

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

Zero Draft MoM sent for approval: 21/06/2021

Approval by Chairman: 27/06/2021

Uploading on PARIVESH: 28/06/2021

Summary record of the Thirty Eighth (38th) meeting of Re-Constituted Expert Appraisal Committee (REAC) held on 15-16th June, 2021 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.

The Thirty Eighth 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 15-16th June, 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	15/06/2021	16/06/2021
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 37th meeting held during 31st May- 1st June, 2021 were confirmed by the EAC as already uploaded on PARIVESH.

15th June, 2021

38.1 Establishment of Pelletization plant of 0.8 MTPA, 1x400 TPD & 1x600 TPD DRI Kiln to produce sponge Iron of 3,35,000 TPA, Induction furnace of 5x20 T to produce Hot Billets/ M.S. Billets of 3,00,000 TPA, Rolling Mill to produce Rolled products (TMT Bars/Angles/ Channels) of 3,00,000 TPA through hot charging, Ferro Alloy plant of 1x12 MVA capacity to produce 40,000 TPA of FeMn (or) 30,000 TPA of SiMn (or) 45,000 TPA of Pig Iron, Power Generation through WHRB of DRI Kilns- 25MW & through CFBC of 15 MW by **M/s. Gopal Sponge & Power Private Limited** located at Chapka Village, Tehsil & **District Bastar, Chhattisgarh** [Online Proposal No. IA/CG/IND/190950/2021; MoEF&CC File No. J-11011/12/2021- IA.II(I)] –**Environment Clearance**– regarding.

38.1.1 M/s. Gopal Sponge & Power Private Limited has made an online application vide proposal no. IA/CG/IND/190950/2021 dated 07/06/2021 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) & 1(d) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

38.1.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
1 st January 2021	28 th EAC 18-20 th January, 2021	TOR issued with public hearing	8 th February 2021

38.1.3 The project of M/s. Gopal Sponge & Power Private Limited located at Chapka Village, Tehsil & District Bastar, Chhattisgarh is green field project involving establishment of Pelletization plant of 0.8 MTPA, 1x400 TPD & 1x600 TPD DRI Kiln to produce sponge Iron of 3,35,000 TPA, Induction furnace of 5x20 T to produce Hot Billets/ M.S. Billets of 3,00,000 TPA, Rolling Mill to produce Rolled products (TMT Bars/Angles/ Channels) of 3,00,000 TPA through hot charging, Ferro Alloy plant of 1x12 MVA capacity to produce 40,000 TPA of Fe Mn (or) 30,000 TPA of SiMn (or) 45,000 TPA of Pig Iron, Power Generation through WHRB of DRI Kilns- 25MW & through CFBC of 15 MW.

38.1.4 Environmental Site Settings:

S.No.	Particulars	Details
i.	Total land	18.62 ha (46 Acres) Entire land is registered & in possession of the Management. Present land use is for agriculture purpose and will be converted to industrial usage.
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Total land acquired and under the possession of project proponent.
iii.	Existence of habitation & involvement of R&R, if any.	No habitation exists in the plant site
iv.	Latitude and Longitude of the	19° 16' 20.90" to 19° 16' 43.10"E

S.No.	Particulars	Details
	project site	81° 52' 55.04" to 81° 53' 09.84"N
v.	Elevation of the project site	546 - 548 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: Markandi River -0.25 Km* Indravati River -7.5 Kms Narangi River -8.1 Kms Boria nala – 0.38 Kms Few ponds exists in the study area
viii.	Existence of ESZ / ESA / National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. if any within the study area	Nil Amadula RF: 7.4 Km Madhota PF: 7.8 Km

*Note: Markandi river is flowing at a distance of 0.25Kms from the project site. The elevation of the project site is 546m & HFL of the Markandi river is 543.160 m above MSL as per the letter dated 22/12/2020 issued by Office of the Executive Engineer, WRD, Jagdalpur, Bastar District, Chhattisgarh. Hence the project site will not be flooded. However, a bund of 2m height is proposed alongside of the river of 650 m length. Further, green belt with a width of 25 meter is proposed all along the periphery of the plant boundary towards the Markandi river.

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

S. No.	Unit	Products	Unit Configuration	Production capacity
1.	Pelletization Plant	Pellets	0.8 million TPA	0.8 million TPA
2.	DRI Kilns	Sponge Iron	1 x 400 TPD & 1 x 600 TPD	3,35,000 TPA
3.	Induction furnaces with CCM & LRF	Hot Billets / M.S.Billets	5 x 20 T	3,00,000 TPA
4.	Rolling Mill (with 85% Hot charging and 15 % Re-heating with LDO as fuel)	Rolled products (TMT bars / Angles / Channels)	1 x 900 TPD	3,00,000 TPA
5.	Ferro Alloy Unit	FeMn / SiMn / Pig Iron	1 x 12 MVA	Fe Mn - 40,000 TPA/ Si Mn - 30,000 TPA / Pig Iron- 45,000 TPA
6.	Power generation (WHRB)	Electricity	1X10 MW & 1 X 15 MW	25 MW
7.	Power generation (CFBC)	Electricity	1 x 15 MW	15 MW

WHRB: Waste Heat Recovery Boiler; CFBC : Circulating Fluidized Bed Combustion

38.1.6 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 (TPA)	SOURCES	MODE OF TRANSPORT
For manufacturing Pellets – 8,00,000 TPA				
1	Iron ore fines	8,96,000	NMDC, CMDC	By rail & road (through covered trucks)
2	Bentonite	6,400	Raipur, Chhattisgarh	By Road (Covered Trucks)
3	Limestone	18,000	Raipur, Chhattisgarh	By Road (Covered Trucks)
4	Dolomite	30,000	Raipur, Chhattisgarh	By Road (Covered Trucks)
5	Coal (Bituminous)	8,000	Raipur, Chhattisgarh	By Road (Covered Trucks)
6	Fuel (Anthracite Coal) Or LDO / LSHS	35,200	Raipur, Chhattisgarh	By Road (Covered Trucks)
		10600 KL/year	Raipur, Chhattisgarh	By Road (in tankers)
A. For manufacturing Sponge Iron – 3,35,000 TPA				
1	Iron Ore (or) Iron ore Pellets	5,36,000	NMDC, CMDC (or) In-house generation	By rail & road (through covered trucks) By Covered Conveyor
		4,69,000		
2	Dolomite	16,750	Raipur, Chhattisgarh	By road (through covered trucks)
3	Coal	Indian (or)	SECL Chhattisgarh / MCL Odisha	By rail & road (through covered trucks)
		Imported	Indonesia / South Africa / Australia	Through sea route, rail route & by road
B. For manufacturing Hot Billets/ MS Billets – 3,00,000 TPA				
1	Sponge Iron	3,35,000	In plant generation	By Conveyor
2	Pig iron / Scrap	45,000	In plant generation / Raipur, Chhattisgarh	By conveyor / By road (through covered trucks)
3	Ferro Alloys	18,000	In plant generation Raipur, Chhattisgarh	By Conveyor By road (through covered trucks)
C. For manufacturing Rolled Products – 3,00,000 TPA				
1	Hot Billets/ MS Billets MS Billets (purchased)	3,00,000	In house generation Raipur, Chhattisgarh	Covered Conveyor By road (through covered trucks)
		17,250		
2	LDO / LSHS*	9810 KL	Raipur, Chhattisgarh	By Road through tankers
* 100% consumption in worst-case scenario				
D. For Ferro Alloys : 1 x 12 MVA				
(i) For manufacturing Silico Manganese - 30,000 TPA				

S. No.	RAW MATERIAL		QUANTITY (TPA)	SOURCES	MODE OF TRANSPORT
1	Manganese Ore		48,900	MOIL / OMC	By Rail & Road through covered trucks
2	FeMn Slag		18,540	In house generation	Covered Conveyor
3	LAM Coke		11,550	Dhanbad, jharkand Imported (from Vizag port)	By Road through covered trucks Through sea route, rail route & by road
4	Quartz		6,000	Chhattisgarh/ Andra Pradesh	By Rail & Road through covered trucks
5	Bag filter dust		3,000	In house generation	Pipeline
OR					
(ii) For manufacturing Ferro Manganese – 40,000 TPA					
1	Manganese Ore		91,000	MOIL / OMC	By Rail & Road through covered trucks
2	LAM Coke		14,600	Dhanbad, jharkand Imported (from Vizag port)	By Road through covered trucks Through sea route, rail route & by road
3	Quartz		1,200	Chhattisgarh/ Andra Pradesh	By Rail & Road through covered trucks
4	Bag filter dust		6,400	In house generation	Pipeline
OR					
(iii) For manufacturing Pig Iron – 45,000 TPA					
1	HG Iron ore		66,375	Chhattisgarh/ Orissa	By Rail & Road through covered trucks
2	LAM Coke		22,050	Dhanbad, jharkand Imported (from Vizag port)	By Road through covered trucks Through sea route, rail route & by road
3	Limestone		18,450	Chhattisgarh/ MP	By Rail & Road through covered trucks
E. For Power Generation –CFBC power plant of 15 MW					
1	Coal	Indian	72,600	SECL Chhattisgarh / MCL Odisha	By Rail & Road through covered trucks
		Imported	46,500	Indonesia / South Africa (vizag port)	Through sea route, rail route & by road
2	Dolochar		67,000	In plant generation /	Covered Conveyor

38.1.7 The water requirement for the proposed project is estimated as 1600 KLD, and same will be sourced from Markandi river. State Investment Promotion Board (SIPB), Govt. of

Chhattisgarh has issued in-principle letter for recommendation of Water withdrawal permission from vide letter No. S. No/119/SIPB/2020 /249 dated 22/02/2021. No ground water is envisaged for the plant activities. The total waste water generation from the proposed project will be 271KLD. There will be no effluent discharge from the Pellet Plant, DRI plant, SMS, Ferro Alloy unit as closed-circuit cooling system will be adopted. Effluent from Rolling mill will be treated in oil separator followed by settling tank and the treated effluent will be recycled. Provision of sewage treatment plant for domestic wastewater and treatment facility for storm water drain will be provided.

38.1.8 Power required for the present proposal is estimated 57.3 MW, which will be sourced from 40 MW Captive Power Plant & the remaining power will be sourced from the State Electricity Grid.

38.1.9 Baseline Environmental Studies:

Period	1 st October 2020 to 31 st December, 2020 (for 8 nos. of stations) and as per the advice of Hon'ble EAC during TOR ppt monitoring has been conducted from 20 th January, 2021 - 10 th February, 2021 for 1 no. of station at Tikanpali
AAQ parameters at 9 locations	PM _{2.5} = 20.7 to 37.6 µg/m ³ PM ₁₀ = 35.5 to 64.6 µg/m ³ SO ₂ = 6 to 11.4 µg/m ³ NO ₂ = 7 to 17.8 µg/m ³ CO = 365 to 977 µg/m ³
AAQ modelling	Incremental GLCs due to the proposed project: PM ₁₀ = 2.68 µg/m ³ SO ₂ = 19.38 µg/m ³ NO _x = 15.4 µg/m ³ CO = 4.7 µg/m ³
Ground water quality at 8 locations	pH: 6.9 to 8.0, Total Hardness: 198 to 337 mg/l, Chlorides: 202 to 366 mg/l, Fluoride: 0.58 to 1.1. Heavy metals are within the limits.
Surface water quality at 6 locations	pH: 7.5 to 8.1, DO: 4.1 to 5.9 mg/l, BOD: 2.1 to 4.5 mg/l and COD from 8.1 to 18.4 mg/l
Noise levels	The equivalent day-night noise levels in the study zone are ranging from 45.72 dBA to 59.95 dBA during the study period.
Traffic assessment study findings	Traffic load (Baseline): 9304.5 PCU/day Additional Traffic load during operation of the proposed project : 2392 PCU/day Total Traffic load during operation of proposed project load : 11696.5 PCU/day Traffic Capacity as per the IRC 73: 1980 for Highways 20000 PCU/day. Hence existing road can cater to this additional traffic due to the proposed project.
Flora and fauna	No schedule-1 fauna within the study area

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

S.No	Waste / By product	Quantity (in TPA)	Method of disposal
1	Ash from Pellet Plant	7,200	Will be utilized in our proposed brick making unit.
2	Ash from Bituminous coal	400	Will be utilized in our proposed brick making unit.
3	Ash from DRI	60,300	Will be utilized in our proposed brick making unit.
4	DoloChar	67,000	Used as fuel in captive CFBC boiler
5	Wet scrapper sludge	16,750	Will be given to nearby Brick manufacturing
6	Kiln Accretion Slag	3,350	Will be utilized in road construction / given to road contractors
7	FES & Bag filter dust	6,200	Will be utilized in our proposed brick making unit.
8	Slag from SMS	30,150	Slag will be crushed and after recovery of iron, it will be utilized in road construction / given to road contractors
9	Mill Scale from Rolling Mill	780	Will be utilized in proposed Ferro Alloy unit
10	End Cuttings from Rolling Mill	9,000	Will be reused in Induction Furnaces.
11	Slag from SiMn Manufacturing	22,000	Will be given to Contractors for Road Construction.
12	Slag from FeMn Manufacturing	22,640	Will be used in manufacture of Silico manganese as it contains high MnO ₂ .
13	Slag from Pig Iron Manufacturing	19,350	Will be used in manufacture of slag cement
14	Ash from Power Plant (with Dolochar & Indian coal)	72,860	Will be utilized in our proposed brick making unit.
15	STP sludge	73	Will be utilized as manure for Greenbelt
Note: Solid wastes such as Dolochar, accretion slag will be stored in designated storage yard. Ash generated will be stored in silos only. There will not be any open storage of fly ash.			

Hazardous waste Generation:

- i. Waste Oil : 35 KL/Annum (**Disposal** : will be given to CECB approved Recyclers/ re-processors)
- ii. Used batteries will be given back to the supplier under buyback arrangement.

