- I) held during 20-21st May, 2020. The observations and recommendations of EAC is given as below:

Observations of the Committee held during 20-21st May, 2020

- i. In accordance with OM of the Ministry vide F.No.22-76/2014–IAIII dated 07.10.2014, if the land for the project is proposed to be acquired through Government intervention, a preliminary notification issued by the concerned State Government regarding acquisition of land as per the provisions of land acquisition, R&R Act, 2013 shall be required at the time of appraisal by the EAC. In the instant proposal following is the land acquisition status:

S No	Land (Acres)	Present status	Remarks
1.	922.1 acres	Acquired by KIADB and handed over to PP.	Out of 922.1 acres, 109.23 acres is under legal dispute.
2.	995.5 acres	Land is yet to be acquired. Further, preliminary notification by the Govt. of Karnataka is also	Preliminary notification is required for appraisal

S No	Land (Acres)	Present status	Remarks
		pending.	by EAC.

36.3.20 Out of the total land required (1917.6 acres) for setting up of 3.5 MTPA steel plant, 922.1 acres is under possession for which KIADB notified as industrial land. After the notification, out of this 922.1 acres of land, 109.03 acres land is adjudicated. The dispute is between KIADB, Government of Karnataka and land owners / farmers and the project proponent is the affected party. A special leave petition was filed by the project proponent where in Hon'ble Supreme Court directed to maintain status –quo by all concerned with regard to the land of the Writ Petitioners (landowners) vide order dated 27.07.2012. Whereas the second phase of land acquisition process by KIADB for 995.5 acres is in progress.

36.3.21 Out of total water (15 MGD) for the project, project proponent was granted permission for 10 MGD and the rest 5 MGD is under consideration of the State Government.

Recommendations of the Committee held during 20-21st May, 2020

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

- i. Revised layout plan of project by realigning the facilities with exclusion of all the subjudiced / disputed lands.
- ii. Preliminary notification issued by the State Government of Karnataka regarding acquisition of 995.5 acres of land as per the provisions of land acquisition, R&R Act, 2013
- iii. Progress made regarding obtaining water withdrawal permission of remaining 5 MGD.

36.3.23 M/s. Aaress Iron and Steel Limited has submitted reply to the ADS points sought by EAC during 20-21st May, 2020 on 30/04/2021 to the Ministry. The ADS reply submitted by the proponent are summarized as below.

S.No.	Additional information sought	Reply submitted by the proponent
i.	Revised layout plan of project by realigning the facilities with exclusion of all the subjudiced / disputed lands.	PP submitted the revised layout for 3.5 MTPA by excluding the land 109.3 acre under sub-judice form total 922.19 acres already notified by KIADB. The land 922.19 acres mentioned above has completed the acquisition process through KIADB and the same in possession. However, a part of land, i.e., 109.3 acres out of 922.19 acres is under subjudice, due to Writ Petition filed by the landowners. Due to Realignment of various units of Proposed Project the Land requirement reduces the 812.89 Acres which is in possession. (922.19 Acre – 109.3 Acres

S.No.	Additional information sought	Reply submitted by the proponent
		= 812.89 Acres). Green belt is proposed @33% of 922.19 Acres.
ii.	Preliminary notification issued by the State Government of Karnataka regarding acquisition of 995.5 acres of land as per the provisions of land acquisition, R&R Act, 2013	State High level clearance 'Committee has considered allocating 995.5 acres land for AISL Integrated Steel Plant. KIADB is yet to initiate the acquisition process of this 995.5 acres, AISL will continue to pursue the same land for future expansion purpose.
iii.	Progress made regarding obtaining water withdrawal permission of remaining 5 MGD.	The water requirement of the project is estimated as 20.93 MGD. Initially 10 MGD for steel project and 2.55 MGD for pellet plant is being sanctioned by the Government of Karnataka vide order Number: CI 511 SPI 2005 dated 22/03/2006 and Letter No : JA:SUM:E 04 MTB2018 dated 04/02/2020. Accordingly, the agreement being executed with Government of Karnataka. Further the 8th SHLCC, Government of Karnataka has given permission vide proceedings dated 23.02.2007 for drawl of additional 5 MGD water from Tungabhadra River. In addition, PP have applied for 40 MGD water from the Upper Krishna project Vide our letter NO: AISL / WRS — KR/2009-10-01 dated 4/12/2009 along with the proposed route MAP for drawl of water. Detailed project report and the check list was forwarded by Asst Executive Engineer, water investigation sub-Division, Belgaum to Executive engineer, water investigation sub-Division, Dharwad for further Needful action. In this regard, PP informed that they have adequate water resources from Upper Krishna project for fulfilling the 5 MGD additional requirement of the project.

36.3.24 The proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021. During the meeting, PP made the written submissions on the following points.

- i. Revised layout plan of project by realigning the facilities with exclusion of all the sub-

- judice / disputed lands.
- ii. Action plan to address the issues raised during public hearing as per MoEF&CC O.M. dated 30/09/2020.

Observations of the Committee

36.3.25 The Committee noted the following:

- i. The revised land requirement for the project is 812.89 acres and the proponent has excluded the 109.3 acres of disputed land by providing access to the land.
- ii. PP has agreed upon to exclude 995.5 acres which is meant for future expansion purpose by the proponent.
- iii. The EAC found that the EIA/EMP report is in order reflecting the present environmental concerns and the projected scenario for all the environmental components arising out of the proposed project with respective mitigation measures. The EAC also noted that the baseline data reported and incremental GLC due to the proposed project were within NAAQ standards.
- iv. The EAC also deliberated on the public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.
- v. The EAC noted that the additional submission submitted through PARIVESH and written submissions made by the project proponent during the course of meeting are addressing the concerns of the Committee and acceded to the same.

Recommendations of the Committee

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

A. Specific conditions

- i. The project proponent shall abide by all orders and judicial pronouncements, made from time to time by the Hon'ble Supreme Court in Special Leave Petition number 20866-20886 of 2012 and 21310-21329 of 2012.
- ii. Total revised area for the project shall be 812.89 acres. In case, if the Hon' Court decides to award the disputed land of 109.3 acres in favor of project proponent formal amendment in the Environment Clearance shall be obtained by the project proponent.
- iii. Rejects from coal washery shall be dewatered in filter press and sold. Maximum 30 days storage inside the plant shall be permitted. No reject pond shall be permitted.
- iv. Iron Ore washing plant tailings shall be dewatered in filter press and stored dry for disposal. Maximum 30 days storage inside the plant shall be permitted.
- v. Maximum 90 days of slag storage area shall be permitted inside the plant. PP shall recycle/reuse /sell 100 % solid waste generated in the plant. Dumping of waste for any period longer than 90 days would not be permitted.

- vi. Intermediate storage area shall be provided with stable impervious lining with garland drains connected to a settling pond.
- vii. Sinter plant shall have sinter cooler waste recovery system to generate process steam or power.
- viii. Producer gas plant shall not be established by the proponent.
- ix. Tar sludge from coke ovens shall be recycled to be used as a fuel in coke ovens.
- x. Coke Dry Quenching (CDQ) shall be installed in coke ovens.
- xi. Coke Oven Gas shall be desulfurized.
- xii. Sinter cooler waste heat recovery shall be installed.
- xiii. Sinter Plant will be installed based on MEROS technology to reduce emission of SO₂, NO_x and heavy metals.
- xiv. BF shall be equipped with Top Recovery Turbine, dry gas cleaning plant, stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.
- xv. Secondary fume extraction system shall be installed on converters of Steel Melting Shop.
- xvi. Waste water treatment plant with zero discharge for Coke plant shall be provided.
- xvii. Basic Oxygen Furnace (BOF) gas shall be cleaned dry.
- xviii. Waste Heat Recovery system for charge preheating shall be included for 65 T Electric Arc Furnace.
- xix. Submerged Arc Furnace and Electric Arc Furnace shall be closed type with 4th hole extraction system.
- xx. PP shall install a slag crusher to convert Steel slag into concrete for use in construction industry and fine sand for use as flux in steel plant, sand in brick making and also as lime in cement making.
- xxi. 85-90 % of billets/slabs shall be rolled directly in hot stage. Only 10-15 % rolling shall be done through RHF using only Light Diesel Oil or Mixed BF/CO gas.
- xxii. CRM and color coating and galvanizing plants shall have CETP to treat and recycle the treated water from CRM complex. Sludge generated at CRM ETP shall be sent to TSDF.
- xxiii. Incinerator shall be provided to incinerate oily sludge, oil scum and waste oil sludge generated in CRM complex.
- xxiv. Acid recovery plant shall be included to recover acid from pickling lines.
- xxv. Dust emission from Steel Plant stacks shall not exceed 30 mg/Nm³ while from Power Plant stacks it shall not exceed 25 mg /Nm³.
- xxvi. Water requirement for the plant shall be met from River Tungbhadra or Krishna. Ground water abstraction is not permitted.
- xxvii. Green Belt shall be developed in 33 % land with tree density of 2500 trees per ha. (or 1000 trees per acre).
- xxviii. Plant internal roads shall be concreted and a vacuum cleaner shall be used to regularly clean the roads.
- xxix. Garland drains shall be provided around stockpiles and pits to trap raw material run off shall be provided.

- xxx. Sewage Treatment Plant of suitable capacity shall be installed to treat domestic sewage.
- xxxi. Specific water consumption in the steel plant shall be less than 6.0 m³/t of finished product.
- xxxii. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.
- xxxiii. Dedicated railway siding within the steel plant complex shall be established by the proponent by December, 2023 for the transportation of materials as committed.
- xxxiv. Parking area for trucks/dumpers shall be provided within the steel plant. No truck/dumper shall be parked outside the steel plant premises.

B. General conditions

I. Statutory compliance:

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

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- iv. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- v. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- vi. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- vii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines

collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

- viii. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- ix. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).
- x. Land-based APC system shall be installed to control coke pushing emissions.
- xi. Monitor CO, HC and O₂ in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.
- xii. Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.
- xiii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xiv. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; 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 recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;
- iv. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- vi. Tyre washing facilities shall be provided at the entrance of the plant gates.
- vii. Treated water from ETP of COBP shall not be used for coke quenching.

- viii. Water meters shall be provided at the inlet to all unit processes in the steel plants.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

VI. Waste management

- i. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.
- ii. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
- iii. Used refractories shall be recycled as far as possible.
- iv. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
- v. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.
- vi. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

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

VIII. Public hearing and Human health issues

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

IX. Corporate Environment Responsibility

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

36.4 Expansion of Alumina Refinery (1 MTPA to 4 MTPA) and Captive Power Plant (75 MW to 285 MW) by **M/s. Vedanta Limited**, located at Lanjigarh **District Kalahandi Odisha** [Online Proposal No. IA/OR/IND/209784/2021, File No. J- 11011/406/2011- IA.II (I)] – **Amendment in Environment Clearance regarding specific condition no. v pertaining to land acquisition for phase III Alumina Refinery** – regarding.

36.4.1 M/s. Vedanta Limited has made an online application vide proposal no. IA/OR/IND/209784/2021 dated 22/04/2021 along with Form 4 and sought for Amendment / Clarification in Environment Clearance accorded by the Ministry vide letter no. J – 11011/53/2014/IA.II(I) dated 20/11/2015.

Details submitted by the project proponent

36.4.2 M/s. Vedanta Limited vide their application dated 19/08/2014 has applied to MoEF&CC for grant of EC for expansion of (1MTPA to 6 MTPA – Phase I: 1 to 2 MTPA; Phase II: 2 to 4 MTPA and Phase III: 4 to 6 MTPA) Alumina Refinery and Captive Power Plant (from 75MW to 285MW) at Dist. Kalahandi, Odisha. As per the proposal submitted to MoEF&CC, the total project area is 1552.7 ha. Out of this total area, 833.17 + 53.5 ha is under advanced stage of acquisition and the balance 666.03 ha was yet to be acquired. Since the total land required for the project activity was not under the possession of proponent, the EC was accorded for the expansion of Alumina Refinery (1 MTPA to 4 MTPA) and Captive Power Plant (75 MW to 285 MW) on 20/11/2015. As per para no. 26 of the EC dated 20/11/2015, the project need not go through a fresh appraisal process again for the Phase -III expansion from 4 to 6 MTPA and stipulated a following specific condition:

“v. For Phase-III (6 MTPA), the proponent shall obtain an amendment of EC after completion of land acquisition of the balance area of 666.03ha”.

36.4.3 The phase wise land break up for the alumina refinery as per EC dated 20/11/2015 is furnished as below.

S.No.	Facility	Existing area (ha)	Addl.land for Phase I (ha)	Addl.land for Phase II	Addl.land for Phase III	Total
1.	Main Plant with greenbelt	420	0	0	0	420
2.	Red Mud Storage Pond with green belt	211.47	0	53.5 ha (process of acquisition initiated)	518.03 (yet to be acquired)	783
3.	Ash Pond with Pipeline with greenbelt	95.4	0	0	80 (yet to be acquired)	175.4
4.	Township & Misc including greenbelt	52.5	0	0	28 (yet to be acquired)	80.5
5.	Railway including Greenbelt	53.8	0	0	40 (yet to be acquired)	93.8
	TOTAL	833.17 ha	0	53.5	666.03 ha	1552.7 ha

36.4.4 The instant amendment proposal is for seeking amendment in the aforementioned specific condition (v) of the EC dated 20/11/2015 as given below:

- i. As per the assessment done by Industrial Promotion & Investment Corporation of Odisha (IPICOL), the nodal agency of Government of Odisha through Engineers India Limited (EIL) have assessed that the total additional land required for expansion

to 6 MTPA is of only 666 acres i.e. 269.52 hectare as against 666 ha prescribed in the EC dated 20/11/2015.

- ii. Total land requirement for 6 MTPA Alumina as recommended by EIL (appointed by Government of Odisha through IPICOL in October 2018 is 1102.54 ha. Out of total area, the land under possession and acquisition is 833.17 ha and 269.63 ha respectively. Out of 269.63 ha, 87.81 ha is in final stage of acquisition and land filed for acquisition is 183.7 ha.
- iii. Following is the Configuration & capacity change granted in EC vis-a-vis with the proposed changes in configuration & capacity of units:

S No	EC condition	Capacity as per EC letter dated 20/11/2015	Amendment	Remarks
1	Specific Condition no v of the Environmental clearance F. No. J-11011/406/2011-IA II(1) dated 20/11/2015	“For Phase-III (6 MTPA), the proponent shall obtain an amendment of EC after completion of land acquisition of the balance area of 666.03 ha detail of which will be furnished to MoEF&CC.”	For phase-III (6MTPA), the proponent shall acquire a land of 666 acres.	This condition for amendment from 4 MTPA to 6 MTPA.
2	Specific Condition no (xxiii) of the EC dated 20/11/2015	Of the total area of 1552.65 ha. an area of 512.37 ha (33%) shall be developed into green belt. Of this, a total of 215.20 ha of green belt have been developed and the balance area of 297.17 ha shall also be brought under plantation, which includes plantation in a width of 15-20m along the remaining	In view of proportionate reduction in Green belt land requirement by IPICOL, the condition will be read as under: “Of the total area of 1102.54 ha. an area of 363.83 ha (33%) shall be developed into green belt. Of this, a total of 278.21 ha of green belt have been developed and the	Present green belt is 29% of land in possession

S No	EC condition	Capacity as per EC letter dated 20/11/2015	Amendment	Remarks
		boundary wall of 3km of the 8km.	balance area of 85.62 ha shall also be brought under plantation, which includes plantation in a width of 15-20m along the remaining boundary wall of 3km of the 8km.”	

36.4.5 The total land estimated for production of 6.0 MTPA Alumina at the time of grant of EC was 1552.7ha. This was finally revised to 1102.54 ha by IPICOL based on the report of EIL. No additional land is required to set up the main plants covered in three phases. But additional land will be required exclusively for **(a) storing Bauxite Residue up to year 2045 after commencement of 6.0 MTPA Alumina production by year 2025, (b) development of additional green belt and (c) development of Railway line which are requirement after production is started.** The amendment is sought for Phase-III production to set up plant & machinery while land acquisition is in process.