38.1.11 Public Consultation:

Details of advertisement given	09 th March 2021
Date of Public Consultation	12 th April 2021
Venue	At the Project site in Chapka Village, Bastar Tehsil & District, Chhattisgarh
Presiding Officer	Chairmanship of Additional District Magistrate
Major issues raised	The issues raised during Public Hearing are: <ul style="list-style-type: none"> • Air, water, soil pollution & its impact on farming • Greenbelt development • Effect of flood water

	<ul style="list-style-type: none"> • Employment • Effect on river water quality • Support to Women Self Help Groups, etc. • Project site is in flood prone area, factory boundary was can cause flood situation in villages houses. • Area is of migratory Birds and Honey Bees.
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Action plan as per MoEF&CC O.M. dated 30/9/2020

S.NO.	MAJOR ACTIVITY HEADS	YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lakhs)	
		1 st Year (Rs. in Lakhs)	2 nd Year (Rs. in Lakhs)	3 rd Year (Rs. in Lakhs)		
A). Based on Need Based & SIA Study						
1	Impart training to the local villagers for skill development & providing employment to them in the industry	Physical Nos. & village	Training to 50 unemployed youth of Chapka, Sonarpal, Sivniguda, Bastar, & Khorkhosa, Usri, Devda, Maviguda, Balenga, Tikanpal, Taragaon, Bhanpuri, Sitlawand, Munjala, Madhota Villages and taking them into Industry.	----	----	20
		Budget in Lakhs	20	----	----	
2	Impart training to the local villagers for skill development. a) DISHA Centre” along with necessary infrastructure for various vocational training program for employment generation in association with <i>National</i>	Physical Nos. & village	Vocational training to 50 unemployed youth in Chapka, Sonarpal, Sivniguda, Bastar, & Khorkhosa villages	Vocational training to 50 unemployed youth in Usri, Devda, Maviguda, Balenga, Tikanpal Villages	Vocational training to unemployed youth in Taragaon, Bhanpuri, Sitlawand, Munjala, Madhota Villages	60
		Budget in Lakhs	20	20	20	

S.NO.	MAJOR ACTIVITY HEADS	YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lakhs)
		1 st Year (Rs. in Lakhs)	2 nd Year (Rs. in Lakhs)	3 rd Year (Rs. in Lakhs)	
	<i>Skill Development Mission</i> (Automobile Repair, Welding, Electrical, Computer Hardware, Soft skills like computer programs etc.)				
3	Community & Infrastructure Development				
	i) Construction of public toilets	Physical Nos. & village	2 nos. toilets in Chapka Village 2 nos. toilets in Sonarpal village 2 nos. toilets in Sivniguda Village 2 nos. toilets in Balenga Village 2 nos. toilets in Khorkhosa village 2 nos. toilets in Tikanpal village		----
		Budget in Lakhs	12	----	----
	ii) Providing LED Street lighting with solar panels	Physical Nos. & village	5 nos. each in Chapka & Sonarpal Villages	5 nos. each in Sivniguda & Balenga Villages	5 nos. each in Khorkhosa & Tikanpal Villages
		Budget in Lakhs	3	3	3
	iii) Repair/maintenance of road	Physical Nos. & village	1000 m in Chapka & Sonarpal Villages	750 m in Khorkhosa & Tikanpal Villages	600 m in Sivniguda & Balenga Villages
		Budget in Lakhs	16	12	10
					Total
					59.0

S.NO.	MAJOR ACTIVITY HEADS		YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lakhs)
			1 st Year (Rs. in Lakhs)	2 nd Year (Rs. in Lakhs)	3 rd Year (Rs. in Lakhs)	
4	Education and Scholarship Programmes					
	i). Providing Scholarships to Class 10 Merit Students	Physical Nos. & village	Top 10 merit students in Chapka & Sonarpal Villages	Top 10 merit students in Sivniguda & Balenga Villages	Top 10 merit students in Khorkhosa & Tikanpal Villages	6.0
		Budget in Lakhs	2.0	2.0	2.0	
	ii). Construction of toilets in surrounding schools & its maintenance	Physical Nos. & village	---	2 nos. toilets in School @Sonarpal Village 2 nos. toilets in School @Chapka village 2 nos. toilets in School @ Bhanpuri Village 2 nos. toilets in School @ Balenga Village 2 nos. toilets in School @ Usri village 2 nos. toilets in School @ Tikanpal village	---	12.0
		Budget in Lakhs	---	12.0	---	
					Total	18.0
5	Distribution of tricycles for handicapped	Physical Nos. & village	5 nos. of tricycles in Chapka Village & 5 nos. of tricycles in Sonarpal Village	5 nos. of tricycles in Sivniguda Village & 5 nos. of tricycles in Balenga Village	5 nos. of tricycles in Khorkhosa village & 5 nos. of tricycles in Tikanpal Village	3.0
		Budget in Lakhs	1.0	1.0	1.0	
6	RWH pits in the surrounding	Physical Nos. & village	3 nos. in Govt . Higher	2 nos. in Sivniguda Anganwadi	Increase of 1 m depth in storage due to De-	26

S.NO.	MAJOR ACTIVITY HEADS		YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lakhs)
			1 st Year (Rs. in Lakhs)	2 nd Year (Rs. in Lakhs)	3 rd Year (Rs. in Lakhs)	
	villages & De-siltation of ponds		Secondary school Sonarpal village, 1 no. at PHC of Sonarpal village & 2 nos. in Panchayat office of Chapka Village	school & 3 nos. in High School Khorkhosa village, 1 no. at Panchayat office Khorkhosa village	siltation of pond in Balenga Village (19°15'19.18"N, 81°53'31.35"E) & Increase of 1.25 m depth in storage due to De-siltation of pond in Usri Village (19°15'43.97"N, 81°51'33.50"E)	
		Budget in Lakhs	3	3	20	
7	Provision of drinking water facility	Physical Nos. & village	Drinking water facility in Chapka & Sonarpal Villages	Drinking water facility in Sivniguda & Khorkhosa Villages	Drinking water facility in Balenga & Usri	36
		Budget in Lakhs	12	12	12	
					TOTAL (A)	222
B). Based on Public Consultation/Hearing						
1	Primary Health Centre with Ambulance to Sonarpal & Balenga villages	Physical Nos. & village	---	Primary Health Centre with Ambulance facility in Sonarpal Village	---	40
		Budget in Lakhs	---	40	---	
2	Financial assistance to Self Help Groups (SHG) of women and elderly persons	Physical Nos. & village	Women SHG -10 groups in Chapka & Sonarpal Villages	Women SHG -10 groups in Sivniguda & Khorkhosa Villages	Women SHG -10 groups in Balenga, Tikanpal & Usri	14
		Budget in Lakhs	4	4	6	
					Total (B)	54
					Grand Total(A+B)	276

38.1.12 The capital cost of the project is Rs. 490 Crores and the capital cost for environmental protection measures is proposed as Rs. 23.5 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.1.34 Crores. The employment

generation from the proposed project is 400. The details of cost for environmental protection measures is as follows:

S. No.	Item	Capital Cost (Rs. in Crores)			Recurring Cost / Annum (Rs.in Lacs)
		2022-2024	2024-2026	Total	
1.	Air Emission Management				
	ESPs	4.0	4.0	8.0	30.0
	Proposed Fume extraction systems with Bag filters	1.8	2.7	4.5	5.0
	Other APCS & conveyor systems	1.0	0.5	1.5	1.0
	Chimneys for proposed units	2.5	1.0	3.5	2.0
	CEMS	0.5	0.1	0.6	1.0
	CAAQMS	0.4	0.4	0.8	0.5
	Water Sprinklers	0.03	0.02	0.05	0.5
	Mechanical Dust Sweepers	0.15	---	0.15	1.0
	Environment Monitoring	---	---	----	15.0
	Sub total	10.38	8.72	19.1	56.0
2.	Wastewater Management				
	ETP	2.00	----	2.00	4.0
	STP	0.20	----	0.20	1.0
	Settling ponds	0.10	----	0.10	0.5
		Sub total	2.30	0.0	2.30
3.	Solid waste Management				
	Solid waste Storage	0.10	0.10	0.20	2.5
	Solid waste Handling & disposal	0.30	0.10	0.40	20.0
		Sub total	0.40	0.20	0.60
4.	Greenbelt development, Landscaping Noise Management	0.30	0.20	0.50	20.0
5.	Occupational Health & Safety (including Dispensary with Ambulance facility)	0.80	0.20	1.00	30.0
TOTAL		14.18	9.32	23.5	134

38.1.13 Greenbelt will be maintained in 16 ha of total land. Total number of plants will be 15,600 @ 2500 nos. of plants per hectare as per MoEF&CC norms.

38.1.14 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.

38.1.15 Name of the EIA Consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No.132 in the List of ACOs and NABET certificate vide no. NABET/EIA/1922/RA0149 valid till 22-03-2022 Rev. 11, June 09, 2021].

38.1.16 During the course of meeting, the project proponent made a written submission on the following points:

- i. Revised action plan (para no. 38.1.11) to address the issues raised public hearing as per MoEF&CC O.M. dated 30/09/2020.
- ii. Commitment regarding development of green belt development in 35% percentage of the total area of 18.62 ha. This includes development of green belt development with a width of 25 meter all along the periphery of the plant boundary towards the Markandi river side.
- iii. Provision of closed sheds for the storage of all the raw materials with garland drain facility.

38.1.17 The proposal was considered by the EAC (Industry 1) in its 38th meeting held on 15-16th June, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

38.1.18 The Committee observed the following:

- i. Markandi river is flowing at a distance of 0.25 Kms from the project site. The elevation of the project site is 546 m & HFL of the Markandi river is 543.160 m above MSL as per the letter dated 22/12/2020 issued by Office of the Executive Engineer, WRD, Jagdalpur, Bastar District, Chhattisgarh. PP has proposed to set up a bund of 2m height alongside of the river of 650 m length. Further, green belt with a width of 25 meter is proposed all along the periphery of the plant boundary towards the Markandi river.
- ii. 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.
- iii. 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.
- iv. The EAC noted that the 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

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

A. Specific conditions

- i. No construction activity/infringement will take place in flood plain of Markhandi river located at a distance of 250 meters from the boundary of the plant site. HFL of Markhandi River is reported as 543.16 meters. Project proponent shall construct a 2 m high bund wall of 650 m length along the plant boundary.

- ii. Green belt shall be developed in 35% percentage of the total area of 18.62 ha. This includes development of green belt development with a width of 25 meter all along the periphery of the plant boundary towards the Markhandi river side.
- iii. Project proponent shall commence the activity at the site only after obtaining prior water withdrawal permission from Markhandi river from the Competent Authority. Ground water withdrawal is not permitted.
- iv. 100 % slag as well as ash generated from the project shall be used for brick manufacturing as committed by the project proponent.
- v. All the raw materials as well as finished products shall be stored under covered shed.
- vi. Project proponent shall monitor the water quality in the upstream and downstream of Markhandi river on quarterly basis. Compliance status in this regard shall be submitted to the concerned Regional Office along with the half yearly compliance report.
- vii. No storm water shall be discharged in to Markhandi river without prior treatment.
- viii. Particulate matter emission from all the stacks shall be less than 30 mg/Nm³.
- ix. No producer gas plant shall be installed at any stage.
- x. 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 two Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

- v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
- vii. Plant internal roads shall be concreted and a vacuum cleaner shall be used to regularly clean the roads.
- viii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- ix. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

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

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

VI. Waste management

- i. Used refractories shall be recycled as far as possible.
- ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused in melting Furnaces.
- iii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

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

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

IX. Environment Management

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

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, 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.

38.2 Expansion and modernization of Iron ore Crushing, screening capacity 1.2 MTPA to 1.5 MTPA and 1.5 MTPA Iron ore Beneficiation Plant by **M/s. Godawari Natural Resources Private Limited** located at Village Gidhali, Tehsil Dondi, **District Balod, Chhattisgarh** [Online Proposal No. IA/CG/IND/212836/2021 MoEF&CC File No. J-11011/48/2020-IA.II (I)] - **Amendment in Environment Clearance regarding specific condition no. ii and v**—regarding.

38.2.1 M/s. Godawari Natural Resources Private Limited has made an online application vide proposal no. IA/CG/IND/212836/2021 dated 26/05/2021 along with Form 4 and sought for amendment in Environment Clearance accorded by the Ministry vide letter no. J-11011/48/2020/IA.II(I) dated 18/05/2021.

Details submitted by the project proponent

38.2.2 M/s. Godawari Natural Resources Private Limited was accorded Environment Clearance by the Ministry on 18/05/2021 for Expansion and modernization of Iron ore Crushing, screening capacity 1.2 MTPA to 1.5 MTPA and 1.5 MTPA Iron ore Beneficiation Plant located at Village Gidhali, Tehsil Dondi, District Balod, Chhattisgarh.

38.2.3 The present proposal of PP is for seeking amendment in specific condition no ii and v of Environmental Clearance accord dated 18/05/2021.

38.2.4 Reason for the amendment:

S No	Reference of EC dated 18/05/2021	Description as per EC dated 18/05/2021	Description as per Proposal	Remarks
1.	Specific condition No. ii	Uniform green belt of 15-meter width shall be developed around the plant boundary (inner side) covering 33% of the plant area with a tree density of 2500 trees per hectare. A green belt of 30 m width shall be provided towards 1.36 ha land locked vacant land.	Uniform green belt of 15-meter width shall be developed around the plant boundary (inner side) covering 33% of the plant area with a tree density of 2500 trees per hectare. A green belt of 1 m width shall be provided around 1.36 ha land locked vacant land to the extent possible.	This is already an operating plant since last 10 years based on the consent from Chhattisgarh Environment Conservation Board. Internal Transport Road and laboratory building already exists and both are adjacent to the 1.36-hectare vacant land (Southern Side), and on the western side the land is not with the company. Hence, PP can get only one meter width area which can be developed as green belt.
2.	Specific condition No. v	Tailings from iron ore beneficiation plant shall be disposed in dry form after filtration in filter press/vac filters. Maximum storage of filtered cake permitted inside the plant shall be 15 days.	Tailings from iron ore beneficiation plant shall be disposed in dry form after filtration in filter press/vac filters. Maximum storage of filtered cake permitted inside the plant shall be 6 Months.	This is proposed as an emergency measure :- During the last year PP had observed complete lockdown during the major part of the year and the same is continuing now in the state of Chhattisgarh. This pandemic situation can continue, and in view of the same since we had already made a provision of 2-hectare land for storage of tailings so as to ensure that in case of emergency storage requirement PP can store material to the extent of 195000 Tons. This is equivalent to 86% (10.50 Months production) of the tailing that will be generated. In view of this on a safer side, PP requested to allow us storage of 6 months which is equivalent to 112500 MT which is almost 50% of the tailing that are likely to be generated.

38.2.5 No change in the plant Configuration and capacity granted in aforesaid EC has been proposed by PP.

38.2.6 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.

- 38.2.7 During the course of meeting, the project proponent made a written submission on the following points:
- i. Revised layout indicating green belt development in a width of 1 meter towards the 1.36 ha land locked vacant land.
 - ii. Optimized the time required for tailings storage from 6 months to 3 months.

38.2.8 The proposal was considered by the EAC (Industry 1) in its 38th meeting held on 15-16th June, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

- 38.2.9 The Committee noted that
- i. Project proponent is unable to develop 30 meters green belt all along the outer boundary of the 1.36 ha land locked vacant land due to the existence of road and laboratory building adjacent to the 1.36-hectare vacant land.
 - ii. Project proponent has requested enhance the time period for storage of tailings from 15 days to 3 months.

Recommendations of the Committee

38.2.10 In view of the foregoing and after deliberations, the Committee recommended for amendment in the specific condition ii and v of the EC dated 18/05/2021 as given below:

- ii. Uniform green belt of minimum 15-meter width shall be developed around the plant boundary (inner side) covering 40% of the project area with a tree density of 2500 trees per hectare. A green belt of maximum possible width shall be provided all along the outer boundary of 1.36 ha land locked vacant plot.
- v. Tailings from iron ore beneficiation plant shall be disposed in dry form after filtration in filter press/vacuum filters. Maximum storage of filtered cake permitted inside the plant shall be 90 days.

38.3 Brownfield project or enhancing the production capacity of sponge Iron from (2x100 TPD DRI)- 60,000 TPA to Sponge Iron (6x100 TPD DRI)- 200,000 TPA along with new set up of MS Billet 300,000 TPA and/or Rerolled Steel Products through Hot Charging 150,000 TPA and through Reheating Furnace 150,000 TPA; MS Black Pipe Mill 140,000 TPA, Galvanizing plant 100,000 TPA, Captive Power Plant 20MW (12MW through WHRB and 8MW through AFBC) and Fly Ash Bricks 69,300 TPA by **M/s. Kalindi Ispat Private Limited** located at Village- Belpan, Tahsil- Masturi, **District- Bilaspur, Chhattisgarh** [Online Proposal No. IA/CG/IND/213169/2021; file no: IA-J-11011/126/2021-IA-II(I)] – **Prescribing for Terms of Reference**– regarding.

38.3.1 M/s. Kalindi Ispat Private Limited has made an online application vide proposal no. IA/CG/IND/213169/2021 dated 27/05/2021 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 & Non-Ferrous) and 1(d) Thermal Power Plant under Category “A” of the schedule of the EIA Notification 2006.

Details submitted by Project proponent

38.3.2 The project of M/s. Kalindi Ispat Private Limited located at Village- Belpan, Tahsil- Masturi, District- Bilaspur, Chhattisgarh is for Brownfield project or enhancing the production capacity of sponge Iron from (2x100 TPD DRI)- 60,000 TPA to Sponge Iron (6x100 TPD DRI)- 200,000 TPA along with new set up of MS Billet 300,000 TPA and/or Rerolled Steel Products through Hot Charging 150,000 TPA and through Reheating Furnace 150,000 TPA; MS Black Pipe Mill 140,000 TPA, Galvanizing plant 100,000 TPA, Captive Power Plant 20MW (12MW through WHRB and 8MW through AFBC) and Fly Ash Bricks 69,300 TPA.

38.3.3 Environmental site settings:

SNo	Particulars	Details		Remarks
i.	Total land	25.619 ha [Private:25.619ha]		9.72Ha. land is already diverted for Industrial purposes which will be used for implementation of industrial activity. Remaining, area will also be diverted for Industrial use. Approx. 35% of the total land will be used as green belt area.
ii.	Existence of habitation & involvement of R&R, if any.	No		
iii.	Latitude and the Longitude of project site.	Point	Co-ordinates	
		A	21°47'21.20"N 82°13'57.62"E	
		B	21°47'10.88"N 82°14'26.08"E	
		C	21°47'27.84"N 82°14'3.36"E	
		D	21°47'22.12"N 82°14'20.76"E	
	E	21°47'21.19"N 82°14'8.18"E		
iv.	Elevation of the Project site	250- 257m.		
v.	Involvement of Forest land if any.	No.		
vi.	Water body exists within the project site as well as study area	Study area 1. Seonath River -4.8Km/W 2. KhorsiNala- 9.2 Km /S 3. Jamuniyan-4.8 Km /WSW 4. Arnaor Arpa River -6.5 Km/NW		

SNo	Particulars	Details	Remarks
		5. Kurung Left Bank Canal-0.2 Km/N 6. Jalso Distributary-7.1 Km/NE	
vii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. If any within the study area	Study area Mohtara RF-9.7 Km-SSW	

38.3.4 The existing project was accorded Consent to Establish under Air Act and Water act by Chhattisgarh Environment Conservation Board (CECB); Raipur vide Ir. no. 2438/TS/CECB/2005 Raipur dated 03/06/2005. The unit was set up prior to EIA Notification 2006 with less than Rs. 100 Crores investment therefore EIA Notification 1994 was not applicable on the unit. Consent to Operate renewal for the existing unit is accorded by CECB vide Ir. no. 3892/TS/CECB/2018 dated 02/08/2018. The validity of CTO is up to 31.08.2021

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

S No	Name	Existing Units		Proposed Additional Units		Total (Existing + Proposed)	
		Configuration	Production TPA	Configuration	Production TPA/ MW	Configuration	Production TPA/ MW
1	Sponge Iron	DRI Klins, (2 x 100 TPD)	60,000 TPA	DRI Klins, (4x100TPD)	140,000 TPA	DRI Klins, (6x100 TPD)	200,000 TPA
2	Mild Steel Billet	-	-	Induction Furnace, 15 MT X 6 Nos along with LRF and CCM	300,000 TPA	Induction Furnace, 15 MT X 6 Nos along with LRF and CCM	300,000 TPA
3	Re Rolled Steel Products like; Structural Steel	-	-	Billet Reheating Furnace based Rerolling Mill will be about 455 TPD	300,000 TPA	Billet Reheating Furnace based Rerolling Mill will be about 455 TPD	300,000 TPA
4	MS Black Pipe or pipes	-	-	ERW pipe mill will be about 425 TPD	140,000 TPA	ERW pipe mill will be about 425 TPD	140,000 TPA
5	Galvanized Steel products	-	-	Galvanizing unit will be about 304 TPD	100,000TPA	Galvanizing unit will be about 304 TPD	100,000 TPA
6	WHRB Power Plant	-	-	WHRB from Sponge Iron	12 MW	WHRB from Sponge Iron	12 MW

S No	Name	Existing Units		Proposed Additional Units		Total (Existing + Proposed)	
		Configuration	Production TPA	Configuration	Production TPA/ MW	Configuration	Production TPA/ MW
7	AFBC Power plant	-	-	AFBC boiler	8 MW	AFBC boiler power generation from Char/ Dolochar & Coal	8 MW
8	Fly Ash brick	-	-	Fly Ash brick manufacturing facility	69300 TPA	Fly Ash brick manufacturing facility	69300 TPA

38.3.6 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

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Iron Ore	96,000	224,000	320,000	Odisha Iron Ore Mine and NMDC	Within 200 kms	By Rail to the nearest railway siding and then by Road through covered vehicles
2	Coal	78,000	182,000	260,000	SECL Coalmines / Open Market	Within 200 kms	By Rail to the nearest railway siding and then by Road through covered vehicles
3	Limestone/ Dolomite	3,000	7,000	10,000	Open Market	Within 200 kms	By Road through covered vehicles
4	Refractory Material	90	210	300	Open Market	Within 200 kms	By Road through covered vehicles
	Total	177,090	413,210	590,300			

For Induction Furnace (Steel Melting Shop)

S. No	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Sponge Iron	-	300,000.00	300,000.0	Captive production/ Local market	Within 200 kms	By Road through covered vehicles
2	Pig Iron /CI Scrap	-	37,113.00	37,113.00	Captive production/ Local market	Within 200 kms	By Road through covered vehicles/ Internally available
3	Melting Scrap	-	6,200.00	6,200.00	Captive production/ Local market	Within 200 kms	Internally available/ By Road through covered vehicles
4	Ferro Alloys	-	3,000.00	3,000.00	Captive production/ Local market	Within 200 kms	Internally available/ By Road through covered vehicles
5	Aluminum	-	300.00	300.00	Open Market/ BALCO	Within 200 kms	By Road through covered vehicles
6	Ramming Mass	-	750.00	750.00	Open Market	Within 200 kms	By Road through covered vehicles

S. No	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
7	Steel Sheet Former	-	75.00	75.00	Open Market	Within 200 kms	By Road through covered vehicles
8	Furnace Oil for Laddle Preheating	-	582.00	582.00	Open Market	Within 200 kms	By Road through covered vehicles
9	Calcined Lime for Refining of Liquid Steel	-	15,000.00	15,000.00	Open Market	Within 200 kms	By Road through covered vehicles
10	Fluorospar and other additives for de phos	-	3,000.00	3,000.00	Open Market	Within 200 kms	By Road through covered vehicles
11	Electrode (Graphite Carbon) for Arc Furnace*	-	600.00	600.00	Open Market	Within 200 kms	By Road through covered vehicles
	Total	-	366,620.00	366,620.00			

*It is proposed to set up LRF in which Graphite Carbon Electrodes will be used. If 100% capacity of hot metal is refined in LRF then 600 TPA is expected Graphite Electrodes are estimated to get consumed. Therefore, highest quantity was considered for the sake of the project economics and impact.

For Hot Charging Rerolling Mill

S No	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Hot Billets	-	153,062.00	153,062.00	Captive Production in Steel Melting shop	-	Internal Transfer
	Total	-	153,062.00	153,062.00			

For Reheating Furnace based Rerolling Mill

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Cold MS billet (Internally available)	-	146,938.00	146,938.00	Captive production as per requirement	-	Internal Transfer
2	Cold MS Billet (From outside)	-	6,062.00	6,062.00	Local market as per requirement	Within 200 kms	By Road through covered vehicles
3	Coal	-	18,000.00	18,000.00	SECL Coalmines / Open Market	Within 200 kms	By Rail to the nearest railway siding and then by Road through covered vehicles
	Total	-	171,000.00	171,000.00			

For Captive AFBC Power Plant (8 MW)

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Char Dolochar	-	60,000.00	60,000.00	Captive generation in SID	-	Internal Transfer
2	Coal	-	38,779.00	38,779.00	SECL Coalmines / Open Market	Within 200 kms	By Rail to the nearest railway siding and then by Road through covered vehicles
3	Fluidizing Bed Media	-	150.00	150.00	Open Market	Within 200 kms	By Road through covered vehicles
	Total	-	98,929.00	98,929.00			

Black Pipe Mill and Galvanizing unit

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	MS Strip	-	150,000.00	150,000.00	Captive generation from Billet Reheating Furnace	-	Internal Transfer.
2	Zinc	-	5,000.00	5,000.00	Open Market	Within 200 kms	By Road through covered vehicles
3	Lead	-	50.00	50.00	Open Market	Within 200 kms	By Road through covered vehicles
4	Furnace Oil	-	2,000.00	2,000.00	Open Market	Within 200 kms	By Road through covered vehicles
5	Acid	-	4,500.00	4,500.00	Open Market	Within 200 kms	By Road through covered vehicles
6	Lime for Treatment	-	2,500.00	2,500.00	Open Market	Within 200 kms	By Road through covered vehicles
	Total	-	164,050.00	164,050.00			

Fly Ash Brick Plant

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Fly Ash/ Coal Ash etc.	-	45,045.00	45,045.00	Internally available.	-	Internal Transfer
2	Gypsum and Cement	-	6,930.00	6,930.00	Open Market	Within 200 kms	By Road through covered vehicles
3	Granulated slag from Induction Furnace	-	17,325.00	17,325.00	Internally available.	-	Internal Transfer
	Total	-	69,300.00	69,300.00			

38.3.7 The water requirement for the project is estimated as **1680 m³/day**. **Total Yearly water requirement will be 1680 KLD * 330 days = 553,185 KLA**. Company will be using ground water for its existing use and construction activities. Company has applied to CG Water Resources department for allotment of Surface Water for its expansion purposes from its nearest sources. The company will be able to secure the allotment of Surface Water from its nearest source by the time construction of the expansion is completed. Till then the company

will continue to draw ground water for which it has obtained required permissions from CGWA. The permission for drawl of ground water is obtained for its existing requirement from CGWA vides Lr. No. CGWA/NOC/IND/ORIG/2020/8463 dated 19.08.2020.

38.3.8 The power requirement for the project is estimated as 37 MW, out of which 20MW will be obtained from the captive power plant and 17MW will be sourced through State Grid (CSPDCL).

38.3.9 The capital cost of the project is Rs 231. 9371 Crores (including existing cost & proposed CER) and the capital cost for environmental protection measures are proposed as Rs 3.01 Crores. The existing employment is 130, while additional employment from the proposed project/ expansion is 815 Nos. Total employment after expansion of the proposed project will be 945 Nos.

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

Attributes		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 and Benzopyrene & Heavy metals, Heavy metals: Ni, Pb, As	8	Monthly	
B. Noise	Sound pressure level (Leq)	8	Monthly (day time and night time)	
C. Water		16		
Surface water	As per IS: 10500	8	Once in a	
Ground water		8	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 the study area	3	Once in a year	
a. Aquatic	Aquatic Ecological Study 3 locations at Sivnath River and other River in study area			
b. Terrestrial				
F. Socio-economic parameters	Occupational Health monitoring of employees	1 (Project site)	Once in a year	

- 38.3.11 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.
- 38.3.12 Name of the EIA consultant: M/s. Anacon Laboratories Pvt. Ltd., Nagpur [S No. 63 vides Certificate no. NABET/EIA/1922/RA 0150; Valid till September 30, 2022. Rev. 11, June 09, 2021].
- 38.3.13 The proposal was considered by the EAC (Industry 1) in its 38th meeting held on 15-16th June, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

- 38.3.14 The EAC noted the following:
- i. Proposed rolling mill is designed for 50 % rolling of billets for manufacture of long products and 50 % rolling of strips for black pipe manufacture. Hot charging shall be done for billets and not for strip manufacture.
 - ii. 30 m green belt shall be provided towards Belpan village located at distance of 600 meter from the plant boundary.
 - iii. Acid fumes from pickling line shall be extracted, scrubbed and treated in ETP. Wash out from DM plant and CT blowdown shall also be treated in the same ETP.
 - iv. Zinc dross from galvanizing plant and dust collected from Bag filter of galvanizing section shall be sent to registered recyclers.
 - v. Graphite electrodes are meant for LRF.
 - vi. 1680 KLD water shall be drawn from river Sheonath.
 - vii. Baseline data collected during March – May, 2021. The selection of base line monitoring locations has not been carried out as per the meteorological condition exist at the site and the guidelines issued by the CPCB from time to time. In light of this, the Committee has not acceded to the request of proponent regarding use of baseline data collected during March – May, 2021 for EIA report preparation and opined that fresh baseline data shall be collected during post monsoon season of 2021.

Recommendations of the Committee

- 38.3.15 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:
- i. Fresh base line data shall be collected during post monsoon season of 2021 (1/10/2021 to 31/12/2021) and shall be used for preparation of EIA report. The data collected shall be in conformity with the meteorological data and CPCB guidelines.
 - ii. Action plan to limit the dust emission from all 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 Belpan village which is located at distance of 600m from the plant boundary.
 - v. Action plan for 100 % solid waste utilization shall be submitted.