36.4.6 One court case is pending at NGT, Kolkata as on date: Shri Prafulla Samantaray, a self-proclaimed environmental activist, has filed an appeal against the order of MOEF&CC granting EC for expansion of Alumina Refinery from 1 to 4 MTPA and CPP from 75 to 285 MW dated 20.11.2015. The appeal (No. 16 of 2014) has been filed before National Green Tribunal, Kolkata Bench. In the said appeal, one Misc. case (MA No. 333/2016/EZ) has also been filed for condonation of delay in filing appeal. The matter would be posted for hearing of the arguments, however the same has not been heard by the Hon’ble Tribunal. No interim order has been passed by Hon’ble Tribunal in this matter.

36.4.7 M/s Vedanta Limited has earlier made an online application vide proposal no. IA/OR/IND/203399/2021 dated 13/03/2021. The proposal was considered by the EAC (Industry 1) in its 33rd meeting held on 30-31st March, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee held during 30–31st March, 2021

The EAC noted the following:

- i. The land required for the expansion of Alumina refinery from 4 to 6 MTPA has been reduced from 666 ha to 666 acres. No justification is provided regarding the reduction in land area nor the requisite supporting study report of M/s. Engineers India Limited provided.
- ii. It was apprised that reduction in land requirement will be achieved by increasing the height of red mud pond up to 55 meter. However, no scientific study report has been made available with respect to stability of red mud pond.

- iii. The revised land of 666 acres is yet to be acquired by the PP. No alternate proposal for red mud management has been submitted in the event of non-acquisition of revised land of 666 acres (or) contiguous land for red mud disposal.
- iv. The land use break up for the Alumina refinery based on the reduced land requirement has not been furnished.
- v. Plant layout depicting the phase wise alumina refinery with green belt and allied facilities such as red mud pond and revised ash pond has not been made available.
- vi. In addition to the EC amendment, PP also sought for change in configuration of the alumina refinery - Phase 1 from 2.0 to 2.1 MTPA by debottlenecking, Phase 2 from 4 to 4.9 MTPA by adding 2.8 MTPA stream and Phase 3 from 4.9 to 6 MTPA by adding 1.1 MTPA stream.
- vii. PP has commissioned only 2.0 MTPA Alumina refinery till date as against the sanctioned capacity of 4 MTPA.

Recommendation of the Committee held during 30–31st March, 2021

In view of the foregoing and after deliberations, EAC opined that additional clarification on the observations made above is required. The proposal therefore is returned in its present form to address the shortcomings. Further, the Committee asked the PP to obtain EC amendment for alumina refinery expansion from 4 to 6 MTPA with reduced land requirement from 1552.3 ha to 1102.9 ha and thereafter separate application should be submitted for change in configuration of alumina refinery.

36.4.8 M/s. Vedanta Limited has again made an online application vide proposal no. IA/OR/IND/209784/2021 dated 22/04/2021 by incorporating the observations of EAC made during 30-31st March, 2021. The proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021.

36.4.9 Detailed presentation was made by the project proponent inter-alia reduction in project area, issues related to red mud pond design & stability and lay out etc. Further, the land break up requirement as per the EC dated 20/11/2015 and proposed EC amendment is given as below.

S.No.	Facility	Total land (ha) for 6 MTPA alumina refinery as per EC dated 20/11/2015	Proposed amendment in land (ha) as per PP	Remarks
1.	Main Plant with greenbelt	420	284.5	420 ha in EC included Conveyor & Mines approach road and part of Railway siding
2.	Red Mud Storage Pond with green belt	783	432.4	Reduction in land due to Dry disposal of red mud cake to optimum height
3.	Ash Pond with Pipeline with greenbelt	175.4	91.1	As per MoEF&CC norms, 0.32 ha/MW of land comes to 92.3 ha of land requirement for 285MW power plant.

S.No.	Facility	Total land (ha) for 6 MTPA alumina refinery as per EC dated 20/11/2015	Proposed amendment in land (ha) as per PP	Remarks
				EIL also considered 50% ash utilization. At present, ash utilization is 100% since last three years. With the above scenario and the utilization of ash by Fly ash brick industries, no additional land is required for Ash pond
4.	Township & Misc including greenbelt	80.5	72.7	As per EIL assessment, the exiting township area of 52.5 ha (129.7 acres) is sufficient to cater to the need of additional manpower requirement of 6 MTPA by constructing multiple high-rise apartments. Remaining area is for green belt development.
5.	Railway including Greenbelt	93.8	145.2	EIL also considered the railway sidings of bauxite and coal inside plant.
6.	Air strip	--	29.2	Considered in Main plant area during EC accorded on 20/11/2015
7.	Conveyor & Mines	--	47.8	
	TOTAL	1552.7 ha	1102.9 ha*	

*Note –Total land is 1102.9 ha inter-alia including Forest land of 26.244 ha for which stage II forest clearance has been accorded by MoEF&CC vide letter no. 5-ORC264/2015-BHU dated 12/11/2020. Out of the total land, the land under possession and acquisition is 833.17 ha and 269.63 ha respectively. Out of 269.63 ha, 87.81 ha is in final stage of acquisition and land filed for acquisition is 183.7 ha. To this effect, PP has submitted a letter number IDCO LAE-7667/2021-4760 dated 12/03/2021 issued by IDCO. In addition, PP informed that the air strip was established and commissioned after obtaining approval from Airport Authority of India on 15/05/2006 and is not meant for commercial purpose. The said air strip does not require environmental clearance under the provisions of EIA, 1994 and EIA, 2006.

36.4.10 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.

36.4.11 Name of the EIA Consultant: GLOBALTECH Enviro Experts Pvt. Ltd. [S.No.94 in the List of ACOs with their Certificate / Extension Letter no. Rev. 10, May 13, 2021].

Observations of the Committee

36.4.12 The Committee noted that the project proponent is seeking following amendments in the EC dated 20/11/2015 as per the stand taken by the Ministry during the accorded of the said EC with reduced land requirement.

a. Subject matter of the EC dated 20/11/2015

Expansion of Alumina Refinery (1 MTPA to 6 MTPA) and Captive Power Plant (75 MW to 285 MW) by M/s. **Vedanta Limited**, located at Lanjigarh **District Kalahandi Odisha**

b. Total area of the project shall be 1102.54 ha in place of 1552.7 ha. The land area break up for 1102.54 ha is as below.

S.No.	Facility	Total land (ha) for 6 MTPA alumina refinery
1.	Main Plant with greenbelt	284.5
2.	Red Mud Storage Pond with green belt	432.4
3.	Ash Pond with Pipeline with greenbelt	91.1
4.	Township & Misc including greenbelt	72.7
5.	Railway including Greenbelt	145.2
6.	Air strip	29.2
7.	Conveyor & Mines	47.8
	TOTAL	1102.9 ha*

**Note –Total land is 1102.9 ha inter-alia including Forest land of 26.244 ha for which stage II forest clearance has been accorded by MoEF&CC vide letter no. 5-ORC264/2015-BHU dated 12/11/2020. Out of the total land, the land under possession and acquisition is 833.17 ha and 269.63 ha respectively. Out of 269.63 ha, 87.81 ha is in final stage of acquisition and land filed for acquisition is 183.7 ha. To this effect, PP has submitted a letter number IDCO LAE-7667/2021-4760 dated 12/03/2021 issued by IDCO. In addition, PP informed that the air strip was established and commissioned after obtaining approval from Airport Authority of India on 15/05/2006 and is not meant for commercial purpose. The said air strip does not require environmental clearance under the provisions of EIA, 1994 and EIA, 2006.*

c. Specific condition no.v of the EC dated 20/11/2015

For phase-III (6MTPA), the proponent shall acquire a land of 666 acres.

d. Specific condition no.xxiii of the EC dated 20/11/2015

Of the total area of 1102.54 ha. an area of 363.83 ha (33%) shall be developed into green belt. Of this, a total of 278.21 ha of green belt have been developed and the balance area of 85.62 ha shall also be brought under plantation, which includes plantation in a width of 15-20m along the remaining boundary wall of 3km of the 8km.

e. A presentation was made by the Project Proponent about the Red Mud Pond giving various stimulation aspects. The matter was discussed in details. However, some design details regarding the Red mud pond was still needed.

Recommendations of the Committee

36.4.13 The committee, after detailed deliberations was of the opinion that the project proponent shall submit various specific design parameters of the proposed changes in the Red mud pond for further consideration of the EAC.

36.5 Proposed 3 x 9 MVA Ferro Alloys Plant [Ferro Manganese: 61,365 TPA, Silico Manganese: 45,256 TPA, Ferro Silicon: 21,049 TPA] by **M/s. Nilkanth Ferro Limited** at Village Radha Madhavpur, Mouza & P. O. Chousal, **District Bankura, West Bengal** [Online Proposal No. IA/WB/IND/209986/2021, File No. J- 11011/10/2011-IA.II (I)] – **Validity extension of Environment Clearance** – regarding.

36.5.1 M/s. Nilkanth Ferro Limited has made online application vide proposal no. IA/WB/IND/209986/2021 dated 01/05/2021 along with Form 6 and sought extension of validity of Environment Clearance accorded by the Ministry vide letter no. J-11011/10/2011-IA.II(I) dated 26/09/2012.

Details submitted by the project proponent

36.5.2 M/s. Nilkanth Ferro Limited was granted Environment Clearance by the Ministry vide letter No. J-11011/10/2011-IA.II(I) dated 26/09/2012 for a project titled “Proposed 3 x 9 MVA Ferro Alloys Plant [Ferro Manganese: 61,365 TPA, Silico Manganese: 45,256 TPA, Ferro Silicon: 21,049 TPA] at Village Radha Madhavpur, Mouza & P. O. Chousal, District Bankura, West Bengal.”

36.5.3 With respect to the aforesaid EC, project has not been started yet due to some unfavourable circumstances as given below:

- The steel sector starting picking up around 2018, when we decided to start with the plant, the company had lost the senior most Director and promoter of the company.
- In early 2019, the four younger Directors initiated the process of construction of the plant by calling for quotations from suppliers and design consultants and obtaining/renewing statutory clearances.
- Company had obtained a Consent to Establish (CTE) vide letter no. 26-2N-42/2011(E) dated 08.01.2014 from West Bengal Pollution Control Board (WBPCB) and as soon as company recovered somewhat from the aforementioned loss, Company applied for extension of the CTE and received an extension vide WBPCB’s letter dated 15.03.2019 which is valid up to 31.12.2023.
- However, in June 2019, due to further health problems in the family, although company continued to undertake necessary activities for plant construction, company could not undertake them with full focus.
- Company did resolve the power availability issues with DVC. Company had applied to Damodar Valley Corporation (DVC) on 13.04.2012 vide their letter no. NFL/40 to sanction power. However, due to various internal and external issues at DVC, there was no immediate sanction. After their decision to install the plant in 2019, they followed them up and could get a formal sanction on 23.12.2019, for which made a payment to DVC of Rs. 17,90,650/-.
- With power sanctioned and CTE renewed, it appeared company was on track.
- Hence, when things started to look up with lock downs re-opening, company wanted to start its plant construction and started talking with the contractors and banks. There had been reluctance in the banks to finance the project earlier due to the general financial scenario of the nation, wherein many major players in the steel & power sectors had defaulted and were under NCLT. It is when company started interacting more deeply with the bank that company got to know that Environmental

Clearances have a validity period and that their environment clearance had expired. Company also wish to submit that the said EC dated 26.09.2012 is its first EC and only EC for the Company and the Management are not familiar with the rules and regulations related to EIA Notification nor had any idea about the validity of an environmental clearance. Therefore, this lapse occurred. Management was advised to apply for EC validity extension.

- Hence, Management was in the process of applying to the MoEF&CC for grant of extension of validity of EC in December, 2019 during which the Company was in discussion with the suppliers for detailed design engineering of the plant and for supply of plant equipment and machineries. However, due to the outbreak of Covid-19 pandemic in China and subsequently throughout the world, negotiations with the suppliers came on hold due to the impending economic uncertainties. Thereafter the outbreak of the pandemic in India has led to halt in progress of the project.

36.5.4 The implementation status of the EC dated 26/09/2012 is as follows:

S No	Facilities	Units	As per EC dt . 26.09.2012	Implementatio n status as on 0 8.05.2021	Consent (CTE dt. 08.01.2014 & 15.03.2019)
(a)	Ferro Manganese	Submerged Arc furnaces of 3X9 MVA	61,365 TPA	Boundary, land levelling, one small shed, RM yard	61,365 TPA
(b)	Silico Manganese		45,256 TPA		45,256 TPA
(c)	Ferro Silicon		21,049 TPA		21,049 TPA

36.5.5 No changes are proposed in the granted EC. The proposal is for obtaining extension in validity of EC only.

36.5.6 Acquisition of land and it development has already been completed. The balance activities will be started soon after getting validity extension with completion target in July 2022. Commencement of commercial operation has been planned from September 2022.

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

36.5.8 The proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

36.5.9 The Committee noted the following;

- EC was accorded on 26/09/2012. Request for validity extension has been submitted on 01/05/2021 after the expiry of the validity period of the EC i.e., 25/09/2019, even after the condonation period of 90 days as per the extant provisions prescribed in the EIA Notification, 2006. Further, as per the provisions of the said notification, no condonation for delay shall be considered for any application for extension filed beyond ninety days after the validity period of Environment Clearance.

- ii. The project proponent has not applied for EC validity extension on time.

Recommendations of the Committee

36.5.10 In view of the foregoing and after deliberations, the Committee recommended to reject the validity extension application of M/s. Nilkanth Ferro Limited submitted vide proposal no. IA/WB/IND/209986/2021.

36.6 Establishment of Ferro Alloys Plant (Greenfield Project) for production of 79,200TPA Ferro Alloys (Si-Mn or Fe-Mn or in combination of any) by **M/s. Anjaney Ferro Alloys Limited** at Mouza Bhutberia, P.O. Mihijam, **District Jamtara, Jharkhand** [Online Proposal No. IA/JH/IND/207720/2021, File No. J- 11011/144/2021-IA.II (I)] – **Prescribing of Terms of Reference – regarding**

36.6.1 M/s. Anjaney Ferro Alloys Limited has made an application online vide proposal no. IA/JH/IND/207720/2021 dated 24/04/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non ferrous) under Category “A.” of the schedule of the EIA Notification, 2006.

Details submitted by Project proponent

36.6.2 The project of M/s. Anjaney Ferro Alloys Limited located at Mouza Bhutberia, P.O. Mihijam, District Jamtara, Jharkhand is for Establishment of Ferro Alloys Plant (Greenfield Project) for production of 79,200TPA Ferro Alloys (Si-Mn or Fe-Mn or in combination of any).

36.6.3 Environmental site settings

S No	Particulars	Details
i	Total land	7.94 ha (land use: Industrial) [Govt land: 7.94 ha]
ii	Existence of habitation & involvement of R&R, if any.	No existence of habitation & involvement of R&R
iii	Latitude and Longitude of the project site	Latitude: 23°49'42.78" N Longitude: 86°53'9.56" E
iv	Elevation of the project site	185 meters AMSL
v	Involvement of Forest land if any.	No involvement of Forest Land
vi	Water body exists within the project site as well as study area	Project site: No water body within the plant site area Study area: Maithan Reservoir: 2.1 km in West Ajay River: 5.3 km in NE Barakar River: 8 km in SW
vii	Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study	Nil PF near Gaurangdih at 7.9 km in East PF near Durgapur at 8.2 km in West PF near Maheshpur at 7.6 km in South

S No	Particulars	Details
	area	West PF near Hadla at 6 km in South West

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

Unit	Configuration	Production Capacity (TPA)
Ferro Alloy Plant	SAFs 4x9 MVA	Fe-Mn - 79200
		Si-Mn – 60,720
		Or in combination of any

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

S No	Item	Ferro-Manganese 79,200 TPA	Silico-Manganese 60,720 TPA	Source	Distance
		Quantity in TPA	Quantity in TPA		
1	Mn ore	205,920	109,296	By Rail from Barbil (Orissa), MOIL (Nagpur) and also Import through Haldia dock	300 km (Rail/Road)
2	Coke	63,380	30,360	Locally from Dhanbad	50 km (Road)
3	Dolomite	3,960	27,720	Barbil (Orissa)	300 km (Road)
4	Coal	-	36,432	From ECL and BCCL	30 km (Road)
5	High Fe-Mn slag	-	29,146	In-house	-
6	Quartz	--	15,180	Locally from nearby districts in Jharkhand	150 km (Road)
7	EC Paste	1,426	911	Local Market in Jharkhand	30 km (Road)
Total		274,666	233,468	-	-

36.6.6 The water requirement for the project is estimated as 75 m³ /day which will be met from Ground water. The permission for drawl of groundwater shall be obtained from CGWA.