- vi. Action plan for rain water harvesting shall be submitted.
 - vii. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
 - viii. Air Cooled condensers shall be used in Captive Power Plant.
 - ix. Scheme for use of surface water from Sheonath River shall be furnished for gradual phase out of ground water shall be submitted.
 - x. Scheme for acid fumes extraction from pickling line, scrubbing and treatment in ETP, including treatment of wash out from DM plant and CT blowdown shall be furnished.
 - xi. 4x100 TPD units are proposed for DRI. Possibility of using 1x350 TPD unit may be explored as the same would be more environment friendly and commercially viable.
- 38.4 Green field project of Iron Ore Beneficiation plant- 2x1.2 MTPA, Pellet plant- 2x 1.0 MTPA, DRI Kilns (8x600 TPD)- 1.68 MTPA, SMS facility with Induction Furnaces with LRF (12x20 T)- 0.84 MTPA, SMS facility (EAF) (1x40 T)- 0.14 MTPA, Rolling Mill through hot charging- 0.77 MTPA, Coke oven plant (Non recovery)- 0.245 MTPA, Sinter plant (1x52 m²)- 0.525 MTPA , Blast Furnace (1x250 m³)- 0.315 MTPA, Ferro Alloys (2x9 MVA)- 0.042 MTPA, Oxygen plant (1x200 TPD)- 0.07 MTPA, Lime plant (1x200 TPD)- 0.07 MTPA, Crusher (1x120 TPD)- 0.042 MTPA, Brick manufacturing unit 140 Million Bricks/year, WHRB based Power through DRI kilns- 120 MW & through BF- 6.0 MW) & CFBC based Power Plant of 2x20 MW) by **M/s. Shyam Steel Works (P) Limited** located at Raghunathpur Steel & Allied Industrial Park-II, Mouza- Lachhmanpur, Jarukhamar, Siulibari, Digardhi, Shikratyar, Senera, Block- Raghunathpur-I, **District- Purulia, West Bengal** [Online Proposal No. IA/WB/IND/213283/2021; file no: IA-J-11011/228/2021-IA-II(I)] – **Prescribing for Terms of Reference**– regarding.
- 38.4.1 M/s. Shyam Steel Works (P) Limited has made an application online vide proposal no. IA/WB/IND/213283/2021 dated 01/06/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToR 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) under Category “A” of the schedule of the EIA notification, 2006.
- 38.4.2 The proposed project site of M/s. Shyam Steel Works (P) Limited is located at Raghunathpur Steel & Allied Industrial Park-II, Mouza- Lachhmanpur, Jarukhamar, Siulibari, Digardhi, Shikratyar, Senera, Block- Raghunathpur-I, District- Purulia, West Bengal. The land for the project i.e. 242.81 ha is under the possession of West Bengal Industrial Development Corporation (WBIDC).
- 38.4.3 It was informed by the project proponent that Environment Clearance for the project site mentioned above was accorded by the Ministry vide letter no. J-11011/1283/2007-IA.II(I) dated 5/01/2010. However, the project activity could not be commenced due to financial issues. Subsequently, the land as well as EC was surrendered to WBIDC and MoEF&CC respectively.
- 38.4.4 Instant proposal is for setting up of a green field steel plant project in the land of 242.81 ha which was surrendered by the PP to WBIDC. However, the PP is unable to

explain the factual information regarding ownership of the land presently and no credible document has been made available in this regard.

Recommendations of the Committee

38.4.5 The land proposed for the project is yet to be allotted by the WBIDC to the proponent and the case for the ToR can be considered only after the assurance from WBIDC regarding allotment of land to the project proponent. In view of this, the Committee after deliberations, recommended to return the proposal in its present form.

38.5 Expansion of Coke production from 0.425 MTPA to 0.85 MTPA by installation of a new Stamp charge By-product Recovery Coke Oven Battery (COBP#2) along with 15 MW of power from CDQ in the existing steel plant by **M/s. Jindal Coke Limited at Kalinga Nagar, Odisha** [Online Proposal No. IA/OR/IND/213214/2021; file no: IA-J- 11011/281/2007-IA-II(I)] – **Amendment in Terms of Reference– regarding.**

38.5.1 M/s. Jindal Coke Limited has made an online application vide proposal no. IA/OR/IND/212826/2021 dated 02/06/2021 along with Form 3 and sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. IA-J- 11011/281/2007-IA-II(I) dated 27/03/2021. The proposed project activity is listed at 4(b) Coke oven plants under Category “A” of the schedule of the EIA Notification, 2006 and the proposal is appraised at central level.

Details submitted by the project proponent

38.5.2 The standard ToR was issued for the Expansion of Coke production from 0.425 MTPA to 0.78 MTPA by installation of a new Stamp charge By-product Recovery Coke Oven Battery (COB#2) in the existing steel plant to M/s. Jindal Coke Limited on 27/03/2021. Now, PP is requested for amendment of Coke production from 0.425 MTPA to 0.85 MTPA by installation of a new Stamp charge By-product Recovery Coke Oven Battery (COBP#2) along with 15 MW of power from CDQ.

38.5.3 The configuration & capacity of units granted in TOR vis-à-vis the proposed modification is given below:

FACILITY	CONFIGURATION & CAPACITY		
	As per ToR granted	Proposed amendment	Total (After amendment)
Coke Oven Battery with By-product plant	64 ovens, 0.425 MTPA	64 ovens, 0.425 MTPA	2 x 64 ovens, 0.85 MTPA
Power from CDQ	-	15 MW	15 MW
Chimney	1 x 125 m	1 x 125 m	2 x 125 m
Gas Holder	Nil	50,000 Nm ³	50,000 Nm ³

FACILITY	CONFIGURATION & CAPACITY		
	As per ToR granted	Proposed amendment	Total (After amendment)
Booster Unit	2 nos, 10000 Nm ³ /hr	2 nos, 15,000 Nm ³ /hr	4 nos

38.5.4 Details of other changes in the proposed TOR modification are:

Reference of approved TOR	As per approved TOR	Proposed amendment	Remarks
Project Cost	Project cost was Rs. 270 Crores	Proposed project cost will be Rs. 470 crores.	CDQ will be installed.

38.5.5 The consultant also presented the locations of monitoring locations wherein baseline data for different environmental components have been collected.

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

38.5.7 Name of the consultant: M. N. Dastur and Company (Pvt.) Ltd. (S.No. 168, List of ACOs with their Certificate / Extension Letter no. Rev. 11, June 09, 2021)

Observations of the Committee

38.5.8 The Committee noted the following:

- i. Most of the sections in the revised Form I has not been filled in properly.
- ii. Locations of the monitoring stations wherein baseline data has been wrongly selected. There is no monitoring station has been set up at the project site at all.
- iii. Details of changes in by product capacity have not been furnished.
- iv. Details of By-product plant and BOD plant have not been furnished.

Recommendations of the Committee

38.5.9 In view of the foregoing and after detailed deliberations, the Committee recommended to return the proposal in its present form to address the shortcoming enumerated at para no. 38.5.8 above.

38.6 Any Other Item with the permission of the Chair: Existing project of 7 MTPA of Iron Ore Pellet Plant by **M/s. ArcelorMittal Nippon Steel India Limited** (Erstwhile M/s. Essar Steel India Limited) located at Scindia Road, **Vishakhapatnam District, Andhra Pradesh – Clarification on requirement of Environment Clearance for the proposed change of fuel from Low sulphur Heavy Stock (LSHS) to Natural Gas - regarding.**

38.6.1 This refers to the letter dated 9/04/2021 from M/s. ArcelorMittal Nippon Steel India Limited (Erstwhile M/s. Essar Steel India Limited) requesting MoEF&CC to issue clarification on the subject cited above based on the letter dated 06/01/2021 issued by the Andhra Pradesh Pollution Control Board (APPCB).

38.6.2 In this regard, MoEF&CC has referred the proposal before the Expert Appraisal Committee (EAC) for consideration. The project proponent has been invited to make a presentation before the EAC. Accordingly, the project proponent made a presentation before the EAC and the details are summarized as below.

- i. Project proponent has established initially 4 MTPA iron ore pellet plant during 1991 after obtaining Consent To Establish (CTE) from APPCB on 12/07/1991. Thereafter, the plant was commissioned after obtaining Consent To Operate (CTO) from APPCB on 30/10/1997. Total land area of the project is 110 acres.
- ii. Project proponent has undertaken following expansion activity during 2001 to 2006 at Scindia road, Visakhapatnam District, Andhra Pradesh

Activity undertaken	CTE from APPCB	CTO from APPCB	Requirement of EC	Clarification from MoEF&CC
Expansion of Iron ore pellet plant from 4 to 7 MTPA	13/03/2001	12/05/2006	Nil	MoEF&CC vide letter dated 7/12/2000 clarified that activity of pelletization plant will not fall under Schedule I of the EIA Notification, 1994.
25 MW coal-based power plant	19/09/2003	12/05/2006	Nil	MoEF&CC vide letter dated 13/05/2004 clarified that 25 MW CPP does not require EC under the provisions of EIA Notification, 1994 as the investment for the project was less than INR 100 crores

- iii. As per the Ministry's circular dated 21/11/2006, the projects which are attracting the provisions of EIA, 2006 for which NOC issued before 14/09/2006 are not required to take Environment Clearance under the provisions of EIA Notification, 2006. In the instant case, the proponent has obtained CTE as well as CTO prior to 14/09/2006, hence EC has not been obtained by the PP under the provisions of EIA Notification, 2006.
- iv. As per the provisions of EIA, 2006, Iron ore pellet plant falls under primary metallurgy industry under schedule 3(a) and requires prior environment clearance from MoEF&CC.

- v. Project proponent continued the operation of iron ore pellet within the consented capacity of 7 MTPA and 25 MW CPP from 2006-2020 based on the periodic CTO renewal obtained from APPCB. Recent CTO renewal was accorded by APPCB on 28/03/2020 and is valid up to 31/12/2024.
- vi. Meanwhile, through Corporate Insolvency Resolution Process, the company management changed from M/s. ESIL to M/s. AM/NS India.
- vii. Present proposal of PP is for change of fuel from Low Sulphur Heavy Stock (LSHS) to Natural Gas without enhancing the iron ore pellet in the 7 Million Tons Per Annum (MTPA) Iron ore pellet plant. Due to this fuel change, PP reported that there will be substantial reduction in emission levels of SO₂ (9TPD to 0.0057TPD).
- viii. The project proponent has sought for clarification regarding applicability of Environment Clearance for the change of fuel from LSHS to Natural Gas based on the condition prescribed by the APPCB in their CTE dated 6/1/2021 which states that “the industry shall inform MoEF&CC regarding change of fuel and obtain a clarification from MoEF&CC whether EC is required for change of fuel. If required, the industry shall obtain EC from MoEF&CC”.
- ix. Salient features of the fuel change proposal
 - GAIL is laying a dedicated natural gas pipe line from Kakinada to vizag with an investment of Rs. 650 Cr
 - A tap off from main trunk line which is around 18km away from the plant is being laid by GAIL to the AM/NS plant boundary with an investment of Rs.45 Cr.
 - No additional land required
 - No storage of natural gas. It is only piped natural gas received from GAIL.
 - No additional water required.
 - No new facilities are coming up except gas burners, burner management systems, Safety installations
 - Pipe line laying from GAIL PRS to inside the plant.
 - No change in production capacities.
 - Obtained Factories approval for the fuel change project from Director of Factories, Govt. of AP and got approval from Greater Visakhapatnam Municipal Corporation
 - Substantial reduction in pollution loads in terms of SO₂, NO_x & CO₂.
 - Change of fuel cost is Rs. 10 Crores

Observations of the Committee

38.6.3 The Committee noted the following:

- i. Project proponent has established initially 4 MTPA iron ore pellet plant during 1991.
- ii. As per the MoEFCC notification dated 27th January, 1994, the criteria adopted for the applicability for Environment Clearance (EC) was investment i.e., if the investment is more

than INR 100 Crores for new projects and if the investment is more than 50 crores for expansion would require EC from MoEF&CC.

- iii. In the instant case under consideration, project proponent is operating 7 MTPA iron ore pellet plant and 25 MW coal based captive power plant based on the consents obtained from Andhra Pradesh Pollution Control Board (APPCB). At the time expansion of iron ore pellet plant from 4 to 7 MTPA and installation of 25 MW coal based captive power plant, project proponent obtained separate clarifications from MoEF&CC on 8/12/2000 and 13/05/2004 regarding applicability of Environment Clearance under the provisions of EIA, 1994. The Committee opined that PP could have possibly sought the said clarification as an integrated project and EC could have been obtained under the provisions of EIA, 1994.
- iv. As per the Ministry's circular dated 21/11/2006, the projects which are attracting the provisions of EIA, 2006 for which CTE were issued before 14/09/2006 are not required to take Environment Clearance under the provisions of EIA Notification, 2006. In the instant case, the proponent has obtained CTE as well as CTO prior to 14/09/2006, hence EC has not been obtained by the proponent under the provisions of EIA Notification, 2006. However, the Hon'ble National Green Tribunal vide its judgement dated 27/05/2014 in Appeal No. 5 2014: M/s. Ardent Steel Limited Vs MoEF & Ors given the following directions with respect to iron ore pellet plant: -
 - i. That Standalone Pelletization Plants require prior EC under the EIA Notification 2006 and that Pelletization falls under the phrase "*primary metallurgical industry*".
 - ii. MoEF&CC and all the State Pollution Control Boards to take steps immediately, ensuring the stand alone pelletization plants to obtain environmental clearance from the concerned authorities.
- v. MoEF&CC/ State Pollution Control Boards to examine the possibility, whether such units should be permitted to operate during the interregnum of applying for environmental clearance and grant/refusal of the same by the competent authorities in accordance with law.
- vi. In pursuance to the aforementioned judgement of Hon'ble NGT, MoEF&CC vide letters dated 25/06/2014, 15/07/2014, 18/07/2014, 8/09/2014 and 21/08/2015 asked all the State Pollution Control Boards to take necessary action in the matter and extended the time frame for obtaining Environment Clearance for all the stand alone pelletization plants till 7/09/2016. Further, MoEF&CC vide S.O. 2572 (E) dated 14/09/2015 exempted "all standalone pelletization plants, which were in existence and in operation on or before the 27/05/2014 and have valid consent to establish and consent to operate from the concerned State Pollution Control Board or the Union Territory Pollution Control Committee" from the public consultation process for obtaining Environment Clearance under the provisions of EIA, 2006. However, the PP, in this case, has not taken any action to obtain the EC from MoEF&CC and continued to operate the plant based on CTO obtained from APPCB from time to time. In view of this, the Committee opined that the existing 7 MTPA iron ore pellet plant along with the 25 MW CPP has not applied for EC within time period prescribed by MoEF&CC.

- vii. The existing 7 MTPA iron ore pellet plant and 25 MW CPP has never undergone through EC process under the provisions of EIA, 1994 and 2006. The unit is located in a Bowl area (the area between Yarada hill range in the south to Simhachalam hill range in the north and sea on the east and the present NH-5 in the West direction) which has been identified by a Central Pollution Control Board as an Other Polluted Areas.
- viii. The instant proposal involves change of fuel from LSHS to Natural Gas which is basically resulting in change in scope of the project. In view of this, APPCB has asked the PP to seek clarification from MoEF&CC.

Recommendations of the Committee

- 38.6.4 In view of the foregoing and after deliberations, the Committee recommended the following:
- i. As per the provisions of EIA 2006, iron ore pellet plant falls under primary metallurgy industry under schedule 3(a) and requires prior environment clearance from MoEF&CC. Further, in pursuance to the judgment of Hon'ble NGT dated 27/05/2014, all standalone pellet plants require EC under the EIA Notification, 2006 which were in existence and in operation on or before the 27/05/2014 and have valid consent to establish and consent to operate from the concerned State Pollution Control Board or the Union Territory Pollution Control Committee by 7/09/2016.
 - ii. With respect to proposed fuel change from LSHS to Natural Gas in their 7 MTPA iron ore pellet plant, the same would be considered while considering their proposal for grant of EC under the provisions of EIA, 2006 as the unit has never undergone EC process and the unit has been operating in a polluted bowl area.
 - iii. In view of the above, the Committee is of the considered view that in the first instance, the project proponent should obtain Environment Clearance under the provisions of EIA, 2006 as had been the case of such pellet plants who had obtained EC as per the Hon'ble NGT judgement dated 27/05/2014. Since, the window period given by the MoEF&CC for one year and subsequently extended for another one year i.e. up to 7/09/2016 has expired, the MoEF&CC may take appropriate decision whether the EC process may be initiated in the instant case beyond the expiry of the aforesaid window period. The MoEF&CC may also take a call as to whether the exemption from public hearing would apply to the Project Proponent in case it is decided to initiate the EC process.

16th June, 2021

- 38.7 Expansion in Ferro Alloys Plant furnace capacity from 6x9 MVA to 9x9 MVA to produce Ferro Manganese and silico manganese by **M/s. Berry Alloys Limited**, located at Plot No 368 and 368A, APIIC Growth Center Bobbili (Mandal), **Vizianagaram (District) Andhra Pradesh** - [Online Proposal No. IA/AP/IND/204152/2019, File No. J-11011/1129/2007-IAII(I)] – **Environment Clearance – regarding.**

- 38.7.1 M/s. Berry Alloys Limited has made an online application vide proposal no. IA/AP/IND/204152/2019 dated 09/06/2021 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 & non-ferrous) Under Category “A” of the schedule of the EIA Notification, 2006 and appraisal at Central Level.

Details submitted by the project proponent

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

Date of Application	Consideration	Details	Date of Accord
06/10/2019	12 th meeting of Re-EAC held on 21-23 rd October, 2019	Terms of Reference	11/12/2019

- 38.7.3 The project of M/s. Berry Alloys Limited (BAL) located in Bobbili Village, Bobbili Tehsil, Vizianagaram District, Andhra Pradesh State is for setting up of a new 3x9 MVA submerged electric Arc furnace for production of additional Ferro Manganese– 86400 TPA (OR) Silico Manganese– 72000 TPA (OR) Synthetic Slag – 72000 TPA/ enhancement of production of Ferro Manganese from 129600 TPA to 216000 TPA, Silico Manganese from 108000 TPA to 180000 TPA.

- 38.7.4 Environmental site settings

S No	Particulars	Details
i	Total land	8.84 ha [Private: 3.41 ha; Govt: 5.43 ha] Land use: Industrial
ii	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Land has been allotted by APIIC Growth Center to the project proponent.
iii	Existence of habitation & involvement of R & R, if any	NA
iv	Latitude and Longitude of the project site	Latitude
		18°32'21.53"N
		18°32'28.09"N
		18°32'27.70"N
		18°32'30.34"N
		18°32'29.66"N
	Longitude	
	83°20'31.05"E	
	83°20'31.65"E	
	83°20'39.77"E	
	83°20'40.33"E	
	83°20'46.91"E	
	83°20'42.72"E	
v	Elevation of the project site	123 m AMSL
vi	Involvement of Forest land if any.	Status of stage I Forest Clearance: NA
vii	Water body exists within the project site as well as study area	Project site: Nil Study area Vegavati River – 1.6 KM, S
viii	Existence of ESZ/ ESA/ national	Nil

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

38.7.5 The existing project was accorded EC dated 28/08/2018 for expansion of Ferro alloy unit (4x9 MVA to 6x9MVA) for production of Ferro Manganese (129,600 TPA) or Silico Manganese (108,000 TPA) or Ferro Silica (25,200 TPA) or Ferro Chrome (36,000 TPA). Consent to Operate for the existing unit is accorded vide Ir. no. APPCB/VSP/VZM/160/HO/CFO/2019 dated 15.02.2019. The validity of CTO is up to 31.08.2022.

38.7.6 Implementation status of the existing EC dated 28/08/2018:

S No	As per EC dated 28/08/2018		Implementation status as on 09/06/2021	Production as per CTO
	Facility	Configuration		
1.	Electric Arc Furnace	6x9 MVA	5 x 9 MVA Completed 1x9 MVA under installation	5x9 MVA Electric Arc Furnace

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

S No	Name	Existing Units		Proposed Units		Total (Existing + Proposed)	
		Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
1	Ferro Manganese	6x9 MVA	129600 TPA or	3x9 MVA	86400 TPA or	9x9 MVA	216000 TPA or
2	Silico Manganese	6x9 MVA	108000 TPA or	3x9 MVA	72000 TPA or	9x9 MVA	180000 TPA or
3	Ferro Silica	6x9 MVA	25200 TPA or	3x 9 MVA	-	9x9 MVA	25200 TPA or
4	Ferro Chrome	6x9 MVA	36000 TPA	3x9 MVA	-	9x9 MVA	36000 TPA or
5	Synthetic Slag	6x9 MVA	-	3x9 MVA	72000 TPA	9x9 MVA	72000 TPA

38.7.8 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 (TPA)	Source	Distance from site (km)	Mode of transportation
A. Ferro Manganese					
1.	Manganese Ore (with Average Mn 44%)	2.1 – 2.4	Ore & Metal Company Ltd./ Open Market	100-300	Road
2.	Coke (with average Fixed Carbon 80%)	0.30			
3.	Coal (with average Fixed Carbon 60%)	0.30			
4.	Dolomite	0.20			
B. Silico Manganese					
1.	Manganese Ore (with	2.5 – 2.8	Ore & Metal	100- 300	Road

S No	Raw Material	Quantity (TPA)	Source	Distance from site (km)	Mode of transportation
	Average Mn 44%)		Company Ltd./ Open Market		
2.	Coke (with average Fixed Carbon 80%)	0.40			
3.	Coal (with average Fixed Carbon 60%)	0.40			
4.	Dolomite	0.20			
5.	Quartz	0.20			

38.7.9 The existing unit requires 90 KLD of water and third phase (proposed phase) requires 50 KLD of water. Total initial water requirement for the project will be 140 KLD. This requirement will be met from APIIC Growth Centre.

38.7.10 The power requirement for the project is estimated as 62000 kVA (existing 38000 kVA and additional 24000 kVA), and will be obtained from Eastern Power Distribution Company of Andhra Pradesh Limited.

38.7.11 Baseline Environmental Studies

Period	October 2019 to December 2019				
AAQ parameters at 8 locations	PM _{2.5} = 21.66 to 29.88 µg/m ³ PM ₁₀ = 54.55 to 69.64 µg/m ³ SO ₂ = 11.96 to 18.26 µg/m ³ NO ₂ = 17.32 to 23.52 µg/m ³ CO = 0.19 to 0.47 mg/m ³				
AAQ modelling	PM ₁₀ = 69.64 to 73 µg/m ³ NO _x = 23.52 to 34.65 µg/m ³				
Ground water quality at 8 locations	pH: 6.79 to 7.52, Total Hardness: 216.2 to 441.6 mg/l, Chlorides: 39.77 to 765.08 mg/l, Fluoride: 0.98 to 1.32 mg/l. Heavy metals are within the limits.				
Surface water quality at 4 locations	pH: 7.09 to 8.16; DO: 7.1 to 7.9 mg/l; BOD: 1.1 to 1.30 mg/l; COD from 4.80 to 5.40 mg/l.				
Noise levels	45.0 to 65.8 dBA for the day time and 32.4 to 44.7 dBA for the Night time.				
Traffic assessment study findings	Material	Quantity (TPD)	Capacity of Trucks (Tonnes)	Number of Trucks/Day	PCU
	Existing				
	Raw	1134	30	38	114
	Finished	393	30	13	39
	Proposed				
	Raw	567	30	19	57
	Finished	197	30	7	21
Total			77	231	
Flora and fauna	No Schedule-I species is present in study area.				

38.7.12 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 (TPD)	Mode of treatment/ disposal
1	Slag	Plant	360	Sold to Brick Manufacturing
2	Dust	from filter bag	3.5	Reuse inside plant
3	Kitchen Waste (@ 0.2 kg/p/d)	--	44.0 kg/day	Bio digester will be provided
4	Used oil KL/Annum	--	1.0	Sold to Authorized Vendor

38.7.13 Public Consultation:

Details of advertisement given	25/12/2020
Date of public consultation	29/01/2021
Venue	Near Plant Site
Presiding Officer	District Collector
Major issues raised	i. Pollution control and Plantation. ii. Employment to local people. iii. Water Pollution iv. Skin problems due to pollution. v. Company not complying the existing norms

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	<p>Sri Chukka Jagan Mohan Rao, M. Burjavalasa, stated that earlier permissions were issued to the industry based on the industry promises, but the same was not fulfilled by them. He also stated while going for expansion in the 2018, the industry gave the same promises regarding pollution control and plantation, but not fulfilled till now. He further stated that the industry is not operating the pollution control devices from 10 p.m. to 6 a.m., not carrying out plantation, causing dust nuisance, not giving jobs to local people and asked to show them the place of existing plantation in the 15 acres, to show the pollution control devices being used and the local villagers for whom they have</p>	<p>Industry had fulfilled the applicable Norms and installed high efficiency bag filter to control the emission below 30 mg/Nm³. Online monitoring system were installed and connected to SPCB online server. We are continuously operating all APC Device. Industry is ensure to implement the same management practices in proposed units. More than 33% of the existing area has been developed as greenbelt. For future expansion additional greenbelt will</p>	<p>EMP Cost INR - 3.0 crores is earmarked for Air Pollution Control</p> <p>EMP Cost - INR 0.20 crores is earmarked for Greenbelt Development</p>	<p>Before COD of the plant</p> <p>Within a Year</p> <p>Within a year</p>

S No	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget Rs Lacs	Target date for implementation of action plan
	<p>given jobs from the villages viz., M. Burjavalasa, Mettavalasa, M. Panukavalasa & Bunathotavalasa. He expressed his grief stating that this area might become another Eluru regarding ground water pollution. He stated to rehabilitate the villages and then give permissions. He suggested postponing the public hearing and ensuring that they are complying with all the norms, as life is more important than job.</p>	<p>be provided. More than 75% of the workers are from local villagers in project. No ground water utilized in the project and we are operating our project on zero discharge norms. Berry Alloys project comes under APIIC Growth center (notified industrial area) and some part of Pvt. land. No R & R involved in this project.</p>	<p>EMP Cost - INR 0.75 crores is earmarked for water Pollution management</p>	
2	<p>Sri. Adapa Krishna Rao, S/o. Balarama Swamy, Mettavalasa, informed that out of 1200 acres of APIIC lands, >800 acres was given from Mettavalasa village, but named the area as Bobbili growth center and suggested to carry out public hearing in the surrounding villages. He asked that through there is a Government GO of giving jobs to 75% to the local villagers, how many local villagers & outsiders are existing in the earlier industries and asked whether they have displayed the names of the local people for whom they have given jobs. He stated that two of the industries near the hill are emitting pollution, due to which they are facing skin problems and also stated that the water in a nearby tank is in black colour. He also questioned the management to explain the amount spent through CSR and suggested the management that 75 out of 100 jobs to be given to local unemployed villagers and ensure the pollution free system to the surrounding villagers.</p>	<p>More than 75% of the workers are from local villagers in project. For proposed unit State Government Norms will be followed for employment and preference will be given to local villagers. Under CSR Activity following activities done by BAL: I. Organization of Eye Camp in the Village Panukuvalasa. II. Provided drinking water facility in village Burjavalasa. III. Supplied desk to School (village Burjavalasa). IV. Plantation in Village Mettavalasa. V. Provided water supply to Village Panukuvalasa with 32 outlets with 10 KL tank Industry installed the APC equipment and ensures to implement the best management practices to reduce the air pollution.</p>	<p>INR – 30.0 Lakhs is earmarked for CSR Activity</p>	<p>Within 2 years</p>
3	<p>Sri. Puvval Madhavarao, Sarpanch, Mettavalasa, opined that the public hearing is just a</p>	<p>For proposed unit State Government Norms will be followed for</p>	<p>-</p>	

S No	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget Rs Lacs	Target date for implementation of action plan
	formality and stated that he has attended so many public hearings and gave suggestions, but nothing seems to be changed and welcomed the revolution came within the villagers. He informed that they have given 2000 acres of land, but giving jobs to 1% of the local villagers only after pursuing several times and also stated that they are facing pollution problems from all the existing industries.	employment and preference will be given to local villagers. Industry installed the APC equipment and ensures to implement the best management practices to reduce the air pollution.		
4	Sri. Singireddy Gopalam, S/o. Suryanarayana, CPM, M. Burjavalasa , informed that the people in the nearest 4 villagers have negative impression and they have taken a stand that expansion would be permitted only after completing the existing norms. He stated that if the industry needs to be in good condition, the villagers are to be in good condition. He expressed his grief that the industries are not giving minimum wages, not carrying out CSR activities and not allowing them to form unions and suggested not to give permission for expansion and suggested to issue expansion only after complying with the existing norms.	We are complying all statutory norms. Further we assure you that we will provide the high efficiency APC system. We are providing wages to all workers as per the Government Norms. We are continuously doing CSR Activities in nearby villages.	EMP Cost – INR 4.65 crores is earmarked for pollution control INR – 30.0 Lakhs is earmarked for CSR Activity	Before COD of the Plant With in 2 years
5	Sri YedlaApparao, S/o Rajayyanaidu, Gunnathovalasa, M.Burjavalasa , stated that so many people have expressed their views and informed that problem is being faced by other villages along with Mettavalasa. He suggested the management to implement latest technology to control pollution solve water problem in the villages, carryout sprinkling for dust control and increase the plantation. He suggested the management to take care of the problems of the villages, as the industries will be good if the people around are good.	Industry had fulfilled the applicable Norms and installed high efficiency bag filter to control the emission below 30 mg/Nm ³ . Online monitoring system were installed and connected to SPCB online server. We are continuously operating all APC Device. Industry is ensuring to implement the same management practices in proposed units. More than 33% of the existing area has been developed as greenbelt.	EMP Cost – INR 4.65 crores is earmarked for pollution control	Before COD of the Plant