36.6.7 The power requirement for the project is estimated as 36 MVA, which will be obtained from the Damodar Valley Corporation (DVC).

36.6.8 The capital cost of the project is Rs 72 Crores. The employment generation from the proposed project / expansion is 300. There is no Court case/show cause/direction or violation under EIA, 2006 related to the project under consideration.

36.6.9 Proposed Terms of Reference (Baseline data collection period: March to May 2021):

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
A. Air				
a. Meteorological parameters	Temp., Relative Humidity, Wind Speed, Wind Direction, Rainfall	1 Location	24-hourly sampling for three months	Secondary data from IMD, New Delhi for the nearest IMD station
b. AAQ parameters	PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , CO	8 Locations	24-hourly sampling, twice a week for 12 weeks	Monitoring Network: Minimum 2 locations in upwind side, more sites in downwind side / impact zone All the sensitive receptors need to be covered
B. Noise	Leq (Day & Night), Lmax (Day & Night), Lmin (Day & Night)	8 Locations	24-hourly sampling, twice in a week (working and non-working day) for 3 months	Monitoring Network: Minimum 2 locations near to project site, more sites in impact zone, All the sensitive receptors need to be covered
C. Water				
a. Surface water quality parameters	pH, EC, NO ₃ , Na, K, Fe, Al, Ca, Cl, Cr, Mg, TDS, TSS, DO, SO ₄ , F, BOD, COD, Zn, Cu, Mn, Cd, Turbidity, Odour	8 Locations	Once in a day in each month for one season	At least one grab sample per location
b. Ground water quality parameters	pH, Ca, Cl, Mg, TDS, SO ₄ , F, NO ₃ , Fe, Al, Zn, Cu, Mn, Cd, Pb, Hg, EC, Turbidity, Odour	8 Locations	Once in a day in each month for one season	At least one grab sample per location
D. Land				

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
a. Soil quality	pH, Conductivity, Soil Texture, Water Holding Capacity, Cl, Ca, Na, K, Organic matter, Mg, N, Zn, Mn, Phosphorus, Pb, Cd, Cr, Cu	8 Locations	Once in a day in each month for one season	One surface sample from project site, each Agriculture, forest, water body, landfill or hazardous waste site (if applicable) and prime villages.
b. Land use	Agriculture area, Water bodies, Industrial land, Barren land, Built-up area, forest area.	10 km Radius study area	one season	Data from Global positioning system, Topo-sheets, Satellite Imageries
E. Biological				
a. Aquatic	Species of Plants and Avifauna	10 km Radius study area	one season	Secondary data to collect from Government offices, NGOs, published literature
b. Terrestrial	Species of Plants and Animals	10 km Radius study area	one season	Secondary data to collect from Government offices, NGOs, published literature
F. Socio-economic parameters	Demographic details and Occupational details	10 km Radius study area	one season	Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. agencies

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

36.6.11 Name of the EIA consultant: Vardan EnviroNet [S. No. 37 in List of ACOs with their Certificate / Extension Letter no. Rev. 10, May 13, 2021].

36.6.12 The proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

36.6.13 The EAC noted the following:

- i. Total land available is 7.94 ha.
- ii. There is no forest land or water body in plant area. Maithan water reservoir is 2.1 km from site.
- iii. Gaurangdih PF is 7.9 km East and there are 4 other RFs in the study area more than 6 km from site.
- iv. 4x9 MVA SA Furnaces are proposed to be installed.
- v. Water requirement of 75 KLD shall be met from ground water sources.
- vi. Kangui village in only 100 meter from boundary of the project site.
- vii. SiMn slag shall be used for cement making.

Recommendations of the Committee

36.6.14 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. Action plan for gradual phasing out ground water usage shall be submitted.
- ii. Action plan to limit the particulate matter emission from the stacks below 30 mg/Nm³ shall be furnished.
- iii. Action plan for fugitive emission control in the plant premises shall be provided.
- iv. Action plan for green belt development covering 33% of the plant area shall be submitted including green belt development towards Kangui Village which is located at a distance 100 m from the plant boundary.
- v. Action plan for rain water harvesting shall be submitted.
- vi. Action plan for 100% slag utilization shall be submitted.
- vii. Traffic study shall be carried out and scheme to strengthen village roads shall be furnished.
- viii. Stock piles shall be on impervious floor, with garland drains and catch pits to trap run off material.

36.7 Expansion of DRI Kilns (Sponge Iron from 30,000 TPA to 90,000 TPA), New Induction Furnace with matching LRF & CCM (MS Billets / Ingots / Hot Billets) (90,000 TPA), New Rolling Mill (TMT Bars / Structural Steel) 90,000 TPA, New WHRB based Power Plant - 4.0MW & CFBC based Power Plant –6.0MW) by **M/s. Bellary Ispat Limited** located at Halukundi Village, Taluk & **District Bellary, Karnataka** [Online Proposal No. IA/KA/IND/210624/2021, File No. J- 11011/703/2009-IA.II (I)] – **Prescribing of Terms of Reference** – regarding

36.7.1 M/s. Bellary Ispat Limited has made an application online vide proposal no. IA/KA/IND/210624/2021 dated 28/04/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report 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 & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006.

Details submitted by Project proponent

36.7.2 The project of M/s. Bellary Ispat Limited located at Halukundi Village, Bellary Taluk & District, Karnataka is for Expansion of DRI Kilns (Sponge Iron from 30,000 TPA to 90,000 TPA), New Induction Furnace with matching LRF & CCM (MS Billets / Ingots / Hot Billets) (90,000 TPA), New Rolling Mill (TMT Bars / Structural Steel) 90,000 TPA, New WHRB based Power Plant -4.0MW & CFBC based Power Plant -6.0MW).

36.7.3 Environmental site settings:

S No	Particulars	Details		
i.	Total Land	10.27 ha. (25.37 Acres) Land Use: Industrial		
ii.	Existence of habitation & involvement of R & R, if any	No habitation exists in plant site; hence no R & R is involved.		
iii.	Latitude and Longitude of the project site	S No	Latitudes	Longitudes
		1.	15° 4'30.27"N	76°51'51.19"E
		2.	15° 4'30.80"N	76°51'58.90"E
		3.	15° 4'16.72"N	76°51'59.96"E
		4.	15° 4'16.19"N	76°51'58.37"E
		5.	15° 4'16.46"N	76°51'58.85"E
		6.	15° 4'16.72"N	76°51'52.52"E
iv.	Elevation of the project site	506 m to 510 m AMSL		
v.	Involvement of Forest land, if any	No Forest land is involved in the project site.		
vi.	Water body exists within the project site as well as study area	Project site: Nil		
		Study area:		
		Water Body	Distance/ Direction	
		Tungabhadra High Level Canal	4.9 Km/ NE	
		Allipur Kere Reservoir	8.3 Km/ North	
Banja Halla Nallah	6.8 Km/ East			
vii.	Existence of ESZ/ESA/ National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve/ Elephant Reserve etc. if any within the study area	Nil		
viii.	Forests within study area	Name	Distance/ Direction	
		Bellary Reserve Forest	0.4 Km/ West	
		Mincheri Reserve Forest	2.8 Km/ SE	

36.7.4 The existing project was accorded Consent for Establishment from Karnataka State Pollution Control Board (KSPCB) vide letter no. 34/KSPCB/EO(BLY)/DEO/AEO-1/CFE/MR/2003-2004/1109 dated 24.08.2005 for 1 x 50 TPD (Kiln - I) and vide letter no.

19/KSPCB/EO(BLY)/DEO/AEO-1/CFE/MR/2006-2007/492 dated 15.05.2006 for 1 x 50 TPD (Kiln - II). Environment Clearance was not applicable to the existing plant, as Consent was obtained prior to the EIA notification 2006 & EC was also not applicable as per EIA Notification 1994, as the project cost is Rs. 8.8 Crores, which is less than threshold limit of Rs 100 Crores. Consent for Operation (CFO) obtained from KSPCB vide no. AW-305493 for 2 x 50 TPD and same is valid up to 30.06.2022.

Chronology of events pertaining to Earlier EC proposal:

- M/s. Bellary Ispat Private Limited has submitted application for TOR on 01/12/2009.
- TOR letter to undertake EIA study was issued by MoEF&CC on 16th March, 2010. Accordingly, EIA report was prepared and submitted for Public Hearing.
- Public Hearing for the expansion project was conducted on 29th December, 2010.
- Proposal was considered in the EAC (Industry) meeting held during 26-27th August, 2011. After details deliberation, the committee recommended the project for Environment Clearance subject to submission of revised layout plan.
- Proposal was Re-considered in the EAC (Industry) meeting held during 20-21st February, 2014 and committee recommended the proposal for Environmental Clearance subject to conditions as stipulated in its meeting held during 26-27th August 2011.
- During the processing of file, Ministry sought information regarding status of Environmental Clearance obtained for existing unit and its compliance, reasons for not taking EC under provision of EIA notification 1994 / 2006.
- CFE obtained from KSPCB for 1 x 50 TPD (Kiln – I) vide letter no. 34/KSPCB/EO(BLY)/DEO/AEO-1/CFE/MR/2003-2004/1109 dated 24.08.2005 and for 1 x 50 TPD (Kiln – II) vide letter no. 19/KSPCB/EO(BLY)/DEO/AEO-1/CFE/MR/2006-2007/492 dated 15.05.2006. Later obtained Consent for Operation (CFO) from KSPCB vide no. AW-305493 and same is valid up to 30.06.2022. Environment Clearance was not applicable to the existing plant, as Consent was obtained prior to the EIA notification 2006 & As per 1994 EIA notification, also EC was not applicable as the project cost is Rs. 8.8 Crores, which is less than threshold limit of Rs 100 Crores.
- KSPCB has issued Consent for Operation (CFO) vide no. AW-305493 and same is valid up to 30.06.2022. The same has been confirmed by KSPCB to MoEF&CC vide letter dated 5th April 2019.
- Subsequently, MoEF&CC has directed to make fresh application for TOR vide letter F.No. J-11011/703/2009-IA. II (I) dated 21st January 2020.

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

S No	Units (Products)	Existing Operating Plant	Proposed Expansion	After Proposed Expansion
1.	DRI Kilns (Sponge Iron)	2 x 50 TPD (30,000 TPA)	2 x 100 TPD (60,000 TPA)	2 x 50 TPD & 2 x 100 TPD (90,000 TPA)
2.	Induction Furnace (MS Billets / Ingots)	--	2 x 15 T (90,000 TPA)	2 x 15 T (90,000 TPA)

S No	Units (Products)	Existing Operating Plant	Proposed Expansion	After Proposed Expansion
3.	Rolling Mill (TMT bars / Structural Steel) (85 % Hot charging with Hot Billets and remaining 15% through RHF with LDO as fuel)	--	1 x 300 TPD (90,000 TPA)	1 x 300 TPD (90,000 TPA)
4.	Power Plant	WHRB	---	2 x 2.0 MW
		FBC	---	1 x 6.0 MW

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

S No	Raw Material		Quantity(TPA)			Sources	Mode of Transport
			Existing	Proposed Expansion	Total after proposed expansion		
1.	For DRI Kilns (Sponge Iron)						
	Iron ore		30,000	90,000	1,20,000	Bellary, Karnataka	By Road (through covered trucks)
	Coal	Indian	39,000	78,000	1,17,000	SCCL Telangana	By rail & road (through covered trucks)
		Imported	25,000	50,000	75,000	Indonesia / South Africa / Australia	Through sea route, rail route & by road
	Dolomite		1,500	3,000	4500	Karnataka	By road (through covered trucks)
2.	For Steel Melting Shop (MS Billets/ Ingots/Hot Billets)						
	Sponge Iron		---	90,900	90,900	Own generation & purchased from outside	By road (through covered trucks)
	MS Scrap / Pig Iron		---	14,000	14,000	Karnataka	By road (through covered trucks)
	Ferro alloys		---	5,000	5,000	Karnataka	By road (through covered trucks)
3.	For Rolling Mill through Hot charging (Rolled Products)						
	Hot Billets / MS Billets / Ingots		---	95,400	95,400	Own generation & Purchased from outside	By road (through covered trucks)
	LDO		---	5,000 Kl/annum	5,000 Kl/annum	Nearby IOCL Depot	By road (through Tankers)
4.	For CFBC Boiler						
	Indian Coal (100 %)		---	32,400	32,400	SCCL Telangana	By rail & road (through covered trucks)
	OR						
	Imported Coal (100 %)		---	21,000	21,000	Indonesia / South Africa /	Through sea route, rail route &

S No	Raw Material		Quantity(TPA)			Sources	Mode of Transport
			Existing	Proposed Expansion	Total after proposed expansion		
						Australia	by road
OR							
	Dolochar + Indian Coal	Dolochar	---	12,000	12,000	In plant generation	through covered conveyors
		Indian Coal	---	26,400	26,400	SCCL Telangana	By rail & road (through covered trucks)
OR							
	Dolochar + Imported Coal	Dolochar	---	12,000	12,000	In plant generation	through covered conveyors
		Imported Coal	---	14,800	14,800	Indonesia / South Africa / Australia	Through sea route, rail route & by road

- 36.7.7 Water consumption in existing plant is 40 KLD and same is being sourced from Ground Water source. Water requirement for proposed expansion project will be 330 KLD and same will be sourced from Ground water sources and STP treated water from Bellary Municipal Corporation/ Karnataka Urban Water Supply and Drainage Board (KUWS & DB). Permission for drawl of water from Ground water Resources from Karnataka Ground Water Authority (KGWA) & Bellary Municipal Corporation / Karnataka Urban Water Supply and Drainage Board (KUWS & DB) will be obtained.
- 36.7.8 Power requirement in the existing plant is 0.3 MW and same is being sourced from BESCOM. Power required for the proposed expansion project will be 12.2 MW and same will be sourced from BESCOM (State Grid) & Captive Power Plant.
- 36.7.9 The capital cost of the project is Rs. 125.0 Crores and the capital cost for environmental protection measures is proposed as Rs. 6.25 Crores. Proposed employment generation from proposed project will be 100 nos. through direct employment and 150 nos. through indirect employment.
- 36.7.10 Proposed Terms of Reference (Baseline data Collection period: **1st December, 2020 to 28th February, 2021**):

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
A. Air			
a. Meteorological parameters	1	On hourly basis for one season	<ul style="list-style-type: none"> • Wind Speed • Wind Direction • Temperature • Relative Humidity • Rainfall
b. AAQ parameters	8	24 hourly Twice a week for One Season	Parameters Monitored: PM _{2.5} , PM ₁₀ , SO ₂ , NO _x and CO
B. Noise	8	On hourly basis for 24 Hrs. at each	Parameters Monitored:

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
		station	<ul style="list-style-type: none"> • Day equivalent • Night equivalent
C. Water			
a. Ground Water	8	One sample at each of the locations	Parameters Monitored: as per IS: 10500
b. Surface Water	2	One sample at each of the locations	Parameters Monitored: as per BIS: 2296
D. Land			
a. Soil quality	8	One sample at each of the locations	Parameters Monitored: Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn
b. Land use	--	--	LU map will be prepared by concerned FAE for study area
E. Biological	--	Once in Season	---
a. Aquatic	--	Once in Season	---
b. Terrestrial	--	Once in Season	---
F. Socio economic parameters	--	Once in Season	Social Impact Assessment will be carried out by concerned FAE for study area

36.7.11 The PP is requested to exempt the public hearing for the instant proposal due to the following:

- There is no additional land requirement for present proposal and Water requirement is reduced from 427 KLD to 370 KLD.
- Public hearing has been conducted as per the provisions of EIA notification 2006 and its subsequent amendment on 29th December 2010. Final EIA report has been submitted & accordingly considered in EAC meeting held during 26-27th August 2011. Subsequently EAC has recommended the proposal for issue of EC. The present proposal being submitted almost similar except reduction of Billets production by 5000 TPA.