S No	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget Rs Lacs	Target date for implementation of action plan
		For future expansion additional greenbelt will be provided. Water sprinkling is in place to control the dust pollution		
6	Sri T. Appalanaidu, S/o Atchiyya, M. Burjavalasa , stated that children are facing lot of health problems and the same was appraised to Collector. He stated that there is no safety to the workers and management are not providing Personal Protection Equipment kits and suggested to give permission for expansion only after controlling the pollution of the existing activity	Industry will take up the medical camps and regular health checkups in the nearby villages. Frequent Environmental monitoring will be carried out in the study area. Industry had fulfilled the applicable Norms and installed high efficiency bag filter to control the emission below 30 mg/Nm ³ . Industry is ensuring to implement the same management practices in proposed units. More than 33% of the existing area has been developed as greenbelt. For future expansion, additional greenbelt will be provided.	EMP Cost – INR 4.65 crores is earmarked for pollution control	Before COD of the Plant
7	Sri B. Chandra Rao, M. Palavalasa , stated that the same questions are being raised in all the public hearings and stated that one should not oppose the industries to see the development and also stated that the management has to control pollution, take care of villagers health and give jobs to the local people, as health is more important than jobs.	We welcome the suggestion and ensure that we will fulfilled the applicable Norms and installed high efficiency bag filter to control the emission below 30 mg/Nm ³ . We are continuously operating all APC Device. More than 33% of the total area will be developed as green belt. Industry will take up the medical camps and regular health checkups in the nearby villages.	EMP Cost – INR 4.65 crores is earmarked for pollution control	Before COD of the Plant
8	Sri A. Adinarayana, M. Punukovalasa , informed that he used to work in an industry and now lost his job, as the industry is under shutdown. He stated that	We assure that Advance technology will be adopted to control the pollution. Project in notified	EMP Cost – INR 4.65 crores is earmarked for pollution control	Before COD of the Plant

S No	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget Rs Lacs	Target date for implementation of action plan
	he is cultivating tomatoes and the crop is being damaged due to pollution. He stated that the present number of industries is enough and they don't need more.	industrial area and there is no agriculture filed near by the industry		

38.7.14 The capital cost of the project is Rs 4.95 Crores and the capital cost for environmental protection measures is proposed as Rs. 4.95 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 0.61 Crores. The employment generation from the proposed project/ expansion is 220. The details of cost for environmental protection measures is as follows:

S. No	Item	Capital Cost (Rs. Lakhs)	Recurring Cost per annum (Rs. Lakhs)
1	Air Pollution Control <ul style="list-style-type: none"> • Bag Filters • Dust Management System • Online Monitoring System 	300	20.0
2	Water Pollution Control <ul style="list-style-type: none"> • STP • Rain Water Harvesting • Drainage 	75	5.0
3	Noise Pollution Control	25	2.5
4	Environment Monitoring and Management	10	6.5
5	Occupational Health	10	7.0
6	Greenbelt	20	3.0
7	Salary of EMP staff	0	10.0
8	Safety management	10	0.15
9	Laboratory and chemicals	15	2.0
10	Public hearing Issues related cost	30	5.0
	Total	495	61.15

38.7.15 Greenbelt will be developed in 7.4 Acre which is about 33.9 % of the total project area. A 2m wide green belt, 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 3220 saplings will be planted and nurtured in 3.0 hectares in 1st year.

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

38.7.17 Name of the EIA consultant: M/s. Ampl Environ Pvt. Ltd. [S.No. 127, list of ACOs with their Certificate letter no. NABET/EIA/2023/IA0061 valid up to 13/08/2023; Rev. 11, June 09, 2021].

Certified compliance report from Regional Office:

38.7.18 The Status of compliance of earlier EC was obtained from Regional Office, Chennai vide letter no. E.P./12.1/697/AP/1891 dated 06.12.2019 in the name of M/s. Berry Alloys Ltd. The Action taken report regarding the partially/non-complied condition was submitted to Regional officer MoEF&CC, Chennai vide letter no. Berry/Pollution/12-2019 dated 12.12.2019. Present status as furnished by the PP is given as below:

S No	Non-compliance details	Observation of RO (abridged)	Condition no.			Re-assessment by RO/ Response by PP
			EC date	Specific	General	
1	Continuous online Ambient Air Quality Monitoring system has not installed		Dated 28.08.2018		General Condition 4 (f)	Ambient Air Quality monitoring system is under installation.
2	Sewage Treatment Plant for domestic wastewater was not provided		Dated 28.08.2018		General condition 7 (b)	There is no waste water in our process, Domestic waste water will be sent to 3200 sq.m water harvesting pond.
3	The company has not installed solar light system for all common areas, street lights, villages, parking around project area		Dated 28.08.2018	specific condition no. xxiii		We Have already Installed solar lighting system in related area.
4	Advertisement were not given in two local news papers		Dated 28.08.2018		General condition no. xiv	Advertisement is given in two local newspapers and the cutting of newspapers submitted to RO Chennai
5	The status of compliance report was not uploaded on company's website and also not submitted to the RO, MoEFCC Chennai		Dated 28.08.2018		General condition xi	The status of compliance report submitted to RO, MOEFCC, Chennai.
6	Date of Financial Closure, final approval of the project and the date of commencing the land development was not intimated to RO, MOEFCC Chennai		Dated 28.08.2018		General condition 25.0	As the project was the under the existing premises only. There is no land development involved.
7	No Information was provided about		Dated 28.08.2018		General Condition	We are having industrial labour and

S No	Non-compliance details	Observation of RO (abridged)	Condition no.			Re-assessment by RO/ Response by PP
			EC date	Specific	General	
	public liability Insurance Act				No. 25.0	Public Liability Policy's.

38.7.19 The proposal was considered by the EAC (Industry 1) in its 38th meeting held on 15-16th June, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

38.7.20 The Committee noted the following:

- i. The signatures of all team members involved in EIA report preparation are scanned.
- ii. TOR point 9 pertaining to Corporate Environment Policy has not been addressed as per the TOR requirement.
- iii. TOR Point 11 pertaining to action plan to address the issues raised during public hearing as per MoEF&CC O.M. dated 30/09/2020 has not been furnished.
- iv. Raw Material requirement for existing units, solid waste generation and other details on existing units have not been addressed.
- v. Process details are available only for FeMn and SiMn only. No process details are made available for existing products and synthetic slag.
- vi. Details of Fume Extraction System(FES) for furnace and type of furnace are not available in the report.
- vii. Chapter 2 - The description is not as per Appendix III of EIA Notification 2006.
- viii. AAQ monitoring station locations as shown in Figure 3.2 are not as per the wind rose diagram shown in Figure 3.1 of the EIA report.
- ix. Total Suspended Solids (TSS) level in village ponds is varying between 2 mg/l to 8 mg/l. BOD between 1.1 to 1.3 mg/l and COD between 4.8 to 5.4 mg/L. Analytical results indicate the data has not been collected properly.
- x. Noise levels have been monitored from 5.5 to 7.0 Km from plant site. No explanation is available for selection of noise sampling stations far away from the project site.
- xi. EB section presents the inventory of biodiversity of the study area. No analysis or interpretation of data with respect to the importance of biodiversity to the area studied and the potential impact of the project on the same has been done.
- xii. 40 Villages have been covered in SE study in 10 km area. The report mentions that EIA was carried out in three different stages i.e.,- Desk Research, Data Analysis and Report Preparation. In the report only demographic profile is available. Data Analysis and interpretation of data could not be found.
- xiii. Worst case scenario AAQ modelling has not been done.
- xiv. Chapter 10 does not give quantified EMPs to be implemented in time bound manner indicating budget provision for each EMP as required under the provisions of Chapter 10 Appendix III of EIA Notification 2006.
- xv. Action taken report of PP against the observed no-compliances of Regional Office has not been verified by the Regional Office.

Recommendations of the Committee

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

38.8 Modification/ enhancement of production capacity of steel melting shop from 3,31,500 TPA to 5,15,666 TPA after installation of additional 4x15 T Capacity furnaces within existing Steel Division by **M/s. SKS Ispat and Power Limited** located at Siltara, Tehsil & **District Raipur, Chhattisgarh** - [Online Proposal No. IA/CG/IND/6948/2006 File No. J-11011/99/2006-IAII(I)] – **Environment Clearance – regarding.**

38.8.1 M/s. SKS Ispat and Power Limited has made an application online vide proposal no. IA/CG/IND/6948/2006 dated 07/06/2021 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 and Non-ferrous) under Category “A.” of the schedule of the EIA Notification, 2006.

38.8.2 The project proponent vide email dated 16/06/2021 expressed their inability to participate in the meeting and requested to defer their case till further request from them.

38.8.3 It was apprised to the EAC to consider the proposal in the absence of proponent and their EIA consultant based on the records made available by them as per the Ministry’s O.M. dated 18/11/2020 pertaining to streamlining the process of grant of Environment Clearance. Accordingly, the proposal was considered by the EAC.

Details submitted by Project proponent

38.8.4 The detail of the ToR is furnished as below:

Date of Application	Consideration	Details	Date of Accord
17/10/2019	12 th meeting of Re-EAC held on 21-23 rd October, 2019	Extend validity of Terms of Reference	24/02/2020*
29/03/2016	9 th meeting of EAC held during 27-29 th July, 2016	Terms of Reference	20/10/2016

** Note: In pursuance to the MoEF&CC S.O. 221 (E) dated 18.01.2021 it is to submit that that “the period from the 1st April, 2020 to the 31st March, 2021 shall not be considered for the purpose of calculation of the period of validity of Terms of Reference granted under the provisions of this notification in view of outbreak of Corona Virus (COVID-19) and subsequent lockdowns (total or partial) declared for its control. Accordingly, the ToR for the project is valid till 19/10/2021.*

38.8.5 The project of M/s. SKS Ispat and Power Limited located at Siltara, Tehsil & District Raipur, Chhattisgarh is for Modification/ enhancement of production capacity of steel melting shop from 3,31,500 TPA to 5,15,666 TPA after installation of additional 4x15 T Capacity furnaces within existing Steel Division.

38.8.6 Environmental site settings:

S No	Particulars	Details	Remarks
i.	Total land	77.23 ha [Private land]	Private Industrial Land

S No	Particulars	Details	Remarks
ii.	Land acquisition details as per MoEF&CC O.M. Dated 7/10/2014	The land proposed is Private Industrial Land. It is already acquired by the company. Land Documents are attached in EIA-EMP report.	
iii.	Existence of Habitation & involvement of R&R, if any.	No R & R is involved in the project.	
iv.	Latitude and Longitude of the project site	Latitude: 21023°9.37"N to 21023°47.68"N Longitude: 81038°25.40"E to 81039°0.04"E	
v.	Elevation of the Project site	Project site located at 272 m above MSL (Flat Terrain)	
vi.	Involvement of Forest land if any.	No	
vii.	Water body exists within the project site as well as study area	Project site: None Study area River Kharun – 1.22 KM (W) Chokra Nala – 0.90 km (SW) River Lor – 8.43 km (WNW)	
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant Reserve etc. If any within the study area	Nil.	

38.8.7 The existing project was accorded environmental clearance accord dated 25/08/2006. renewal of Consent to operate for the existing unit is accorded by CECB dated 20/02/2020. The validity of CTO is up to 31/01/2023.

38.8.8 Implementation status of the existing EC:

S No	Facilities	Units	As per EC dated 25.08.2006	Implementation Status as on date	Production as per CTO
1.	Sponge iron	2,70,000 TPA, 2 x 100 TPD & 350 x 2 TPD Kiln	2,70,000 TPA	2,70,000 TPA	2,70,000 TPA
2.	Steel Billets production Unit (SMS)	3,31,500 TPA (4x12T Induction Furnace & 4x15T Induction Furnace)	3,31,500 TPA	3,31,500 TPA	3,31,500 TPA
3.	Palletization Plant	3,00,000 TPA	3,00,000 TPA	Not implemented	Not implemented
4.	Ferro Alloys	Ferro Alloy plant 29,400 TPA	29,400 TPA	29,400 TPA	29,400 TPA
5.	Structural/re-rolled products	Rolling Mill (4 Nos.) - 3,84,000 TPA	3,84,000 TPA	3,84,000 TPA	3,84,000 TPA
6.	Captive Power Plant (Total 85 MW)	Power Plant – Total 85 MW 25 MW WHRB and 2x30 MW CFBC & AFBC CPP.	85 MW	85 MW	85 MW
7.	Gasifier (5 Nos.)	Gasifier (5 Nos.) 5 x 8000 Nm ³ /Hr.			(5 Nos.)
8.	Oxygen/Nitrogen Plant	Oxygen/Nitrogen Plant – 170 NM ³ /Hr.			170 NM ³ /Hr

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

Existing Production capacity & configuration	Proposed modification/ enhancement	Total production capacity after modification / enhancement & configuration	Remarks
SMS – 3,31,500 TPA (4x12T Induction Furnace & 4x15T Induction Furnace)	SMS- 184166 TPA 4x15T Induction Furnace	SMS- 5,15,666 TPA (4x12T Induction Furnace & 8x15 T Induction Furnace)	Four more Induction Furnaces of (15T each) to be installed to achieve total production after expansion
Sponge Iron -2,70,000 TPA 2x100 TPD & 2x350 TPD Kiln	-	Sponge Iron- 2,70,000 TPA 2x100 TPD & 2x350TPD Kiln	No change at present
Rolling Mill (4 Nos.) - 3,84,000 TPA	-	Rolling Mill (4 Nos.) - 3,84,000 TPA	No change at present
Ferro Alloy – 29,400 TPA	-	Ferro Alloy – 29,400 TPA	No change at present
Power Plant – Total 85 MW 25 MW WHRB and 2 X 30 MW CFBC & AFBC CPP.	-	Power Plant – Total 85 MW 25 MW WHRB and 2 X 30 MW CFBC & AFBC CPP.	No change at present
Gasifier (5 Nos.) 5 x 8000 Nm ³ /Hr.	-	Gasifier (5 Nos.) 5 x 8000 Nm ³ /Hr.	No change at present
Oxygen/Nitrogen Plant – 170 NM ³ /Hr.	-	Oxygen/Nitrogen Plant – 170 NM ³ /Hr.	No change at present

38.8.10 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			Source	Distance from site (Kms)	Mode of Transportation
		Existing (TPA)	Expansion (TPA)	Total (TPA)			
1	Iron Ore	432000	0	432000	Odisha Iron Ore Mines and NMDC	Within 200 kms	By Road through covered truck
2.	Coal	351000	0	351000	SECL Coal Mines	Within 200 kms	By Road through covered truck
3.	Dolomite	6750	0	6750	Open Market	Within 200 kms	By Road through covered truck
4.	Sponge Iron	323213	179562	502775	From captive generation /open market	-	-
5.	Pig Iron	51343	28523.79	79867	open market	Within 200 kms	By Road through covered truck
6.	Scrap	18218	10121.07	28340	open market /captive generation	Within 200 kms	By Road through covered truck
7.	Ferro Alloys	3643	2023.88	5667	captive generation	Within 200 kms	-
8.	Coal	705840	0	705840	SECL	Within 200 kms	By Road through covered truck
9.	Char/ Dolochar				Captive generation in SID	Within 200 kms	By Road through covered truck
10.	Manganese Ore	51400	0	51400	Open Market	Within 200 kms	By Road through covered truck
11.	Manganese Slag	22030	0	22030	Open Market	Within 200 kms	By Road through covered truck

S No	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing (TPA)	Expansion (TPA)	Total (TPA)			
12.	Reluctance	22030	0	22030	Open Market	Within 200 kms	By Road through covered truck
13.	Quartz	7350	0	7350	Open Market	Within 200 kms	By Road through covered truck
14.	MS Rounds	2.94	0	2.94	Open Market	Within 200 kms	By Road through covered truck
15.	Billet	395520	0	395520	Captive Generation	Within 200 kms	By Road

38.8.11 The water requirement for the project is estimated as 4730 m³/day, including 397 m³/day (proposed expansion SMS 300 m³/day + proposed coal washery 90 m³+ 07 m³ for domestic purposes for additional manpower), Water requirement will be obtained from Kharun River. The proposed water requirement will be fulfilled through existing water allocation. The permission for drawl of surface water (4800 m³/day is obtained from WRD, Govt. of Chhattisgarh vide Lr. No.5425/315/JS/TS/OJP/03/D-4, Raipur Dated 16/11/2004.

38.8.12 The power requirement for the project is estimated as 85 MW, will be obtained from the waste heat recovery and captive coal-based power plant.

38.8.13 Baseline Environmental Studies

Period	15 th March to 15 th June, 2019
AAQ parameters at 8 locations	PM _{2.5} = 42 to 112.6 µg/m ³ PM ₁₀ =15 to 39.1 µg/m ³ SO ₂ = 8 to 23.1 µg/m ³ NO _x = 10 to 28.1 µg/m ³ CO= 0.176 to 0.234 mg/m ³
AAQ modelling (Incremental GLC)	PM ₁₀ (Incremental)= 3.2µg/m ³ SO ₂ (Incremental)= 15µg/m ³ NO _x (Incremental) =10.5µg/m ³
Groundwater quality at 8 locations	pH:7.55 to7.94; Total Hardness:196.4 to 607.3 mg/l, Chlorides: 0.12 to 0.24 mg/l, Fluoride: 16.28 to 88.92 mg/l. Heavy metals are within the limits.
Surface water quality at 4 locations	pH: 7.35 to 7.77; DO: 5.9 to 6.1mg/land BOD: from 5.18 mg/l to 8.96 mg/l; COD from 18 to 26.44 mg/l
Noise levels	49.8to73.6for the day time and 38.2 to 61.4 for the Night time.
Traffic assessment study findings	The LOS value from the proposed project may be “good” for highway which was earlier “good”. So the additional load on the carrying capacity of the concern roads is not likely to have any significant adverse effect.
Flora and fauna	No Rare, Endangered or Threatened (Schedule – I) species observed in the study area

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

S No	Type of Waste	Quantity generated (TPA)	Mode of Treatment /Disposal
1	Char- Dolo Char	197370	The Coal char due to rich calorific value is utilized as fuel in the Coal Based Power Plant.
2	Dust from DSE	3510	
3	Slag	67552.24	Slag is crushed at slag crusher and screened in order to isolate the metal & the metal is recycled and loose material is disposed for filling the low lying area & area development.
4	End Cutting Scrap	11520	Recycled to the Billet Plant
5	Slag	24931.2	Slag is crushed at slag crusher and screened in order to isolate the metal & the metal is recycled and loose material is disposed for filling the low lying area & area development.
6	Coal Ash	142402	Bottom ash is utilized for area development & filling low lying area.
7	Char Ash	183518	Fly is utilized for brick manufacturing and also part of it given to Cement Plants.

38.8.15 Public Consultation:

Details of advertisement given	The announcement notice of public consultation/hearing scheduled date and agenda was made public through print media advertisement and reflected in one of National English Daily and Two Hindi regional Newspapers (Hindi & English) Dainik Bhaskar (Hindi Newspaper) Dated 24/10/ 2020 The Times of India (English Newspaper) Dated 24/10/2020
Date of public consultation	25.11.2020
Venue	CSIDC Bhavan, Industrial Area Phase –II Siltara, Raipur
Presiding Officer	Shri. N R Sahu (Additional District Collector, Raipur) Dr. S K Upadhyay (Regional Officer) Chhattisgarh Environment Conservation Board, Raipur Other officials of CECB & Revenue Department Govt. of C.G
Major issues raised	i. Regarding Employment to locals. ii. Regarding CSR activities iii. Air pollution due to project iv. Water pollution v. Regarding greenbelt vi. Regarding Venue of PH

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.	Employment for local youth, Benefits to Local people by proposed expansion project	The company maintains local employment as per CG Industrial Policy. At present total Manpower 322 working in plant out of which 180 are local people. The proposed expansion will require additional 170 nos. manpower. Employment will be given to locals depending upon their qualification and experience.	-	Additional employment will be provided during implementation of expansion project.
2.	Air Pollution, Dust Emission on Roads	The company is having adequate Air Pollution Control equipment's like ESP, Bag Filters with Central Dust Collection System by which company is keeping Particulate emission less than 50 mg/Nm ³ as per existing norms. In the proposed expansion of SMS division also, all the pollution control equipment with high efficiency bag filter are proposed to be installed, thereby PM emission limit will be maintain less than 50 mg/Nm ³ for the entire project activity.	Existing EMP cost: Capital cost Rs. 10.15 Cr. & continues investing recurring expenditure/ annum more than Rs.1.5 Cr. Proposed Expansion EMP Cost: Capital : Rs 160 lakhs Recurring : Rs. 30.0 lakhs	Additional Mitigation measures will be implemented after grant of EC with immediate action
3.	Water Pollution	Total 12 water samples were collected from different locations and were analyzed as per the procedures specified in standard methods for the examination of water and wastewater published by American Public Health Association (APHA/IS 10500) and as per results most of the samples are Physico-chemically good. Whereas, all surface water samples were contaminated and water treatment followed by chlorination or disinfection treatment is needed before use for domestic purpose whereas groundwater samples were not bacteriologically contaminated.	Existing EMP cost: Capital cost Rs. 10.15 Cr. & continues investing recurring expenditure/ annum more than Rs.1.5 Cr. Proposed Expansion EMP Cost: Capital: Rs 160 lakhs Recurring: Rs. 30.0 lakhs	Additional Mitigation measures will be implemented after grant of EC with immediate action
	Many industries captured farmers land for the sake of greenbelt development.	The Company purchased private land directly from land owners after due registered deeds. SKSIPL has land area of 190.76 Acres including proposed land 02 acres (0.809 ha) within existing premises located in Siltara. Provision for 33 % green belt is made.	Capital Cost for Green Belt Development (Plantation and maintenance) is Rs. 5.0 Lakhs and Recurring cost Rs. 1 Lakhs	Time frame: Continuous process

S NO	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget, Rs Lacs	Target date for Implementation of action plan
4.	Why Public Hearing is organized at CSIDC Office.	The Public Consultation site selection is based on the suggestion by Additional District Collector. The CSIDC office of Siltara has ample place for people, considering social distancing issues in respect of COVID-19, sufficient parking space and easy approach to the site. The Project proponent does not have any role in site selection for public hearing.		Not required
5.	CSR Activities	The Company is an integrated steel plant and CSR activities are conducted regularly, which would continue as per regular guidelines of Revenue Officers of the district. Detailed social welfare activities are covered under Chapter 9 of EIA report for the past period whereas, for the year 2019-20 company had spent Rs. 19.20 lakhs for different CSR activities. Provision made towards organizing various religious and other activities in nearby villages. Provision made towards expenses to be done towards conservation of Environment Provision made towards expenses to be done for promoting Education. Provision made towards expense for promoting medical care in and around the plant premises.	EMP for Social and Infrastructure Development Capital Cost: 15:00 Lakhs for Rain Water Harvesting, Drinking Water facility including water filter, Sanitation Water, Greenbelt in 10 schools within study area	Timeframe: 3 years
6.	Minimum Wages; Equal work and Equal payment need to be provided irrespective of Male and Female; Accident Insurance should be provided on time.	Wages are being provided to labors as per prevailing norms of Govt.; Insurance of employees is also provided as per rules.		Not required
7.	Water sprinkling should be done 24 hours to control pollution.	Regular Water sprinkling is being carried within plant premises for dust suppression and it will be continue further after expansion.	Existing EMP cost: Capital cost Rs. 10.15 Cr. & continues investing recurring expenditure/ annum more than Rs.1.5 Cr. Proposed Expansion EMP Cost:	It is continuous process and will be continued after expansion also.

S NO	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget, Rs Lacs	Target date for Implementation of action plan
			Capital : Rs 160 lakhs Recurring : Rs. 30.0 lakhs	
8.	Development in nearby villages should be carried out through CSR fund; Company should construct a hospital where MBBS doctors appointed.	The Company is an integrated steel plant and CSR activities are conducted regularly, which would continue as per regular guidelines of Revenue Officers of the district. Health Checkup camps is being organized by the company and it will be continued in future also and records are maintained.	Existing medical facilities will be strengthened through CSR budget. EMP for Social and Infrastructure Development Capital Cost: 15:00 Lakhs for Rain Water Harvesting, Drinking Water facility including water filter, Sanitation Water, Greenbelt in 10 schools within study area	Timeframe: 3 years

38.8.16 The capital cost of the project is Rs. 1030 Crores (1000 Cr. Existing + 30 Cr. Proposed) and the capital cost for environmental protection measures is proposed as Rs 160 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 30 Lakhs. The employment generation from the proposed project / expansion is 492 (existing 322 + approx. proposed 170). The details of cost for environmental protection measures is as follows:

S. No.	Description of Item	EMP Cost (Rs. In lakhs)	
		Capital Cost	Recurring Cost
i.	Pollution Control during Construction Stage	2.0	-
ii.	Air Pollution Control Measures	40.0	4.0
iii.	Wastewater Management and Effluent Treatment Plant & Sewage Treatment Plant (Proposed – based on MBBR technology)	27.0	2.0
iv.	Environmental Monitoring Instruments and Laboratory	0.0	0.5
v.	Solid waste Management	2.0	0.5
vi.	Noise Reduction Systems	1.0	0.5
vii.	Occupational Health & Safety (Provision of PPE, Medical Examination)	8.0	5.0
viii.	Greenbelt Development (Plantation and maintenance)	5.0	1.0
ix.	Environmental Monitoring Program	0.0	9.0
x.	Socio-economic Welfare Measures	75.0	7.5
	Total	160.0	30.0

38.8.17 Green belt will be developed in 28.34 ha which is about more than 33% of the total project area. The alive plant inside plant boundary is 35,000 nos. of plant (60-65% survival rate) are

survived and forms part of thick green belt. A green belt, 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. 1000 saplings are proposed to be planted in addition to existing 65 acres Survived plantation.

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

38.8.19 Name of the EIA consultant: M/s. Anacon Laboratories Pvt. Ltd. Nagpur [S No 63 vides accreditation Certificate No: NABET/EIA/1922/RA0150 Valid till 30/09/2022; Rev. 11, June 09, 2021].

Certified compliance report from Regional Office

38.8.20 The Status of compliance of earlier EC was obtained from Regional Office, vide letter no. 5-73/2006(ENV)/97 dated 18/05/2021 in the name of M/s. SKS Ispat & power ltd. The Action taken report regarding the partially/ non-complied condition was submitted to Regional officer MoEF&CC, Raipur vide letter no. F. No. 5-73/2006 (ENV)/27 dated 24/02/21 MoEF&CC (RO), Raipur evaluated the same and has issued letter date 18.5.2021. The details of the observations made by RO in the report dated along with its re-assessment/ present status as furnished by the PP is given as below:

Sl.	Non-compliances Details and Observation of RO	Condition no.			Response by PP	Re-assessment by RO
		EC date	Specific	General		
1.	Partially complied: No ETP was observed during monitoring	August 25,2006	vi		The Effluent water stored in 2 large settling ponds with capacity (13x243.5 meter & 65x55x3.5 meter) Where oil & grease are removed through screening. The surface of the settling pond' is covered with concrete and HDPE liner so that the quality of the existing ground water will be retained. Settled water is chemically treated with the help of clarifier & sand filter and stored in 2 large reservoirs with capacity (1,80,000 m & 2,60,000 m' and it is used in plantation and dust suppression etc. " No effluent is discharged outside the plant premises under any Circumstance. Hence, discharge condition is maintained at all time. Further one ETP plant is Under construction in the campus and will be completed within six months.	PP has sent drawings of under construction ETP.

Sl.	Non-compliances Details and Observation of RO	Condition no.			Response by PP	Re-assessment by RO
		EC date	Specific	General		
2.	<p>A) It is inform that fly ash is given to cement plant, fly ash bricks manufacturer and are used for making bricks in our own fly ash bricks manufacturing unit. Agreement / MOU made in this regard are not made available during the visit.</p> <p>B) It has been observed that all the scrap materials from Ferro's Alloy plant, SMS and fly ash dumped in an open site in the plant premises.</p> <p>C) No scientific and designed land fill site was observed and any record in this context not made available by the PP. No information provided by the PP regarding leachate collection and monitoring reports w.r.t leachate and soil.</p>	August 25,2006	vii.		<p>A) Mostly fly ash given to our own fly ash bricks manufacturing unit and remaining fly ash, we are supplying fly ash to nearby bricks manufacturing units and cement plants. No fly ash accumulation takes place at site.</p> <p>B) We have 100% concreted road and concreted platform with Raw material storage shed where scrap material is stored. The scrap materials, generated from the Ferro and SMS plant, is crushed and used for the purpose of road construction, nearby villages and also used in bricks plant to increase the strength & quality of bricks. And fly ash is placed in silos which are transported with tarpaulin covered trucks. Hence no fly ash accumulation is taking place at site.</p> <p>C) SKSIPL: solid waste generation and its disposal in the following manner. The Dolo char due to rich calorific value (2000- 2300) is utilized as fuel in the Coal Based Power Plant. Slag is crushed at slag crusher and screened for metal recovery and loose material is disposed for filling the low lying area & area development Cutting edge scrap recycled to the Billet Plant Fly ash is utilized for brick manufacturing and also part of it given to Cement Plants. Bottom ash is utilized for brick manufacturing and & filling low lying areas. Dolo char Ash will also give to brick manufacturers. Hazardous Waste Used spent oil 2.5-3.0 KLA reused as lubricant and in excess will be given to authorize recyclers and cement or</p>	PP has now submitted the copy of invoice showing supply of fly ash and submitted the lab reports.

Sl.	Non-compliances Details and Observation of RO	Condition no.			Response by PP	Re-assessment by RO
		EC date	Specific	General		
					records are being maintained. Since there is no hazardous waste generation hence, designed land fill is not required at site. Moreover the soil testing has been done on project site and surrounding villages by NABL approved environment laboratory	
3.	A) Documental evidence of occupational health programmers were not made available during the visit. B) It was also observed the workers working in the core plant area were not taken any safety precautions measures , no worker has wear proper PPE kits during the day of site visit.	August 25,2006	xi		Annual health checkup program of our employees has been Conducted as per Form No-21; records are maintained and submitted as per factories Act. B) All mandatory Safety PPEs are provided to all our employees. Safety is prioritized in our industry and division wise daily tool box meetings are held by the Safety Department. Document regarding purchasing &issuing safety PPEs to employee	PP has now submitted that Employee's annual health check-ups program records. PP has submitted document pertaining to purchasing & issuing safety PPEs to Employees.
4.	A) No ambient air quality station was installed within the plant. B) Monitoring reports (in- house Monitoring) w.r.t. ambient air quality monitoring made available during the visit.	August 25,2006		iii	A) As suggested by CECB To monitor the pollution in the industrial area Siltara, online station has been set up by Chhattisgarh Sponge Iron manufacturers Association, in which we have also provided financial support. Further, Online continuous monitoring system (Opacity meters) & Gas monitoring system will be installed at all the 4 main stacks to monitor the particulate matter & gas emission continuously. B) As a proactive measure we have installed environment cell well equipped with field monitoring equipments and laboratory for spot sampling and analysis at site. This lab will be upgraded during proposed expansion. We do in-house monitoring	Online station has been set up by Chhattisgarh sponge iron manufacturers Association, in which they have also provided financial support. Copy of letter from RO is submitted.