36.7.12 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.

36.7.13 Name of the EIA Consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No.130 in the List of ACOs with their Certificate / Extension Letter no. Rev. 10, May 13, 2021].

36.7.14 The proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

36.7.15 The EAC noted the following:

- i. PP has 2x50 TPD kilns operating and proposes to install 2x100 TPD kilns.
- ii. Consent to operate 2x50 TPD kilns is available till 30.6.2022.
- iii. BL data have been collected during Dec 2020 to Feb 2021.
- iv. Water requirement shall be sourced from STP of Bellary Municipality.
- v. Plant is located in 10.27 ha land and the expansion shall be accommodated in the same land.
- vi. Hot rolling has been proposed. RHF shall operate on LDO.
- vii. Railway siding is at Bellary 10 km from site and raw material shall be transported by road to the plant.
- viii. Public Hearing cannot be waived off as the earlier public hearing was held on 29/12/2010 which is more than ten years old. Further, the environmental site setting of the project site could have been changed due to the various developmental activities in the area.

Recommendations of the Committee

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

- i. Action plan for gradual phasing out ground water usage shall be submitted.
- ii. Action plan to limit the particulate matter emission from the stacks below 30 mg/Nm³ shall be furnished.
- iii. Action plan for fugitive emission control in the plant premises shall be provided.
- iv. Action plan for green belt development covering 33% of the plant area shall be submitted.
- v. Action plan for rain water harvesting shall be submitted.
- vi. Action plan for 100% dolochar utilization shall be submitted.
- vii. Stock piles shall be on impervious floor, with garland drains and catch pits to trap run off material.
- viii. 85 to 90 % billets shall be hot charged directly and balance shall be through Reheating Furnace operate on Light Diesel Oil fuel.
- ix. Scheme for treating effluent from the Rolling Mill shall be submitted.
- x. Air Cooled condensers shall be used in CPP.
- xi. Traffic analysis study shall be carried out and submitted.

19th May, 2021

36.8 Setting up of a Greenfield Integrated Steel Plant of capacity 13.2 MTPA Crude Steel with 10 MTPA Cement grinding unit & 900 MW Captive Power Plant by **M/s. JSW Utkal Steel Limited** located at villages Polanga, Bayanala Kandha, Gobindapur, Dhinkia, Nuagaon, Jatadhara, Tehsil – Ersama, **District - Jagatsinghpur, Odisha**. [Online Proposal

No. IA/OR/IND/74396/2018; File No. J-11011/524/2017-IA.II (I)] – **Environment Clearance – regarding.**

36.8.1 M/s. JSW Utkal Steel Limited has made an online application vide proposal no. IA/OR/IND/74396/2018 dated 05/05/2021 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 & nonferrous), 4(b) coke oven plants and 1(d) thermal power plants under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central level.

Details submitted by Project proponent

36.8.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of Accord
13/08/2018	35 th EAC meeting held on 18 th September, 2018 4 th REAC meeting held on 19 th February 2019	Terms of Reference	19/03/2019

36.8.3 The project of M/s. JSW Utkal Steel Limited is located at villages Polanga, Bayanala Kandha, Gobindapur, Dhinkia, Nuagaon, Jatadhara, Tehsil – Ersama, District - Jagatsinghpur, Odisha is for Setting up of a Greenfield Integrated Steel Plant of capacity 13.2 MTPA Crude Steel with 10 MTPA Cement grinding unit & 900 MW Captive Power Plant.

36.8.4 Environmental Site Settings:

S.No.	Particulars	Details	Remarks
1.	Total land	1125.28 ha [Govt. land:-1125.28 ha]	Land use: Total land needed is 1125.26 ha out of which 1069.581 ha land is diverted from forest and rest of 55.703 ha (non-forest land) is allotted by IDCO.
2.	Land acquisition details as per MoEF & CC O.M. dated 7/10/2014	Forest land is already diverted and non-forest is allotted by IDCO.	-

S.No.	Particulars	Details	Remarks
3.	Existence of habitation & involvement of R&R, if any.	There are 63 Project Affected Families (PAF) who would be affected due to the proposed Greenfield project. Rehabilitation and Resettlement (R&R) shall be carried out as per R&R Plan duly approved by District Authorities.	
4.	Latitude and Longitude of the project site	From 20 ⁰ 11'58" to 20 ⁰ 14'08" N latitude and 86 ⁰ 30'53" to 86 ⁰ 35'38" E longitude	
5.	Elevation of the project site	13 m AMSL (maximum) The land is low lying and needs to be raised to prevent flooding during cyclones. Maximum storm surge level observed historically was +5.5 m CD. The land is required to be raised to + 6.5 m CD to avoid flooding. Land would be raised using dredged sand from navigational channel of jetties. Estimated requirement of dredged sand is about 27 million m ³ .	
6.	Involvement of Forest land if any	Forest land = 1069.581 ha Forest Clearance (Stage I and Stage II) was awarded to earlier Project proponent for same site and same project. JSWUSL submitted an application to MoEF&CC for FC transfer from earlier project proponent to present Project Proponent. FAC accorded FC to JSWUSL vide letter no. F.No 8-63/2007-FC dated 16th October 2019	
7.	Water body exists within the project site as well as study area	Project site: Nil Study Area : Mahanadi – 8.2 km NE Jatadhar Mohan river – Adjacent Mahanganadi – 0.4 km N Bay of Bengal - 0.5 km SE	Distance of nearest flood level is 50 m (Jatadhar Mohan river)

S.No.	Particulars	Details	Remarks
8.	Existence of ESZ/ ESA/ national park/wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil	-
9.	Interlinked projects	<p>i. Iron ore grinding and desliming plant with slurry transportation for 30 MTPA iron ore concentrate had been submitted vide proposal no. IA/OR/MIN/179208/2020 for which ToR was granted vide letter dated 29/12/2020.</p> <p>ii. Captive jetty (Proposal no: IA/OR/MIS/74417/2018). The EC proposal for Captive jetty was deliberated in the 256th EAC meeting and the EAC committee has sought additional documents which are yet to be submitted for further consideration. The captive jetty project also granted CRZ recommendation by the State CZMA (OCZMA) vide letter no. OCZMA/56/202041/OCZMA dated 01.02.2021.</p>	

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

Sl. No.	Name	Configuration	Production, MTPA								
1	Slurry dewatering system	Thickener, Filtration (pressure filter) with water recovery system	30.0								
2	Coke oven	8 x 62 ovens block, 6.25 m tall stamp charged, CDQ	6.0								
3	Sinter plant	1 x 500 m ²	5.775								
4	Pellet plant	4 x 8.0 MTPA Grinding Unit - 180 TPH	32.0								
5	DRI	1 x 1.2 MTPA	1.2								
6	Blast furnace	3 x 5,350 cum	13.5								
7	Steelmaking Shop (SMS)	<table border="0"> <tr> <td>SMS-1</td> <td>SMS-2</td> </tr> <tr> <td>3 x 350 t BOF</td> <td>2 x 180 t BOF</td> </tr> <tr> <td>3 x 350 t LF</td> <td>2 x 180 t LF</td> </tr> <tr> <td>2 x 350 t RH</td> <td>1 X 180 t RH</td> </tr> </table>	SMS-1	SMS-2	3 x 350 t BOF	2 x 180 t BOF	3 x 350 t LF	2 x 180 t LF	2 x 350 t RH	1 X 180 t RH	13.49
SMS-1	SMS-2										
3 x 350 t BOF	2 x 180 t BOF										
3 x 350 t LF	2 x 180 t LF										
2 x 350 t RH	1 X 180 t RH										
8	Caster Shop	Slab Caster - 3 x 2 strand Billet Caster - 1 x 8 strand Billet/Bloom Caster - 1 x 6 strand	13.2								
9	Flat Product Mills	Plate Mill - 1 x 1.5 MTPA Hot Strip Mill - 2 x 5.5 MTPA Tinplate Coil - 2 X 0.25 MTPA Silicon Steel - 2 X 0.25 MTPA Cold Rolling Mill - 2 x 2.3 MTPA - Pickling line tandem cold mill(PLTCM)-2x2.3 MTPA	9.74								

Sl. No.	Name	Configuration	Production, MTPA
		- Continuous Annealing Line (CAL) - 2x1.0 MTPA - Continuous Galvanizing Line CGL - 4x0.5 MTPA - Colour coating Line CCL - 4x0.25 MTPA	
10	Long Product Mill	Rebar mill - 1 x 1.2 MTPA Wire Rod Mill - 1 x 0.6 MTPA Medium Section Mill - 1.0 MTPA	2.8
11	Calcining Plant	6 x 600 TPD Lime Calcining Plant 1 x 600 TPD Dolo Calcining Plant	0.97 0.13
12	Cement Plant (BOOT)	Grinding, mixing of slag, clinker & fly ash	10.0
13	Captive Power Plant (BOOT)	By-product gas and coal based 3 x 300 MW	900 MW
14	Air Separation Plant (BOOT)	6 x 2,100 TPD	12,600 TPD
15	Tar processing plant (BOOT)	Distillation units for producing Carbon Black Oil, Anthracene Oil, Naphthalene, Wash Oil and Pitch	300,000 TPA
16	Benzol Refining Plant (BOOT)	Distillation units for producing BTX and other value added products	100,000 TPA

36.8.6 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, tons/annum	Source	Distance from site (Kms)	Mode of transport
1	Coking Coal and Pet Coke	7,831,900	International market Potential source- Mozambique, Australia and Canada	0 (Captive jetties)	Sea
2	Anthracite	192,000	International market Potential source- South Africa, Vietnam and Indonesia	0 (Captive jetties)	Sea
3	Iron ore (Lump)	1,187,900	Procured from the Joda-Barbil and Koira mines region, Odisha	330	Rail (50%)/ Road (50%)
4	Iron ore concentrate	30,000,000	Captive Iron ore grinding & desliming plant, Joda/Nuagaon	330	Slurry Pipeline from Joda/Nuagaon Plant
5	Iron ore fines	4,695,300	Procured from the Joda-Barbil and Koira mines region, Odisha	330	Rail
6	PCI coal	2,700,000	International market Potential source- Australia, South Africa and Indonesia	0 (Captive jetties)	Sea
7	Limestone	4,934,500	BF grade - Purchased from mines in Bagalkot area, Karnataka /Central India (Jukehi-Katni-Niwar area) SMS grade - Imported from Middle-East Countries (UAE & Oman)	1600	Sea (50%)/ Rail (40%)/ Road (10%)
8	Dolomite	2,350,100	International market & Purchases from mines located in Sundargarh district, Odisha & Katni-Bilaspur region, Central India	350	Sea (15%)/ Rail (70%)/ Road (15%)
9	Steam coal	2,700,000	Procured from Mahanadi	450	Rail

Sl. No.	Raw Material	Quantity, tons/annum	Source	Distance from site (Kms)	Mode of transport
			Coalfields Limited (MCL) and South Eastern Coalfields Limited (SECL)		
10	Bentonite	320,000	International market – Russia etc.	0 (Captive jetties)	Sea
11	Quartzite	270,000	International market – Brazil, Domestic - Rajasthan	1900	Sea (10%)/ Rail (50%)/ Road (40%)
12	Clinker	5,116,000	International market – Vietnam, Domestic - Gujarat	0 (Captive jetties)	Sea
13	Gypsum	232,000	Domestic – Rajasthan, Gujarat	1900	Rail 50%)/ Road (50%)

36.8.7 The water requirement for the project is estimated as 256,752 m³ /day, out of which 223,872 m³ /day of fresh water requirement will be obtained from the Upstream of Jobra barrage of Mahanadi River and the remaining requirement of 32,880 m³ /day will be met from the recycling of treated effluent. The permission for drawl of surface water is obtained from Dept. of Water Resources, Government of Odisha vide Lr. No. 20873/WR/Irr.II-WRC-44/19 dated 19/09/2019.

36.8.8 The power requirement for the project is estimated as 1230 MW, out of which 900 MW from coal and gas fired CPP & 221 MW from CDQ & TRT and rest will be balanced Grid/JSW Energy.

36.8.9 Baseline Environmental Studies:

Period	Jan'18 to Apr'18, Nov'18 - Feb'19 and Apr'19 - May'19.	
AAQ parameters at 8 locations	Parameters	Min - Max.
	PM ₁₀ µg/m ³	46.2- 90.2
	PM _{2.5} µg/m ³	23.5- 52.8
	SO ₂ µg/m ³	4.0-9.5
	NO ₂ µg/m ³	7.8-45
	O ₃ µg/m ³	10- 28.8
	CO mg/m ³	0.1 - 0.68
	NH ₃ µg/m ³	<4.18
	Pb µg/m ³	<0.01
	*C ₆ H ₆ µg/m ³	<0.74
	As ng/ m ³	<0.01
	Ni ng/ m ³	<0.02
*BaP ng/ m ³	<0.36	
AAQ modelling (Incremental GLC)	PM ₁₀ =3.7 to 21.5µg/m ³ SO ₂ = 0.8 to 16.4µg/m ³ NO _x = 8.9 to 32.8µg/m ³	

Ground water quality at 8 locations	pH: 6.5 to 7.1, Total Hardness: 835.8 to 2760 mg/l, Chlorides: 54.6 to 853.1 mg/l, Fluoride: 0.1to 0.3 mg/l. Heavy metals are within the limits.
Surface water quality at 8 locations	pH: 6.7 to 8.1; DO: 3.25 to 5.5 mg/l BOD: from 5.0 to 57.5.mg/l. COD: from 39.0 to 288.8 mg/l
Noise levels	52.8 to 75LeqdB(A) for the day time and 42.2 to 67.2LeqdB(A) for the Night time
Traffic assessment study findings	<ul style="list-style-type: none"> • Design capacity of Four Lane Roads: 86,400 PCU/day • Present traffic load: After merging of SH12 and NH 53 near Atharabanki – 38,506 PCU/day • Additional traffic load due to the project: NH 53 and SH 12 – 4589 PCU • Total traffic load in future due to project: 43,095 PCU/day (which is still within the carrying capacity of four lane divided roads of 86,400 PCU/day)
Flora and fauna	There are no Schedule I species exist in the study area.

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

S.No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment / Disposal
1.	BF Slag	Blast Furnace	4050000	Granulation in Slag granulation plant and used in cement manufacturing in captive cement plant. A small quantity would be used internally in the ISP
2.	Steelmaking Slag	SMS	2095000	Recovery of metallics & non-metallics for in-plant use. Balance utilized as railway ballast, in construction aggregate, after processing.
3.	Flue Dusts	Blast Furnace, SMS, Sinter Plant, Pellet Plant etc.	300000	Reuse in Agglomeration
4.	Mill Scales/ Sludge	Mills	150000	Reuse in agglomeration
5.	Fly Ash	Coal based CPP	940000	Used to produce cement in the captive cement plant
6.	Bottom Ash	Coal based	240000	Would be stored in ash pond and

S.No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment / Disposal
		CPP		used for road making
7.	Chrome Sludge	CRM	80	Disposed in secured landfill in TSDF
8.	Decanter tank & tar storage tank sludge	Coke Oven By product plant	800	Reused in coke oven
9.	Used & Waste oil	Mills and other units	1500	old to Recycled recyclers
10.	Zinc Dross	Galvanising Unit	30000	old to Recycled recyclers

36.8.11 Public Consultation:

Details of advertisement given	19 th November, 2019
Date of public consultation	20 th December, 2019
Venue	Badadanda, in front of Jagannath Temple at Gadakujang village
Presiding Officer	Sri Sangram Keshari Mohapatra Collector & District Magistrate, Jagatsinghpur
Major issues raised	<ul style="list-style-type: none"> • Air pollution (dust pollution) • Ground water contamination • Direct and indirect employment • 200 bedded Super specialty Hospital in the local area • upgradation of existing govt. hospitals in three Gram Panchayats • upgradation of existing educational institutions • establishment of technical training institute • vocational training centers • skill development centers • safe drinking water facilities in every village • development of sports infrastructure in the villages • SHGs are to be empowered with skill development and better management of financial implementation and training and establishment of BPO centers in the villages. • Construction or upgradation of road and drainage system

Point-wise Action plan as per MoEF&CC O.M. dated 30/9/2020

S.No.	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget, Rs lacs	Target date for implementation of action plan
1.	Construction or up-gradation of road and drainage system	drainage, sewerage systems, roads, municipal solid wastes collection and disposal system will be developed as a part of the smart village	2400	Within 4 years from project commencement
2.	200 bedded Super specialty Hospital in the local area	Establishment of 200 bed hospital in consultation with local authorities	1000	Within 4 years from project commencement
3.	Up-gradation of existing govt. hospitals in three Gram Panchayats	Up-gradation of govt. hospitals in 3 gram panchayats	250	Within 4 years from project commencement
4.	Up-gradation of existing educational institutions	Establishment of public schools at Garhkujang	700	Within 4 years from project commencement
		Strengthening of library & up gradation of existing village schools by providing Chair, table & black board	170	Within 4 years from project commencement
		Establishment of libraries	160	Within 4 years from project commencement
5.	safe drinking water facilities in every village	Provision of drinking water through pipelines/tankers & installation of portable RO in peripheral villages	2000	Within 4 years from project commencement
6.	development of sports infrastructure in the villages	play ground and stadium will be constructed in consultation and collaboration with Govt. of Odisha	2400	Within 4 years from project commencement
7.	SHGs are to be empowered with skill development and better management of financial implementation and training and establishment of BPO centres in the villages	Providing training to SHG members	400	Within 4 years from project commencement
		Skill development for women empowerment on nursing, tailoring, beautician course, animal husbandry at village	1000	Within 4 years from project commencement
8.	vocational training centres	Establishment of technical training institute for skill development. Location will be decided in discussion with Local administration	2000	Within 4 years from project commencement
9.	skill development centres	Skill development training on welding, electrician course, machinery, carpentry etc. and livelihood program.	1000	Within 4 years from project commencement
		Establishment of BPOs in and provision of employment aid in textile units	300	Within 4 years from project commencement

S.No.	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget, Rs lacs	Target date for implementation of action plan
10.	Free electrification/solar system/street lighting	Solar LED street lighting in villages (Dhinkia, Nuagoan, Gobindpur, Raghunathpur Garhkujang, Noliasahi, Pankapal, Bayanalkanda, Raghunathpur, Abhaychandapur & Kujang	600	Within 4 years from project commencement
11.	Construction of shopping complex	Development of market place	200	Within 4 years from project commencement
12.	Establishment and up-gradation of public community centre and recreation centre	Development of playground and stadium	2400	Within 4 years from project commencement
	Total		16980.0	

36.8.12 The capital cost of the project is Rs. 65,000 Crores and the capital cost for environmental protection measures is proposed as Rs. 2856 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 200 Crores. The employment generation from the proposed project is 72,000 (Direct-15000, Indirect-57000). The details of cost for environmental protection measures is as follows:

S No	Description of Item	(Rs. In Crores)	
		Capital Cost	Recurring Cost
1.	Water Conservation and Wastewater Treatment	775	54
2.	Air Pollution Control Measure	1650	115
3.	Solid Waste management	120	8.5
4.	Green Belt Development	25	2
5.	EMS & laboratory	90	6.5
6.	Address to Public Consultation concerns	196	14
	Total	2856.0	200.0

36.8.13 Greenbelt will be developed in 372 ha which is about 33 % of the total project area. A 10-20 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare.

36.8.14 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.

36.8.15 Name of the EIA consultant: M/s. M. N. Dastur & Co. (P) Ltd. [S.No. 167 in the List of ACOs with their Certificate / Extension Letter no. Rev. 10, May 13, 2021].

36.8.16 M/s. JSW Utkal Steel Limited was earlier made application vide proposal no. IA/OR/IND/74396/2018 dated 04/03/2021. The proposal was considered by the EAC

(Industry 1) in its 32nd meeting of the Re-constituted EAC (Industry-I) held on 15th-17th March, 2021.

- 36.8.17 The project proponent vide email dated 16/03/2021 expressed their inability to participate in the EAC meeting and **requested to return their proposal in its present form** to “revisit and correct the uploaded Form-2 for incorporating the Integrated [Common] EIA Report for ISP and Jetty(ies) Project at Paradeep, Odisha”.

Recommendations of the Committee (EAC during 15-17th March, 2021)

- 36.8.18 In view of the request made by the project proponent, the Committee accepted the request of the project proponent to withdraw the proposal in its present form.
- 36.8.19 M/s. JSW Utkal Steel Limited has again made an online application vide proposal no. IA/OR/IND/74396/2018 dated 05/05/2021. Subsequently, the proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021.
- 36.8.20 Besides above, the EAC has gone through the following records:

A. Public representation

The EAC has taken cognizance of the issues raised in the public representation dated 31/01/2020 and 07/02/2020 alleging several shortcomings in the public hearing held for the project on 29/12/2019.

B. Report of District Magistrate on public representation

As per the District Magistrate report dated 29/05/2020, the public hearing for the instant project was conducted by the District Administration on 29/12/2019 as per the procedure laid down in the EIA Notification, 2006.

Observations of the Committee

- 36.8.21 The Committee noted the following deficiencies in the proposal submitted by the proponent.
- i. There are sand dunes in the vicinity of the project site and as per the ToR accorded, the Sand dunes are not supposed to be disturbed. However, PP has not shown the sand dunes to be protected on the lay out map and the area of these sand dunes.
 - ii. Existing level of the project site is lower than HFL. Level of the site to be raised to + 6.5 m CD to avoid flooding by using dredged sand from navigational channel of jetties. Estimated requirement of dredged sand is about 27 million m³. Dredging work in creeks, its usage and disposal patterns has not been elaborated in the report.
 - iii. Raising of plant level by 6.5 m would block all drainage in the area from West to East and the drains will flood the area in North. It would also increase salinity in that area. It was recommended that a comprehensive drainage study of the area shall be conducted taking into account the history of topography and the heavy rains and cyclones in past. Impact of the project on natural drainage of the area shall be assessed.
 - iv. Water is proposed to be drawn from Jobra Barrage of Mahanadi River 87 km from site. Water is a scarce commodity in that area and PP has not explored the possibility

of desalination of sea water for process use in the plant. CGWA have declared that there is very little water available in Mahanadi during lean season. GW abstraction shall not be permitted. The committee advised to look into another source of water for the plant.

- v. A large reservoir is proposed to be constructed outside the plant boundary to receive fresh water from barrage. Capacity details , location of reservoir, land requirement and status of land acquisition for the same have not been furnished.
- vi. Details of fuel to be fired in pellet plant is not available in the EIA report.
- vii. Waste heat recovery details from Sinter cooler are not furnished.
- viii. Sinter Plant, is of conventional type and BAT like, MEROS technology for emission control has not been proposed.
- ix. BFs shall be equipped with TRT and Dry gas Cleaning Plant, stove waste gas heat recovery system is not included in the proposal.
- x. Numbers and Size of DRI kilns to produce 1.2 MTPA Sponge iron have not been furnished. Power generation details from DRI kilns are also not given.
- xi. There is no commitment of direct hot charging for slabs/billets.
- xii. Acid recovery plant, CETP for CRM complex have been proposed. However there is no provision for incineration of oil scum and oily sludge generated in CRM and for disposal of Hazardous waste from CETP. Details of CETP are not included.
- xiii. CO₂ recovery is envisaged from DRI exhaust gases and recycling of gases to the kiln is proposed in DRI. Details of the proposed system are not available.
- xiv. Action plan with physical targets to address the issues raised during the public hearing as per MoEF&CC O.M. dated 30/09/2020 has not been furnished.
- xv. Reporting structure for Head, Environment Management Cell has not been shown in the organization chart.
- xvi. Details of trees exist in the site to be cut during construction have not been given.
- xvii. R&R Plan based on Public Hearing, SIA and as per Odisha Governments R&R Plan preparation Guidelines has not been furnished.
- xviii. Eight (8) AAQ stations are proposed for entire complex. Based on the Wind Rose and scattered locations of polluting units like CPP, Cement Plant and steel plant, these stations are inadequate. EIA consultant should give a justification for selecting the number of stations and their locations. AAQ has not been monitored as per the methodology explained in EIA report.
- xix. The land use pattern in the diverted Forest clearance of 19.10.2019 has not been furnished.
- xx. Calculation details of sea water requirement for once through cooling , heat generation and transfer details have not been furnished.
- xxi. TOR issued for this project does not provide for BOOT as proposed for certain units. PP shall revisit the same.
- xxii. Action Plan to protect the raw material stored outside during high storm are not available and shall be furnished.

- xxiii. Green belt action covering 33% of the project area with a tree density of 2500 trees per ha shall be submitted. There shall be minimum three rows of trees along the plant boundary as a part of this green belt..
- xxiv. Impact assessment of Raw Materials and finished product transport through road route has not been done.
- xxv. Reason for High Fluoride and Phenol content in the sea water has not been explained.
- xxvi. Explanation as to why iron ore slurry water shall be discharged into sea is not furnished.
- xxvii. Scheme to avoid discharge of BOD treated water, FGD water and TSDF water into deep sea is not available.
- xxviii. Scheme to treat plant run off before marine discharge is not available.
- xxix. Explanation as to why PM, SO₂ and NO_x emission loads are so high in the area has not been furnished.
- xxx. Details of Sodar Monitoring for mixing height determination have not been furnished.
- xxxii. Impact of sea water withdrawal for desalination and once through application shall be furnished.
- xxxiii. Details of fuel to be used for BF slag dryer are not provided.
- xxxiv. Details of technology finally selected for pelletisation are not provided.
- xxxv. MSW generation details in the plant during operation and construction and the management plan for the same is not available.
- xxxvi. The details on “ Alternate Technology” in Chapter 5 of EIA report are not available.
- xxxvii. Treatment details of leachate from TSDF are not available.
- xxxviii. Specific details for control of SO₂ and NO_x emissions from the proposed complex are not available.
- xxxviii. Variance in data provided in documents and PPT presented has been observed which needs to be rectified.
- xxxix. All bag Houses and DE system design criteria have not been given (DE systems shall be designed for 150% of theoretical capacity calculated as per ACGIH).
 - xl. Dredging of Jetty is going to be regular practice. Mechanism to manage dredged material has not been furnished in EIA.
 - xli. EIA does not include the locations of wetlands existing in the study area and impact of the project on these wetlands.
 - xlii. Details of access roads to NH 5 , SH12 and Paradeep port (if any) and impact of the same on environment has not been assessed.
 - xliii. Impact of thermal discharge into sea and mechanism to control the Delta T within 5 Degree C have not been furnished.
 - xliv. The following aspects have not been addressed in the EIA report.
 - a. Study on shoreline changes.
 - b. Plan for Marine environmental conservation.
 - c. Study on grain size analysis
 - d. Assessment of the impact of the project on the local fishing community in terms of economic losses and suggestions for mitigation and R&R
 - e. Oil spill management plan

- xliv. Action plan to implement the recommendations of the Shore Line Study conducted by NCSCM shall be submitted.
- xlvi. Action plan for Continuous Monitoring of the impact on coastal environment should be included in the scope of monitoring.

Recommendations of the Committee

36.8.22 In view of the foregoing and after deliberations, the Committee recommended to return the proposal in its present form to address the shortcomings as enumerated above.

36.9 Proposed Expansion of Ferro Alloy Plant (SAF 1x9 MVA) by installation of 3x5 MVA SAFs and Ferro-Chrome Briquetting Plant (10 TPH) by **M/s. Metsil Exports Private Limited** located at Basudebpur (North), Barjora, **District Bankura, West Bengal** [Online Proposal No. IA/WB/IND/51722/2010; File No. J-11011/371/2009-IA.II (I)]– **Environment Clearance** – regarding

36.9.1 M/s. Metsil Exports Private Limited has made an online application vide proposal no. IA/WB/IND/51722/2010 dated 07/05/2021 along with copy of EIA/EMP report and Form–2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

36.9.2 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
9 th July 2019	9 th meeting of EAC held on 30-31 st July, 2019	Terms of Reference	26 th August, 2019

36.9.3 The project of M/s Metsil Exports Pvt. Ltd. located in Hat Asuria Village, Basudebpur (North), Barjora, Bankura District, West Bengal State is for enhancement of production of Ferro Alloys from

- 17,400 TPA Si-Mn to 46,400 TPA Si-Mn or
- 22,560 TPA Fe-Mn to 60,160 TPA Fe-Mn or
- 16,992 TPA Fe-Cr to 45,312 TPA Fe-Cr or
- 7596 TPA Fe-Si to 20,256 TPA Fe-Si
- and installation of a new 10 TPH Chrome Ore Briquetting Plant.

36.9.4 Environmental Site settings

S. No.	Particulars	Details	Remarks
i.	Total land	5.75 ha [Private: 5.75 ha]	Land use:

S. No.	Particulars	Details	Remarks
			Industrial - 5.75 ha
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	5.75 ha	Total land under the acquisition of the company.
iii.	Existence of habitation & involvement of R&R, if any	Not Applicable	
iv.	Latitude and Longitude of the project site	Latitude: 23°24'17.17"N to 23°24'27.00"N Longitude: 87°17'40.47"E to 87°17'51.38"E	
V.	Elevation of the project site	265.7 feet (81 meters)	
vi.	Involvement of Forest land if any.	Status of stage I Forest Clearance: Not Applicable	
vii.	Water body exists within the project site as well as study area	<u>Project site:</u> None <u>Study area</u> Damodar River - 5.7 km from the project site in NE direction. Irrigation Sluice originating from the River Damodar - 2.3 km in NE direction from the project site Subhankari Nala - 2.1 Km in S direction Kanjor Nala - 2.9 Km in SSW direction Kanjor Reservoir - 4 Km in SSE direction Feeder Canal - 3 Km in ESE direction	-
viii.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area	Nil	

36.9.5 The existing project was accorded environmental clearance vide Ir.no. J-11011/371/2009-IA.II(I) dated 21st June, 2010. Consent to Operate for the existing unit was accorded by West Bengal Pollution Control Board vide Lr. no. CO107882 Memo No. 1705/dr-CO-S/11/1858 dated 15.05.2018. The validity of CTO is up to 30th September, 2023.

36.9.6 Implementation status of the existing EC

Sl. No.	Facilities	Units	As per EC dated 21.06.2010 and subsequent amendment dated 16.12.2016	Implementation Status as on 11 th May, 2021	Production as per CTO
1.	Ferro Alloy Plant	Submerged Arc Furnace (1x9 MVA)	17,400 TPA Si-Mn or 22,600 TPA Fe-Mn or 17,000 TPA Fe-Cr or 7600 TPA Fe-Si	Submerged Arc Furnace (1x9 MVA) under operation	17,400 TPA Si-Mn or 22,560 TPA Fe-Mn or 16,992 TPA Fe-Cr* or 7596 TPA Fe-Si*

Note: * There is permission to manufacture Fe-Cr & Fe-Si. However, it is not being manufactured presently.

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

Sl. No	Name	Existing Units		Proposed Units		Total (Existing + Proposed)	
		Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
1.	Ferro Alloy Plant	Submerged Arc Furnace (1x9 MVA)	17,400 TPA Si-Mn or 22,560 TPA Fe-Mn or 16,992 TPA Fe-Cr* or 7596 TPA Fe-Si*	<ul style="list-style-type: none"> Submerged Arc Furnaces (3x5 MVA) Chrome Ore Briquetting Plant 	<ul style="list-style-type: none"> 29,000 TPA Si-Mn or 37,600 TPA Fe-Mn or 28,320 TPA Fe-Cr or 12,660 TPA Fe-Si 10 TPH 	<ul style="list-style-type: none"> Submerged Arc Furnace (1x9 MVA + 3x5MVA) Chrome Ore Briquetting Plant 	<ul style="list-style-type: none"> 46,400 TPA Si-Mn or 60,160 TPA Fe-Mn or 45,312 TPA Fe-Cr or 20,256 TPA Fe-Si 10 TPH

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

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
A. Ferro Manganese - 60,160 TPA (Existing 22,560 TPA + Proposed 37,600 TPA)							
1.	Manganese Ore	56400	94000	150400	<u>Imported:</u> Australia / Africa. <u>Domestic:</u> Barbil, Nagpur / Bellary sector		Road
2.	Dolomite	6768	11280	18048	Sundergarh, Orissa		Road
3.	Coke	10152	16920	27072	<u>Imported:</u> China, Ukraine or Colombia		Road

					Domestic: Dhanbad	
4.	Steam Coal	5652	9420	15072	South-Eastern Coalfields of CIL	Road
	Overall	78972	131620	210592		
B. Silico Manganese – 46,400 TPA (Existing 17,400 TPA + Proposed 29,000 TPA)						
1.	Manganese Ore	37381	63800	101181	Imported: Australia / Africa Domestic: Barbil, Nagpur or Bellary sector	Road
2.	Dolomite	5947	10150	16097	Sundergarh, Orissa	Road
3.	Coke	15293	26100	41393	Imported: China, Ukraine or Colombia Domestic: Dhanbad	Road
4.	Steam Coal	5098	8700	13798	South-Eastern Coalfields of CIL	Road
5.	Quartzite	4248	7250	11498	Keonjhar / Sundargarh, Orissa	Road
6.	Ferro Manganese Slag	3400	5800	9200	In house / Market	Road
	Overall	71367	121800	193167		
C. Ferro Chrome- 45,312 TPA (Existing 16,992 TPA + Proposed 28,320 TPA)						
1.	Friable	6960	11328	18288	Indigenous	Road
2.	Briquette	33060	53808	86868	Own production	-
3.	Coke	6960	11328	18288	Imported: China, Ukraine or Colombia Domestic: Dhanbad	Road
4.	Coal	2610	4248	6858	Indigenous / Imported	Road
5.	Magnesite	2088	3398.4	5486.4	Indigenous	Road
6.	Quartz	2088	3398.4	5486.4	Keonjhar / Sundargarh, Orissa	Road
	Overall	53766	87508.8	141274.8		
D. Ferro Silicon – 20,256 TPA (Existing 7596 TPA + Proposed 12,660 TPA)						
1.	Mill Scales	3418	5697	9115	Indigenous	Road
2.	Quartz	12913	21522	34435	Keonjhar / Sundargarh, Orissa	Road
3.	Coke	13673	22788	36461	Indigenous	Road
	Overall	30004	50,007	80011		

36.9.9 The water requirement for the project is estimated as 160 m³ /day (overall project after expansion), out of which 160 m³/day of fresh water requirement will be obtained from the Barjora Panchayat Samity. The permission for drawl of water is obtained from Barjora Panchayat Samity vide Lr. No. Memo No. 168 dated 24.02.2021. No groundwater shall be used.

36.9.10 The power requirement for the project is estimated as 22,500 KVA (overall project after expansion), will be obtained from the DVC (Damodar Valley Corporation).

36.9.11 Baseline Environmental Studies

Period	1 st March, 2019 to 31 st May, 2019
AAQ parameters at 8 locations	PM _{2.5} = 19 to 41 µg/m ³

	PM ₁₀ = 53 to 90 µg/m ³ SO ₂ = 5 to 16 µg/m ³ NO ₂ = 10 to 33 µg/m ³ CO = 0.18 to 1.38 mg/m ³
AAQ modelling (Incremental GLC)	PM = 2.81 µg/m ³
Ground water quality at 9 locations	pH: 6.7 to 7.5, Total Hardness: 144 to 226 mg/l, Chlorides: 45 to 111 mg/l, Fluoride: 0.24 to 0.57 mg/l. Heavy metals are within the limits.
Surface water quality at 10 locations	Damodar River pH: 7.5 to 7.6; DO: 7.1 to 7.2 mg/l and BOD: 2 to 3 mg/l. COD : 8 mg/l Canal water pH: 6.9; DO: 6.2 mg/l and BOD: 6 mg/l. COD : 28 mg/l Pond Water pH: 6.9 to 7.6; DO: 5.7 to 7.2 mg/l and BOD: 6 to 9 mg/l. COD : 20 to 31 mg/l
Noise levels	56.3 to 71.3 L _{eq} in dB(A) for the day time and 44.6 to 56.8 L _{eq} in dB(A) for the Night time.
Traffic assessment study findings	Existing Load : 2256 PCU per day Total Load after Expansion: 2403 PCU per day As per IRC: 64-1990 code, a Two-Lane road in Plain terrain can accommodate vehicular traffic load of 15000 PCU per day. Durgapur-Bankura State Highway - 9 is a two-lane road with approx. 12 m width and can well accommodate existing traffic load along with the additional load due to M/s. Metsil Exports Pvt. Ltd.
Flora and fauna	There is no schedule species within the study area.

36.9.12 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
			Existing	Proposed	Total	
1.	Ferro Manganese Slag	Submerged Arc Furnaces	22,560	37,600	60,160	Used as a raw material for Silico Manganese production
2	Silico Manganese Slag	Submerged Arc Furnaces	15,293	26,100	41,393	Used for road construction or land filling purposes
3	Ferro Chrome Slag	Submerged Arc Furnaces	13,920	22,656	36,576	Used for road construction or land filling purposes after chrome recovery through Jigging Process and after TCLP test.
4	Ferro Silicon Slag	Submerged Arc Furnaces	608	1,013	1,621	Used for cement industries as a raw material & used for medium Carbon Silico Manganese production purpose.

36.9.13 Public Consultation:

Details of advertisement given	22 nd October, 2019
Date of public consultation	26 th November, 2019
Venue	“Meeting Hall, Barjora Panchayet Samiti”, Barjora, Dist. Bankura, West Bengal
Presiding Officer	Sri Asim Kumar Biswas, WBCS (Executive), ADM (General)
Major issues raised	i. Employment ii. Pollution iii. Greenery iv. Upgradation of road v. Infrastructure Development Work of Local School and College

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

S. No.	Concerns raised during the Public Hearing	Physical activity and Action plan	Tentative Budget, Rs. Lacs	Target date for implementation of action plan
1.	Generation of local employment.	In the proposed expansion project, top most priority will be given to the local people based on their academic qualification. Besides, there will be programme for the skill development to the unemployed local youth through National Skill Development Corporation, Govt. of India Scheme. In this connection, a building with necessary infrastructures shall be constructed.	Rs. 6 Lakhs have been earmarked under CER for training to unemployed local youth for skill development through National Skill Development Corporation, Govt. of India Scheme. In this connection, a building with necessary infrastructure shall be constructed.	2 years
2.	Development and upgradation of the connecting road from main gate of existing plant to Hat Ashuria Road.	The connecting Road from the main gate of the existing plant to Hat Ashuria Road will be developed and constructed under CER Programme.	Rs. 4.0 Lakhs have been earmarked under CER for the Development and upgradation of the connecting road from the main gate of the existing plant to Hat Ashuria Road.	2 years
3.	Tree plantation in the surrounding areas. Plantation may be carried out at vested land of the Government beside plantation within factory premises.	<ul style="list-style-type: none"> Plantation will be carried out at abandoned land occupied by Government and nursing of the plants will be done by engaging the local people. Around 4750 number of trees (@2500 nos. of tree per hectares) have already been planted under greenbelt development programme within the plant premises. Tree plantation and parks development programme in the nearby villages will be done and distribution of saplings will be done to the nearby villagers and school 	Rs. 2.5 Lakhs have been earmarked under CER activity for the tree plantation and greenery development programme.	3 years

S. No.	Concerns raised during the Public Hearing	Physical activity and Action plan	Tentative Budget, Rs. Lacs	Target date for implementation of action plan
		students.		
4.	Operation of the unit following environmental norms especially in the night time Operation of Air Pollution Control Devices as per norms.	<ul style="list-style-type: none"> Adequate control measures like installation of 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 regularly. All roads shall be paved on which movement of raw materials or products will take place inside the plant premises. No waste water will be discharged outside the plant area. The plant is designed as a zero discharge plant. The entire wastewater will be recirculated and recycled. The equipment shall comply with the Statutory limit of 85 dB(A) (at 1 m. from the source). Noise Reduction Systems will be provided. 	<ul style="list-style-type: none"> Capital Cost of Rs. 3 Crores and Recurring Cost of Rs. 30 Lakhs/ Annum are earmarked for Air Pollution Control. Capital Cost of Rs. 85 Lakhs and Recurring Cost of Rs. 7 Lakhs / Annum are earmarked for Water Conservation & Pollution Control . Capital Cost of Rs. 30 Lakhs and Recurring Cost of Rs. 3.0 Lakhs/ Annum are earmarked for Solid Waste management. Capital Cost of Rs. 25 Lakhs and Recurring Cost of Rs. 2.0 Lakhs/ Annum are earmarked for Noise Reduction Systems. 	3 years
5.	Infrastructure Development Work of Local School and College under CER Activity.	Best efforts will be given for the Infrastructure Development Work of the schools and colleges in the nearby villages based on the requirements through CER Programme.	Rs. 3.0 Lakhs have been earmarked under CER for infrastructure development work to the local school and colleges.	2 years
6.	Ground water shall not be used for industrial purposes.	Requirement of the total 160 KLD water (Existing: 40 KLD and Expansion: 120 KLD) will be supplied by the Barjora Panchayat Samity. No Ground water shall be used for industrial purposes.	-	

36.9.14 The capital cost of the project is Rs. 25 Crores and the capital cost for environmental protection measures is proposed as Rs. 5 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 0.5 Crores. The employment generation from the proposed project / expansion is 200. The details of cost for environmental protection measures is as follows:

S. No.	Description of Item	Existing (Rs. in Lakhs)	
		Capital Cost	Recurring Cost
i.	Air Pollution Control/Noise	300	30
ii.	Water Pollution Control	85	7.0
iii.	Green Belt Development	-	2.5
iv.	Addressal of Public Consultation concerns	15.5	-

- 36.9.15 Greenbelt is already developed in 1.9 ha which is about 33% of the total project area. Local and native species have been planted with a density of 2500 trees per hectare. Total no. of 4750 saplings have already been planted and nurtured in 1.9 hectares.
- 36.9.16 Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration shall be furnished. - No
- 36.9.17 Name of the EIA consultant: M/s Envirotech East Pvt. Ltd. [S. No. 3, List of ACOs in process of complying with their Certificate No. NABET/EIA/1821/RA0118].

Certified compliance report from Regional Office

- 36.9.18 The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide letter no. 102-379/09/EPE dated 19.11.2020 in the name of M/s Metsil Exports Pvt. Ltd. The Action taken report regarding the partially/non-complied condition was submitted to Regional Officer MoEF&CC, Bhubaneswar vide letter no. MEPL/38/2020-21 dated 18th December, 2020. MoEF&CC Integrated Regional Office, Kolkata evaluated the same and has issued letter dated 19th February, 2021. The details of the observations made by RO in the report dated 19th February, 2021 along with its re-assessment/ present status as furnished by the PP is given as below.

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
1	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the WBPCB. The Regional Office of this Ministry at Bhubaneswar / CPCB / WBPCB shall monitor the stipulated conditions.	As per Regional Office file records, it has been observed that the PAs are not submitting the six-monthly compliance reports. It is required to submit the six-monthly compliance reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (by e-mail) to Regional Office, Bhubaneswar on regular basis.	21.06.2010		(xv)	Complied It was observed that the project was shut down for the period (December, 2013 to December, 2018) due to the prevailing market condition during which the PA did not submit the compliance report. However, after the said period it submitted 6 monthly compliance reports since 2019. The 1st six monthly compliance report was submitted in the year 2019. The 2nd six monthly compliance report was submitted in 2020.
2	The project proponent shall upload the status of compliance of the stipulated	It has been observed that the PAs are monitoring stack emissions once in six months	21.06.2010		(xiv)	Complied.

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	<p>environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB and WBPCB.</p> <p>The criteria pollutant levels namely: SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.</p>	<p>only. It is recommended to monitor Stack emissions for at least once in two months and the monitoring reports to be submitted along with six monthly compliance reports on regular basis.</p>				
3	<p>Continuous monitoring facilities for all the stacks and sufficient air pollution control equipment viz. fume extraction system with bag filters, ID fan and stack of adequate height to submerged arc furnace shall be provided to control particulate emissions below 50 mg/Nm³. At no time, the emission level shall go beyond the prescribed standards, interlocking facilities shall be</p>	<p>It has also been observed that the PAs have not installed interlocking facilities in the process. It is required to install interlocking facilities so that process can be automatically stopped in case emission level exceeds the limit.</p>	21.06.2010	1.		<p>Not Complied It has been stated by the PA that it is under technical evaluation, which is expected to be completed shortly.</p>

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	provided so that process can be automatically stopped in case emission level exceeds the limit.					
4	Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated waste water shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, WBPCB and CPCB.	It is required to monitor influent and effluent surface, sub-surface and ground water on regular basis and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E (P) Act whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, WBPCB and CPCB.	21.06.2010	10.		Complied It was observed that the plant is designed as a zero discharge plant as far as the process effluent is concerned. The waste water from cooling tower is re-circulated through cooling and treatment. The treated waste water (having Total Dissolved Solid as around 402 mg/l) is being used for various purposes inside the plant.
5	All the ferro alloy slag shall be used for land filling inside the plant or used as building material only after passing through Toxic Chemical Leachability Potential (TCLP) test. Otherwise, hazardous substances should be recovered from the slag and output waste and be disposed in secured landfill as per CPCB guidelines.	It is required to conduct Toxic Chemical Leachability Potential (TCLP) test for the raw material and all the ferro alloy slag used for land filling inside the plant or used as building material. Hazardous substances, if any should be recovered from the slag and output waste and be disposed in secured	21.06.2010	12.		It has been stated by the PA that only Ferro manganese and Silico manganese are being manufactured after the installation of the project. No ferro chrome has been produced. Ferro manganese slag is being used as a raw material for Silico manganese production and Silico manganese slag is being used for land filling. Ferro chrome slag shall also be used for

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
		landfill as per CPCB guidelines.				land filling after chrome recovery and after TCLP test as and when Ferro chrome is manufactured. However, TCLP Test for the Silico manganese slag has been conducted.
6	Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated waste water shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, WBPCB and CPCB.	It is required to submit the report regarding toxic metal content in the waste material and its composition, end use of soli/hazardous waste shall be submitted to Bhubaneswar, WBPCB and CPCB on regular basis.	21.06.2010	10.		Complied
7	All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 30 th November, 2009 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.	All the commitments made to the public during the Public Hearing/ Public Consultation meeting held on 30 th November, 2009 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Regional Office at Bhubaneswar.	21.06.2010	18.		Partially complied It was been stated by the PA that the issues raised during Public Hearing were mainly related to employment generation for the local people, Pollution control measures, CSR, greenbelt development etc. The company has given preference to the local people for the employment in the existing project.

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
						<p>It has taken adequate pollution control measures with respect to stack emission, wastewater generation and solid waste.</p> <p>Rs. 155 Lakhs have already been spent for this purpose.</p> <p>The Company commenced its operation only in the year 2019 after implementation of the project in 2012 due to adverse market conditions. So, it could just commence its CSR activities after actual realisation of the profit in its business.</p> <p>It was observed that the PA has done only single and two tier plantation along boundary wall which not sufficient.</p>
8	Recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Ferro Alloy Units shall be strictly implemented	It is required to provide the detailed implementation status of recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Ferro Alloy Units.	21.06.2010	17.		Complied
9	At least 5% of the total cost of the project shall be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared	At least 5% of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared	21.06.2010	19.		Complied It has been stated by the PA that the company has recently resumed the operation of its plant after 5 years' shut down due to financial loss. The company has recently done

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.	and submitted to the Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner. It requires immediate action.				mask distribution among the local people in the present context and has decided to continue the same.
10	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	It is required to provide the detailed information regarding the occupational health surveillance of the workers done for the year 2019-20 and 2020-21 (till date).	21.06.2010		(v)	Complied The relevant information regarding the Occupational Health of the Workers done for the period March, 2020 to September, 2020
11	All the environment management measures given in the EIA/EMP shall be implemented and complied with.	It is required to provide the detailed information regarding the implementation status of environment management measures given in the EIA/EMP.	21.06.2010		(vi)	Complied It was observed that the Company has installed Bag Filters & Automatic Stack Emission Monitoring System to control stack emission. The entire wastewater, generated from the plant is reused inside the plant after proper treatment. Ferro manganese slag is being used as a raw material for Silico manganese production and Silico manganese slag is being used for land filling.
12	The company shall undertake eco-development measures including community welfare measures in the project area.	It is required to undertake eco-development measures including community welfare measures in the project area. It requires immediate action.	21.06.2010		(ix)	Complied
13	The project proponent shall	It is required to provide for solar	16.12.2016	4.		Complied

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.	light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.				It was observed that the company has installed solar light system around office gate as well as at other locations inside the plant premises.
14	As proposed, Rs. 150.00 Lakhs shall be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures and used judiciously to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	It is required to provide detailed information regarding item wise expenditure on expenditure incurred under environmental pollution control measures during the year 2019-20 and 2020-21 (till date).	21.06.2010		(xi)	Complied
15	The Project Authorities 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 and the date of commencing the land development work.	It is required to submit the details regarding the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	21.06.2010		(xii)	Initially, the project was started in February 2011 and the project was completed in March 2012.
16	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the	As per the Regional Office file records, it has been observed that the PAs are not submitting environmental statement for each financial year ending 31 st March in Form-V. It is required to submit	21.06.2010		(xvi)	Complied

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.	the environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions.				
17	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored date on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely: PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and	It is required to upload the status of compliance of the stipulated environment clearance conditions, including results of monitored date on their website and should be update the same periodically.	21.06.2010	4.		Complied The status of compliance of the stipulated environment clearance conditions, including results of monitored date has been uploaded on the company's website. The same will be uploaded periodically.

Sl. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	displayed at a convenient location near the main gate of the company in the public domain.					

36.9.19 The proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

36.9.20 The Committee noted the following:

- i. 4th hole extraction system is included as per text. However, in section 2.9.1 of EIA it is mentioned that SAF shall be open type.
- ii. AAQ modelling is done for particulate matter only. Worst case scenario has not been predicted. It should be done for SO₂ and NO_x parameter also.
- iii. RO compliance is generally in order except installation of interlocking devices and completion of commitment made on CER front.
- iv. Action plan with physical targets to address the issues raised during public hearing has not been submitted as per MoEF&CC O.M. dated 30/09/2020.
- v. Scheme to control PM emission within 30 mg/Nm³ and for use of PTFE membrane bags may be furnished.
- vi. Traffic study has not been carried out and scheme to strengthen village roads to be furnished.
- vii. Action plan for 100% sold waste utilization has not been submitted.
- viii. Detail's regard natural drainage pattern of the project site has not been submitted.

Recommendations of the Committee

36.9.21 In view of the foregoing and after deliberations, the Committee recommended to return the proposal in its present form to address the shortcomings as enumerated above.

36.10 Proposed Magnesium ingot plant with production capacity of 26,400 TPA of Ferro Silicon (Raw material for Magnesium Ingots) and 16,500 TPA of Magnesium Ingots by **M/s. Tremag Alloys Private Limited** located at Village Kopparchy, Tehsil Chintakomma Dinne, **District YSR Kadapa, Andhra Pradesh** [Online Proposal No. IA/AP/IND/197043/2021; File No. J-11011/193/2021-IA.II (I)] – **Prescribing for Terms of Reference**– regarding.

36.10.1 M/s. Tremag Alloys Private Limited has made an application online vide proposal no. IA/AP/IND/197043/2021 dated 05/05/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006.

Details submitted by Project proponent

36.10.2 The project of M/s. Tremag Alloys Private Limited located at Village Kopporthy, Tehsil Chintakomma Dinne, District YSR Kadapa, Andhra Pradesh is for Proposed Magnesium ingot plant with production capacity of 26,400 TPA of Ferro Silicon (Raw material for Magnesium Ingots) and 16,500 TPA of Magnesium Ingots.

36.10.3 Environmental site settings:

S N	Particular	Details	Remarks															
i.	Total Land area	40.4686 ha (100 acres) (Entire land has been allotted by Industries and Commerce department, Government of Andhra Pradesh vide G.O No: 127 Dated 14/09/2017).	Land use: As per the land allotment G.O M.S. No. 127 Dated: 14-09-2017 the land is undeveloped land. As per Bhuvans 2015-16, the land is classified as Agricultural crop land.															
ii.	Existence of habitation & involvement of R&R, if any.	Not Applicable	Entire land has been allotted by Industries and Commerce department, Government of Andhra Pradesh vide G.O No :127 Dt:14.09.2017															
iii.	Latitude and Longitude of the project site	<table border="1"> <thead> <tr> <th>S No</th> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>14°29'20.62"N</td> <td>78°44'9.94"E</td> </tr> <tr> <td>2</td> <td>14°29'6.46"N</td> <td>78°44'8.15"E</td> </tr> <tr> <td>3</td> <td>14°29'27.19"N</td> <td>8°43'36.36"E</td> </tr> <tr> <td>4</td> <td>14°29'37.35"N</td> <td>78°43'44.14"E</td> </tr> </tbody> </table>	S No	Latitude	Longitude	1	14°29'20.62"N	78°44'9.94"E	2	14°29'6.46"N	78°44'8.15"E	3	14°29'27.19"N	8°43'36.36"E	4	14°29'37.35"N	78°43'44.14"E	
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4	14°29'37.35"N	78°43'44.14"E																
iv.	Elevation of the project site	~142-151 m (AMSL)																
v.	Involvement of Forestry land if any	Nil	Entire land has been allotted by Industries and Commerce department, Govt. of Andhra Pradesh vide G.O No :127 Dt:14.09.2017															

S N	Particular	Details	Remarks																																																																											
vi.	Water body exists within the project site as well as study area	<p>Project site Three minor streams (rain fed) are existing and will be maintained and the water course will not be altered. Hence no impact on existing drainage system and watershed area.</p> <p>Study Area:</p> <table border="1"> <thead> <tr> <th>Water bodies</th> <th>≈Distance from site</th> <th>Directio</th> </tr> </thead> <tbody> <tr><td>KoppartiCheruvu</td><td>0.28km</td><td>E</td></tr> <tr><td>ErramasupalleVanka</td><td>1.24km</td><td>S</td></tr> <tr><td>PirchipaduVanka</td><td>2.50km</td><td>NW</td></tr> <tr><td>RallaVanka</td><td>4.18km</td><td>SE</td></tr> <tr><td>Kurnool Cuddapah Canal</td><td>5.18km</td><td>E</td></tr> <tr><td>NirukonaVanka</td><td>6.17km</td><td>S</td></tr> <tr><td>UtukuruCheruvu</td><td>7.05km</td><td>ESE</td></tr> <tr><td>BuggaVanka</td><td>7.62km</td><td>E</td></tr> <tr><td>ChintakommadinneCheruvu</td><td>8.37km</td><td>SE</td></tr> <tr><td>PataCuddapahCheruvu</td><td>8.74km</td><td>E</td></tr> <tr><td>ChinnagadiVanka</td><td>9.20km</td><td>SE</td></tr> <tr><td>Papagni River</td><td>9.43km</td><td>NW</td></tr> <tr><td>Penneru River</td><td>10.36km</td><td>NNE</td></tr> <tr><td>KannelaVagu</td><td>11.41km</td><td>NNE</td></tr> <tr><td>AdinimmayaPalli Reservoir</td><td>11.97km</td><td>N</td></tr> <tr><td>PutlampalliCheruvu</td><td>12.70km</td><td>ESE</td></tr> <tr><td>Vakkileru N</td><td>12.24km</td><td>N</td></tr> <tr><td>Eturu Canal</td><td>12.73km</td><td>N</td></tr> <tr><td>MaddimaduguVanka</td><td>12.76km</td><td>SSE</td></tr> <tr><td>KontalaVanka</td><td>12.90km</td><td>SW</td></tr> <tr><td>Maidukuru Canal</td><td>12.94km</td><td>NE</td></tr> <tr><td>KamalapuramCheruvu</td><td>13.45km</td><td>NW</td></tr> <tr><td>Pageru R</td><td>13.61km</td><td>NNW</td></tr> <tr><td>BuggaVanka Reservoir</td><td>14.07km</td><td>SE</td></tr> </tbody> </table>	Water bodies	≈Distance from site	Directio	KoppartiCheruvu	0.28km	E	ErramasupalleVanka	1.24km	S	PirchipaduVanka	2.50km	NW	RallaVanka	4.18km	SE	Kurnool Cuddapah Canal	5.18km	E	NirukonaVanka	6.17km	S	UtukuruCheruvu	7.05km	ESE	BuggaVanka	7.62km	E	ChintakommadinneCheruvu	8.37km	SE	PataCuddapahCheruvu	8.74km	E	ChinnagadiVanka	9.20km	SE	Papagni River	9.43km	NW	Penneru River	10.36km	NNE	KannelaVagu	11.41km	NNE	AdinimmayaPalli Reservoir	11.97km	N	PutlampalliCheruvu	12.70km	ESE	Vakkileru N	12.24km	N	Eturu Canal	12.73km	N	MaddimaduguVanka	12.76km	SSE	KontalaVanka	12.90km	SW	Maidukuru Canal	12.94km	NE	KamalapuramCheruvu	13.45km	NW	Pageru R	13.61km	NNW	BuggaVanka Reservoir	14.07km	SE	The water bodies within the site and outside up to ≈ 8 km are monsoon fed and non-perennial. HFL level will be submitted during the EIA study and the hydrological impacts if any will be addressed with mitigation measures.
Water bodies	≈Distance from site	Directio																																																																												
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vii.	Existence of ESZ/ ESA/national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil																																																																												

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

S. No	Name	Production (TPA)
Products		
1	Ferro Silicon (Raw material for manufacturing Magnesium ingots)	26,400
2.	Magnesium ingots	16,500
By-Product		
3.	Micro silicon powder (by product)	6,600
TOTAL		49,500

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

S N o	Raw materials	Proposed Quantity (MT/Month)	Source	Distance from site	Mode of Transport
Ferro Silicon					
1	Quartz	4480	Local	~6.72 km (E)	By road
2	Iron Scrap	640	Import quality material to be procured from Local traders	~6.72 km (E)	By road
3	Semi Coke	2453	Imported from China	~144.35 km (E)	By road from Krishnapatnam Port
4	Electrode Paste	117	Local	~6.72 km (E)	By road
Magnesium Ingots					
5	Dolomite	14600	Local	~6.72 km (E)	By road
6	Coal	6400	Imported from south Africa or Indonesia	~144.35 km (E)	By road from Krishnapatnam Port
7	Ferro Silicon	1450	Will be used from ferro-silicon plant.	Nil	Captive use
8	Fluorite(CaF ₂)	240	Local	~6.72 km (E)	By road
9	Protection Agent (SF ₆)	4.0	Local	~6.72 km (E)	By road
10	Solvent 60% MgCl ₂ + 2# (MgCl ₂ >35%, NaCl ₂ >30%, KCl>25%, CaCl ₂ <2%, Insoluble matter <4%)	270	Local	~6.72 km (E)	By road

36.10.6 The water requirement for the project is estimated as 688 m³/day out of which, fresh water requirement will be obtained from APIIC through Somasila Reservoir which is 590.3m³/day and remaining 97.7 m³/day will be met from recycling of treated wastewater. The permission of drawl of water is obtained from APIIC through Somasila Reservoir vide GO.M S No. 79 dated 11/11/2019. Approval from Ground water and Water Audit Department (Andhra Pradesh) vide Letter no. 1589/Hg-II/2018 dated 18/02/2021 (construction phase) for 442 KLD.

36.10.7 The power requirement for the project is estimated as 25 MW, which will be obtained from APSPDCL substation. DG sets (2 x 1 MW) (1 working +1 standby) will act as backup power.

36.10.8 The capital cost of the project is INR. 279.93 Crores and the Capital cost for Environmental protection measures is 2.48 Crores. The employment generation from the proposed project is 60 during construction phase and 394 during operational phase.

36.10.9 Proposed Terms of Reference (Baseline data collection period: October 2021 to December 2021 (Post monsoon season)):

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
A. Air				
a) Meteorological parameters	Wind speed, wind direction, relative humidity, rainfall, Atmospheric Temperature and Atmospheric Inversion Level.	One within the site	Hourly for three months	
b) Ambient Air Quality parameters	PM ₁₀ , PM _{2.5} , SO _x , NO _x , CO, Pb, O ₃ , NH ₃ , Benzene, Benzopyrene, As, Ni. as per the Standard ToR issued for 3(a) – TSPM, Mercury & Fluoride	8 locations Within 10 Km radius (study area)	24 hourly-twice in a week for Three Months (one complete non monsoon season)	
B. Noise	Day equivalent & night equivalent Noise levels in dB(A)	8 locations	Hourly -once during study period	
C. Water				
Surface water	physico-chemical and biological characteristics	8 locations	Once during study period	
Ground water	physico-chemical and biological characteristics	8 locations	Once during study period	
D. Land				
a) Soil Quality	physico-chemical characteristics	8 locations	Once during study period	
b) Land use	Land use of the district and study area	-	-	Using GIS

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
E. Biological				
a) Aquatic	A list of flora and fauna of study area with details of Endangered species if any through field observations and secondary sources like Forest Department.	Within study area	Once during study period	
b) Terrestrial				
F. Socio Economic parameters	Demographic structure covering total households, total population, population density, sex ratio, schedule caste and schedule tribe, literacy and employment. Health Status, Cultural and aesthetic attributes in study area including places of historical and archaeological importance, Inventory of places of historical, cultural and religious importance in the study area	Within study area	Once during study period	

36.10.10 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.

36.10.11 Name of the consultant: M/s. Eco Chem Sales & Services, Surat, [S.No. 23 in the List of ACOs with their Certificate / Extension Letter no. Rev. 10, May 13, 2021].

36.10.12 The proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

36.10.13 The EAC noted the following:

- i. HF pollution and SF6 pollution are major environmental issues of Mg ingot production. This has not been addressed in Pre-feasibility report. SF6 pollution is equal to the amount of SF6 consumed. Plant shall consume 4 TPA SF6 which would release 91200 T of CO2 annually. Also nearly 34.4 kg of HF gas shall be released for every tonne of Mg metal produced.
- ii. PP has not proposed substitutes to SF6, like HFC-134a and FK-5-1-12 (Novec-612).
- iii. PP has not proposed measures to control HF pollution.
- iv. Details of SAF to be used in FeSi plant are not available.
- v. GW abstraction is proposed during construction phase. This should be discouraged.

- vi. Noise monitoring is proposed at 8.34 Km from site.
- vii. AAQ monitoring stations are not as per wind Rose.

Recommendations of the Committee

36.10.14 In view of the foregoing and after deliberations, the Committee recommended to return the proposal in its present form to address the shortcomings as enumerate above.

36.11 Brownfield project for substantial expansion by installation of production facilities for production of: Sponge Iron 375,000 TPA; Mild Steel Billet 365,400 TPA; Rerolled Steel Products through Hot Charging and through Reheating Furnace 350,000 TPA and Captive Power 40MW (30MW through WHRB and 10MW through AFBC) by **M/s NRVS Steels Limited** at Village- Taraimal Tahsil- Gharghoda, **District-Raigarh, Chhattisgarh** [Online Proposal No. IA/CG/IND/210323/2021; File No. J- 11011/195/2021-IA.II (I)] – **Prescribing for Terms of Reference**– regarding

36.11.1 M/s. NRVS Steels Limited has made an application online vide proposal no. IA/KA/IND/210624/2021 dated 07/05/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report 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 & nonferrous) and 1(d) Thermal Power Plant under Category “A” of the schedule of the EIA Notification, 2006.

Details submitted by Project proponent

36.11.2 The project of M/s. NRVS Steels Limited located at Village- Taraimal Tahsil- Gharghoda, District- Raigarh, Chhattisgarh is for Brownfield project for substantial expansion by installation of production facilities for production of: Sponge Iron 375,000 TPA; Mild Steel Billet 365,400 TPA; Rerolled Steel Products through Hot Charging and through Reheating Furnace 350,000 TPA and Captive Power 40MW (30MW through WHRB and 10MW through AFBC).

36.11.3 Environmental site settings:

S No	Particulars	Details
i.	Total land	25.33 ha [Private] The proposed expansion will be implemented on the existing 25.33 ha free hold industrial land owned by the company and its group entity. No additional land is proposed to be acquired.
ii.	Existence habitation involvement R&R, if any.	No

S No	Particulars	Details		
		Point	Latitudes	Longitudes
iii.	Latitude and Longitude of the project site.	A	22°1'55.22"N	83°22'7.45"E
		B	22°1'44.64"N	83°22'16.91"E
		C	22° 1'39.69"N	83°22'16.53"E
		D	22° 1'47.90"N	83°21'46.24"E
		E	22° 1'55.72"N	83°21'55.92"E
iv.	Elevation of the Project site	270m.		
v.	Involvement of Forest land if any.	No.		
vi.	Water body exists within the project site as well as study area	<p>Core Zone: Nil</p> <p>Study area:</p> <ol style="list-style-type: none"> 1. Kelo River, 2.7 Km/E 2. Pajhar Nadi, 5.5 Km/NE 3. Jam Nala, 1 Km/W 4. Dewanmunda Nala, 2.9 Km/W 5. Korapali Nala, 3 Km/W 6. Barade Nala, 7.8 Km/WSW 7. Bodojuri Nala, 5.5 Km/WNW 8. Kosam Nala, 6.8 Km/NW 9. Ranai Nala, 7 Km/N 10. Chui Nala, 7.7 Km/NE 11. Gardharasi Nala, 7.1 Km/NE 12. Ratrot Nala, 3.8 Km/ENE 13. Banjari Nala, 1.7 Km/ENE 14. Gerwani Nala, 1.9 Km/SW 15. Karanara Nala, 3.6 Km/SE 16. Dhengu Nala, 9 Km/SSW 17. Tipakhol Tal, 9.7 Km/SE 18. Kelo Dam, 4.7 Km/ 		
vii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	<p>Nil</p> <ol style="list-style-type: none"> 1. Urdana RF, 5.2 Km/SW 2. Barkachhar RF, 3.3 Km/ESE 3. Kharidungri RF, 4.7 Km/SE 4. Taraimal RF, 0.7 Km/N 5. PF (Near Vill. Jamadbhari), 4.3 Km/W 6. Rabo RF, 8 Km/WSW 7. Samaruma RF, 7 Km/NW 8. Punjipathra PF, 2.4 Km/N 9. Pajhar PF, 4.9 Km/NE 10. PF Near Saraipali, 4.4 Km/WNW 11. PF Near Dokarbura, 9.4 Km/NW 12. PF Near Shivpuri, 3.4 Km/SSW 13. Lakha PF, 4.5 Km/SE 14. Barlia PF, 8 Km/SE 15. Dongpani PF, 6.9Km/SSE 16. Chhirwani PF, 8.9 Km/SSE 		

S No	Particulars	Details
		17. Junwani PF, 7.7 Km/SE 18. Keradongri PF, 5.5 Km/SE 19. Devgan PF, 8.5 Km/ENE 20. Amaghat PF, 6.2 Km/N 21. PF Near Amaghat, 7.2 Km/NE 22. PF Near Taraimal, 2.3 Km/ESE

36.11.4 The existing promoters of the company M/s. NRVS steel Limited had first taken over “one existing company called “M/s. Seleno Steels Limited” and changed its name to NRVS Steels Ltd. Subsequently they acquired thru NCLT auction another company’s assets and land all licences and rights owned by “M/s. Keshav Sponge and Energy Private Limited”. Both these companies were operating their respective sponge iron plants with Induction furnaces and power plant for which they had obtained consents from CECB for existing plant as detail given below:

- A. **M/s. Seleno Steels Limited** was granted consent on 14/05/2004 for Sponge Iron Plant 90000 TPA (4 x 50 TPD + 1x100 TPD) along with 6 MW Power Plant (WHRB- 3 MW & FBC-3 MW), Ingots / Billets manufacturing capacity 21,600 TPA Re-rolling mill capacity of 15000 TPA and Coal washery 350,000 TPA which was later transferred in the name of NRVS Steels Ltd).
- B. **M/s. Keshav Sponge and Energy Private Limited** was issued consent on 29/12/2004 for 90,000 TPA (3 x 100TPD) Sponge Iron Plant and for 09MW WHRB Power Plant and for 30,000 TPA Induction Furnace which was also later transferred in the name of NRVS Steels Limited.

Since the unit obtained CTE prior to 14/09/2006, Environment Clearance under the provisions of EIA Notification, 2006 has not been obtained.

36.11.5 The Company NRVS Steels Limited after acquisition of both these companies later informed to CECB that both industries i.e. M/s. Seleno Steels Limited and M/s. Keshav Sponge and Energy Private Limited are presently operated under the name of M/s NRVS Steels Limited and are lying adjacent continuous land; so, the board issued a combined single consent for the entire facilities now owned by the company.

36.11.6 Existing facility implemented as per Consent:

S No	Facility	Capacity as per consent of CECB	Implemented as on 07/05/2021
1.	Sponge Iron (4 x 50 TPD + 4 x 100 TPD)	180,000 TPA	180,000 TPA
2.	Induction Furnace	51,600 TPA	51,600 TPA
3.	Re-Rolling Mill	15,000 TPA	--
4.	Power plant	18.0 MW	15.0 MW
	WHRB from Sponge Iron	15.0 MW	15.0 MW
	AFBC boiler	3.0 MW	--
5.	Coal Washery	350,000 TPA	--

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

S No	Name	Existing Production capacity in the Units		Proposed additional production capacity in the Unit		Total (Existing + Proposed)	
		Existing Facilities	Production TPA/MW	Proposed additional Facilities	Production TPA/ MW	Final Configuration	Production TPA/MW
1	Sponge Iron	DRI Kilns, (4 x50 TPD and 4 x 100 TPD)	180,000 TPA	DRI Kilns, (1x100 TPD 2x200 TPD and 1x350 TPD) (4x50 TPD will be replaced by the above)	195,000 TPA	DRI Kilns, (5x100 TPD; 1x350 TPD; and 2x200 TPD)	375,000 TPA
2	Mild Steel Billet	IF: 3x 7 T	51,600 TPA	IF: (3x12 T; 4x20 T) & LRF: 1x 20 T (existing Induction Furnace of 3x7 TON will be upgraded with 12 Tons each)	313,800TPA	IF: 3x12 T and 4x20 T LRF: 1x 20 T	365,400 TPA
3	Re-rolled Steel Products like; Structural Steel	-	-	Rolling Mill Hot Charging	260000 TPA	Rolling Mill Hot Charging	260000 TPA
4	Rerolled Steel products	-	-	Billet Reheating Furnace	90000 TPA	Billet Reheating Furnace	90000 TPA
5	WHRB Captive power from Sponge Iron	WHRB (15 MW)	15 MW	WHRB from Sponge Iron	15 MW	WHRB from Sponge Iron	30 MW
6	AFBC Captive Power	-	-	AFBC boiler	10 MW	AFBC boiler power generation from Char/ Dolochar & Coal	10 MW
7	Coal washery	Not implemented (Coal washery 350,000 TPA)	Not implemented (350,000 TPA)	Nil	Nil -	Nil -	Nil -

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

For Sponge Iron Plant(3.75 Lakhs TPA):

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Km)	Mode of Transportation
		Existing	Additional qty for Expansion	Total			
1	Iron Ore	315,000.00	292,500.00	607500.00	Odisha Iron Ore Mine & NMDC	Within 500 km	By Rail to the nearest railway siding and then by Road through covered vehicles
2	Coal	252,000.00	216,750.00	468750.00	SECL Coal mines	Within 200 km	By Rail to the nearest railway siding and then by Road through covered vehicles or by port and then by rail to the nearest railway siding and then by Road through covered vehicles
3	Limestone/ Dolomite	9,000.00	4,125.00	13125.00	Local mines	Within 100 km	By Road through covered vehicles
4	Refractory Material	360.00	240.00	600.00	Open Market and local industries	Within 100kms	By Road through covered vehicles
	Total	576,360.00	513,615.00	1089975.00			

For Induction Furnace (Steel Melting Shop): (3.654 Lakhs TPA)

S. No	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Additional for Expansion	Total			
1	Sponge Iron	61,920.00	303,480.00	365400.00	Captive production/	Within the unit	By internal Road through covered vehicles/ Conveyors
2	Pig Iron / CI Scrap	7,341.01	37,862.99	45204.00	Local market	Within 200 km	By Road through covered vehicles/ Internally available
3	Melting Scrap	1,126.90	6,473.10	7600.00	Captive generation/ Local market	Within Plant and local market in 50 km	Internally available/ By Road through covered vehicles
4	Ferro Alloys	541.80	3,112.20	3654.00	Local market	Within 100 km	By Road through covered vehicles
5	Aluminum	77.40	288.00	365.40	Open Market/ BALCO	Within 200 km	By Road through covered vehicles
6	Ramming Mass	141.98	772.02	914.00	Open Market	Within 300 km	By Road through covered vehicles
7	Steel Sheet Former	16.24	75.76	92.00	Open Market	Within 200 km	By Road through covered vehicles
8	Furnace Oil for Ladle Preheating	100.10	608.77	708.88	Petroleum Companies	Within 300 km	By Road through Tankers

S. No	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Additional for Expansion	Total			
9	Calcined Lime for Refining of Liquid Steel	0.00	18,270.00	18270.00	Open Market/ Local Units	Within 100 km	By Road through covered vehicles
10	Fluorspar and other additives for de phos	0.00	3,654.00	3654.00	Open Market	Within 300 km	By Road through covered vehicles
11	Electrode for Arc Furnace	0.00	730.80	730.80	Open Market and from Bhopal	Within 600 km	By Road through covered vehicles
	Total	63,065.69	383,527.39	446593.08			

For Hot Charging Rerolling Mill: 2.6 Lakh TPA

S. No	Raw Material	Quantity required per annum			Source	Distance from site (Km)	Mode of Transportation
		Existing	Qty for Expansion	Total			
1	Hot Billets	-	268569.0	268569.00	Captive Production in Steel Melting shop	-	Internal Transfer
	Total	-	268569.0	268569.00			

For Reheating Furnace based Rerolling Mill: 0.9 Lakh TPA

S No	Raw Material	Quantity required per annum			Source	Distance from site (Km)	Mode of Transportation
		Existing	Qty for Expansion	Total			
1	Cold MS billet (internally available)	-	89523.00	89523.00	Captive production as per requirement	-	Internal Transfer
2	Coal	-	10743.00	10743.00	SECL/MCL Mines Local Market	Within 100 km	By Road through covered vehicles
	Total	-	100266.00	100266.00			

For Captive AFBC Power Plant (10 MW)

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Km)	Mode of Transportation
		Existing	Qty for Expansion	Total			
1	Char Dolochar	-	93750.00	93750.00	Captive generation in SID	-	Internal Transfer by tippers/ Conveyors
2	Coal	-	30458.00	30458.00	SECL/ MCL Mines	Within 100 km	By Road through covered vehicles
3	Fluidizing Bed Media	-	50.00	50.00	Open Market	Within 200 km	By Road through covered vehicles
	Total	-	124258.00	124258.00			

36.11.9 The water requirement for the project is estimated as 1950m³/day,(682500 KLA),The management had decided to implement a 50000 KL Rain water collection Tank which will be enough to cater water requirement of 25 days, During 75 days of monsoon water requirement will be met through rain water collection. Therefore, it is considered that about 100 days water requirement will be met through rain water and rain water collection, and balance 250 days water (487500KLA) will be sourced from Ground Water. The project site is located about 20 meters above the submergence of Kelo dam at a distance of about 4.5 KM from the defined submergence area. Due to this the ground water is found to be adequate for the project. The area falls under safe Category as per CGWA assessment.

36.11.10The power requirement for the project is estimated as 51 MW, out of which 40MW will be generated from the captive power plant and 11MW will be sourced through CSPDCL industrial power supply network, in addition to this 2 Nos of 1500 kVA DG sets are proposed for emergency backup.

36.11.11The estimated capital cost of the project expansion is Rs 308.05Crores (including cost of proposed CER). Capital cost for corporate environmental responsibilities measures is proposed as Rs 3.0501 Crores. The employment generation from the proposed project/expansion is 990 (245 Existing + 745 proposed)

36.11.12Proposed Terms of Reference (Baseline data collection period- 1st March to 31st May 2021):

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
A. Air				
a. Meteorological parameters	Temperature, Relative Humidity, rainfall, wind direction & wind speed.	1 (At project site)	Daily	
b. AAQ parameters	PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , NH ₃ , Ozone, CO, Benzene & Benzopyrene and Heavy metals: Ni, Pb, As	8	Monthly	
B. Noise	Sound pressure level (Leq)	8	Monthly (day time and night time)	
C. Water	All Parameters ; BOD; COD; pH; TDS; TSS; DO etc	16	Once in a month	
Surface water	As per IS: 10500	8	Once in a month	
Ground water		8	Once in a month	
D. Land				
a. Soil quality	Physical and nutrition properties of soil	2	Once in a season	
b. Land use				
E. Biological	Flora and fauna within study depending on Ecological receptors in	3	Once in a year	
a. Aquatic				
b. Terrestrial				

Attributes	Parameters	Sampling		Remarks
	the study area Aquatic Ecological Study 3 locations at Kelo River and other River in study area			
F. Socio-economic parameters	Occupational Health Monitoring of employees	1 (Project site)	Once in a year	

36.11.13 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.

36.11.14 Name of the EIA consultant: M/s Anacon Laboratories Private Limited, Nagpur [S. No. 64, List of ACOs with their Certificate / Extension Letter no. Rev. 10, May 13, 2021].

36.11.15 The proposal was considered by the EAC (Industry 1) in its 36th meeting held on 18-19th May, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

36.11.16 The EAC noted the following:

- i. Kirodimal Nagar siding is 12 km from site .SH1 passes alongside the boundary of the plant.
- ii. Nearest RF in situated 700 M North from site.
- iii. PP operates 4x50TPD kilns at present. These will be modified to 100 TPD during expansion.
- iv. 3x7 T IF shall be modified to 12 T capacity.
- v. PP proposes to use coal as fuel in RHF. No details of PGP or Pulveriser are available.
- vi. 1950 KLD water is proposed to abstracted from ground while Kelo river flows only 2.7 km away from site.

Recommendations of the Committee

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

- i. Action plan for gradual phasing out ground water usage shall be submitted.
- ii. Action plan to limit the particulate matter emission from the stacks below 30 mg/Nm³ shall be furnished.
- iii. Action plan for fugitive emission control in the plant premises shall be provided.
- iv. Action plan for green belt development covering 33% of the plant area shall be submitted including green belt development towards Reserve Forest (within the plant area) which is located at a distance 700 m from the plant boundary.
- v. Action plan for rain water harvesting shall be submitted.
- vi. Action plan for 100% slag utilization shall be submitted.
- vii. Traffic study shall be carried out and scheme to strengthen village roads shall be furnished.

- viii. 4x50TPD kilns shall be phased out and shall not be allowed to operate after expansion.
- ix. Details of PGP or Pulveriser for supply of fuel to RHF shall be furnished.
- x. Coal washery rejects shall be dewatered in filter press and dry coal rejects shall be sold.
- xi. Noise monitoring shall be done near the plant at sensitive receptors.
- xii. Plant roads shall be made pucca, and vacuum cleaners shall be used to clean the roads regularly.

ANNEXURE –1

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

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

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

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

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

6. Environmental Status

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM₁₀, PM_{2.5}, SO₂, 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).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 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 (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP

reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.

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

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 (PM₁₀ 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 PM₁₀ 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(PM₁₀ 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 PM₁₀ 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 charging, charging emission centre, Coke quenching technology, pushing emission control.
5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.

ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

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

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

Executive Summary

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

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

Email

Sundar Ramanathan

Re: Draft MoM EAC 36

From : cnpandey@iitgn.ac.in Fri, May 28, 2021 07:21 PM
Subject : Re: Draft MoM EAC 36 📎 1 attachment
To : Sundar Ramanathan <r.sundar@nic.in>, Sujit Kumar
Bajpayee <sujit.baju@gov.in>

Dear Mr. Sundar,
Please find herewith the approved final MoM of the 36th EAC meeting for further necessary action regarding putting on Parivesh.
With best wishes,
Thanking you,
C. N. Pandey,
Chairman,
EAC (Industry I)
MoEFCC, Govt of India.