Sl.	Non-compliances Details and Observation of RO	Condition no.			Response by PP	Re-assessment by RO
		EC date	Specific	General		
					of ambient air, stack, fugitive, water and noise. Monthly report is submitted to the CECB regional & H.O office Raipur.	
5.	It has been observed that the people working at high noise area are not provided with PPEs.	August 25,2006		v	Personal protective equipment (Earplug) is already provided to all workers and notice boards or wall writing has been done In highly noise area of plant premises.	PP has submitted the PPE purchasing copy.
6.	<p>A) The comprehensive detail in socio-economic activities and documental evidence also were not made available during the visit.</p> <p>B) The information on the date of financial closure was not provided by the PP.</p> <p>C) In addition to the above during the visit it has been observed that coal was found to be kept in open areas.</p>	August 25,2006		vi	<p>A) The socio-economic and peripheral development activities in the surrounding villages like community development programs, educational programmed, drinking water tanker supply, plantation, and pond develop and health care, ambulance & fire brigade facility, etc. are being taken care.</p> <p>The expenses on CSR done during year April 2020 to February 2021 approximately (20 Lacks) statement.</p> <p>B) We have already submitted Current Financial year closure report after plant visit.</p> <p>C) We have We have Three number of different capacity (30000 ton, 8000 ton & 3000 ton) well developed coal yard.</p> <p>However, sometime we kept additional coal temporarily stored and covered with tarpaulin and utilized in process primarily and thereby coal used from coal yard. Henceforth, we cannot store coal in open area.</p>	PP has submitted explanation related with the observations.

38.8.21 The proposal was considered by the EAC (Industry 1) in its 38th meeting held on 15-16th June, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

38.8.22 The Committee noted the following:

- i. EC is sought for expansion of an ISP located in a critically polluted area namely Siltara, Raipur.
- ii. Proposed steel plant is located in a Siltara wherein the State Government of Chhattisgarh imposed ban on establishment of new sponge iron plant and coal-based power plant (Ref: 783/205/07 dated 16/03/2007) and ban on diversification (involving use of coal as fuel or raw material) of the existing industries [Ref: 3529/205/05/11/(E) dated 12/12/2007]. The provisions contained in the said notification neither considered by the proponent nor reflected in the EIA report.
- iii. The application for EC was submitted on 15.3.2021 and EDS was raised on 23.3.2021. EDS reply has been sent on 6.6.2021. On review of the reply, the following points are noted:
 - a. As per the RO report, following observations have been made:
 - ETP has not been installed so far. PP for past fifteen years had been treating the waste water in a make shift and very crude manner.
 - Scrap and solid waste were found dumped in haphazard way on katcha ground allowing leachate to contaminate ground water for several years. There are no records of waste generation available with PP except for fly ash that is sold to cement/Brick manufacturers.
 - There were no records of annual health check- up of employees.
 - PP was advised to install 4 CAAQMS (one inside the plant and three outside) The stations outside the plant have been installed and being managed by Industrial area authorities but the one to be installed inside the plant has not been installed so far.
 - Also PP has not paid their contribution for CAAQMS installed outside by authorities, RO has reported.
 - 4 Nos CEMS to be installed on stacks have also not been installed till date.
 - Workers were not given PPEs for use on the shop floor. Now they have placed order.
 - There was no evidence provided to RO for the Social work done as part of CSR by the company.
 - Raw materials are being stored in haphazard manner inside the factory.
 - b. On review of PH proceedings, it is observed that several issues, like local employment, Dust pollution in villages from trucks plying on roads, Water pollution due to uncontrolled effluent discharge in village pond, Inadequate CSR by the activities for community development, Health issues of villagers, and request by villagers for a Hospital to be constructed by PP, have not been addressed under EMP.
- iv. Action plan to address EMPs subscribed by CECB for Siltara Industrial area has not been included in the EIA report.
- v. A PGP of 5x8000 Nm³/hr capacity is being installed. There is no mention of how phenolic water and tar sludge shall be handled.
- vi. Primary and secondary fume extraction system in SMS has not been provided.

- vii. PP proposes dumping of slag in low lying areas. It is not clear as to where and in whose land.
- viii. The basis of EMP cost is not clear. Chapter 10 of EIA does not give any details.
- ix. RWH is restricted to roof Top harvesting only. Revised plan for RWH in 100 % of plant area is required.
- x. TOR 9 pertaining to Corporate Environment Policy has not been complied with.
- xi. Action plan with physical targets to address the issues raised during public hearing as per MoEF&CC O.M. dated 30/09/2020 has not been submitted.
- xii. It is stated in the EIA report (page no. ES1) that the proponent also applied for environmental clearance for 0.72 MTPA (Throughput) Wet Type of Coal Washery to SEIAA on 13/04/2018. ToR accorded on 04/12/2018. Application for EC was submitted to SEIAA on 17/02/2021. The Committee opined that proposed coal washery is located within the premises of integrated steel plant and PP could have possibly obtained EC for the coal washery from the Ministry as an integrated project.

Recommendations of the Committee

38.8.23 In view of the foregoing, after deliberations, the Committee recommended the following:

- i. Proposal recommended to be returned in its present form to address the shortcomings enumerated at para no. 38.8.22.
- ii. Clarification may be sought from the Project Proponent regarding the reasons for consideration of 0.72 MTPA (Throughput) Wet Type of Coal Washery as Category ‘B’ project as it is located within the premises of integrated steel plant for which EC is under consideration by MoEF&CC as Category ‘A’.

38.9 Expansion of the existing 0.052 MTPA Sponge Iron to 0.16 MTPA Sponge Iron, 2x9 MVA Arc Furnace for manufacturing of Ferro Alloys of 30,000 TPA (Fe-Mn, Si-Mn, Fe-Si & Pig Iron combined), Iron Ore Sinter Plant of 80,000 TPA, 2x20 TPH Iron ore washery of 2,40,000 TPA and 20 MW Power Plant [WHRB – 10 MW & AFBC – 10 MW] by **M/s. Maithan Steel & Power Limited** located at PO Bonra, PS Neturia, **Purulia District, West Bengal** [Online Proposal No. IA/WB/IND/70780/2017; MoEF&CC File No. IA-J-11011/554/2017-IA.II(I)] – **Reconsideration for grant of Environment Clearance based on ADS reply**– regarding.

38.9.1 M/s. Maithan Steel & Power Limited has made an online application vide proposal no. IA/WB/IND/70780/2017 dated 09/01/2020 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

38.9.2 The detail of the ToR is furnished as below:

Date of Application	Consideration	Details	Date of Accord
04/11/2017	24 th meeting of EAC held on 11-13 th December, 2017	Terms of Reference	25/01/2018

38.9.3 The project of M/s. Maithan Steel & Power Limited located is at Village- Bonra, Tehsil- Raghunathpur, District -Purulia, State -West Bengal is for expansion of the existing 0.052 MTPA Sponge Iron to 0.16 MTPA Sponge Iron, 2x9 MVA Arc Furnace for manufacturing of Ferro Alloys of 30,000 TPA (Fe-Mn, Si-Mn, Fe-Si & Pig Iron combined), Iron Ore Sinter Plant of 80,000 TPA, 2x20 TPH Iron ore washery of 2,40,000 TPA and 20 MW Power Plant [WHRB – 10 MW & AFBC – 10 MW].

38.9.4 Environmental site settings:

S No	Particulars	Details	Remarks
i.	Total land	13.78 ha	Industrial
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	13.78ha of land in possession	Already Acquired
iii.	Existence of habitation & involvement of R&R, if any.	No existence of Habitation so R& R not applicable	
iv.	Latitude and Longitude of the project site	23 ^o 37' 53.85" N to 23 ^o 38' 06.35" N & 86 ^o 50' 08.10" E to 86 ^o 50' 12.7" E	On Toposheet No-F45C14
v.	Elevation of the project site	117m AMSL	
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	Project site: Nil Study area Damodar River: 4km	The HFL is at a distance of 3.6 km from the site.
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area.	Nil	

38.9.5 The existing project was accorded NOC vide Ir.no.787/2N-2383/2001 dated 27/09/2001 issued by West Bengal Pollution Control Board (WBPCB). The Project cost was 11.62 Crores and hence there was no need for EC as per Environment Impact Assessment Notification S.O.60(E), dated 27/01/1994, (incorporating amendments vide S.O. 356(E) dated 4/5/1994, S.O. 318(E) dated 10/4/1997, S.O. 319 dated 10/4/1997, S.O. 73(E) dated 27/1/2000, S.O. 1119(E) dated 13/12/2000, S.O. 737(E) dated 1/8/2001, S.O. 1148(E) dated 21/11/2001, S.O. 632(E) dated 13/06/2002). Consent to operate renewal for the existing unit is accorded by WBPCB vide Ir. no. CO110150 dated 28/08/2018 and validity of CTO is up to 31.08.2023.

38.9.6 Implementation status of the existing CTO:

Facilities	Units	As per CTO dated 28/08/2018	Implementation Status as on 09/01/2020
Sponge Iron (DRI) Kilns 2 x 100 TPD	TPA	5000 TPM	In operation

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

Sl. No	Name	Existing configuration	Proposed Configuration	Final configuration	Final Production Capacity In TPA
1.	DRI Kilns	2x100 TPD	1x350 TPD	2x100 TPD 1x350 TPD	1,81,500 Sponge Iron
2.	Power (DRI WHRB)	Nil	12MW	12 MW	12 MW
3.	Power (AFBC)	Nil	8.0MW	8.0 MW	8.0 MW
4.	Ferro Alloys Plant	NIL	2x9 MVA	2x9 MVA	30,000 (Fe-Mn, Si-Mn, Fe-Si & Pig Iron combined)
5.	Iron Ore Sinter Plant	NIL	250 TPD	250 TPD	As required.
6.	Iron Washery	NIL	1x40 TPH	1x40 TPH	2,06,000

38.9.8 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:

Sl No	Raw Materials	Quantity required per Annum			Source	Mode of transport
		Existing Capacity	For Expansion	Total		
1.	Iron Ore	92,400	1,84,800	2,77,200	Barbil, Odisha	Rail
2.	Iron Ore Fines		17,000	17,000	Local / Barbil	Rail
3.	Mn Ore		35,950	35,950	Odisha	Rail
4.	Mill Scale		10,557	10,557	Internal Generation & local purchase	Internal transportation & by road
5.	Coal - Process	60,720	1,06,260	1,66,980	Burdwan / South Africa	Rail
6.	Coal - Power Plant		35,530	35,530	Burdwan / Dhanbad	Rail
7.	Coke & Lam coke		12,025	12,025	Imported / North East	Rail / Road
8.	Limestone & Dolomite	2,640	12,580	15,220	Local	Road
9.	Quartz		9,016	9,016	Local	Road
	Total	1,55,760	4,23,718	5,79,478		

38.9.9 The water requirement for the project is estimated as 72,515m³/day, out of which 1800m³/day of fresh water requirement will be obtained from the Surface water and the

remaining requirement of 54,515 m³ /day will be met from the treated recycled water. The permission for drawl of groundwater / surface water is obtained from Damodar River at confluence of Maithan and Panchet River vide Lr. No. MRO/water Tariff/183 dated 26/03/2019.

38.9.10 The power requirement for the project is estimated as 20MW, which will be met from CPP.

38.9.11 Baseline Environmental Studies

Period:	December 2017 to February 2018
AAQ parameters at 08 locations	PM _{2.5} = 46.53 to 34.7 µg/m ³ PM ₁₀ = 82.41 to 78.5 µg/m ³ SO ₂ = 23.5 to 11.1 µg/m ³ NO ₂ = 28.4 to 14.1 µg/m ³
AAQ modelling (Incremental GLC)	CO = 530 to 313 mg/m ³ PM ₁₀ = 3.62 µg/m ³ PM _{2.5} = 2.05 µg/m ³ SO ₂ = 4.707 µg/m ³ NO _x = 4.18 µg/m ³
Ground water quality at 08 locations	pH: 7.5 to 7.1 Total Hardness: 128 to 96mg/l, Chlorides: 50 to 42 mg/l, Fluoride: 0.36 to 0.26 mg/l. Heavy metals are within the limits
Surface water quality at 08 locations	pH: 7.8 to 7.2 DO: 6.6 to 4.6 mg/l and BOD: 7.2 to 4.8 mg/l. COD from 50 to 30 mg/l
Noise levels	64.4 to 50.7 for the day time and 44.4 to 39.1 for the Night time.
Traffic assessment study findings	Traffic study was done from 08.01.2018 to 12.01.2018 and the average found is as follows: Heavy vehicles – 1,822, Light vehicles - 446, Two wheelers – 440, Three wheelers – 374 Avg. traffic load on 2 lane SH-5 is about 3,238 PCU/day i.e. 135 PCU/hr
Flora and fauna	Schedule I fauna not found.

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

Solid Waste	Quantity in TPA	Utilization
Dolchar from DRI Kilns	36,300	Will be fully used in AFBC along with fresh coal support for generation of steam for CPP
ESP Dust	67,410	To be used in sinter plant, dumped in illegal open cast mine of Biched Bandh, Badadighari mouza of mine area. Ref: ECL permission letter No-ECL/SDPA/AGENT/DMC/20/1748, dated 10/02/2020.
Kiln accretion	85,020	Road construction & dump in illegal open cast mine of Biched Bandh, Badadighari mouza of mine area.
CPP Fly ash	28,230	To be given to M/s City Cement Pvt. Ltd

Solid Waste	Quantity in TPA	Utilization
CPP bed Ash	12,100	4,100 TPA To be given to Eco Brick Waves brick plant
Fe-Mn Slag	12,700	To be used as raw material for Si-Mn production
Si-Mn Slag	7,700	7,700 to 15,400 TPA to be sold to M/s Purbanchal cement Ltd for production of Alkali activated cement
Fe-Si slag	Negligible	It is a slag less process
Pig Iron Slag	16,000	To be granulated & fully sold to M/s City Cement Pvt. Ltd
Washery rejects	6,000	To be fully sold to Eco Brick Waves brick plant.

38.9.13 Public Consultation:

Details of advertisement given	The advertisement was published on 03.12.2018 on Times of India and local Bengali daily ‘Ei Samay’
Date of public consultation	11.01.2019
Venue	Sampriti bhawan, Sarbari More, village-Bonra, Tehsil-Raghunathpur, District—Purulia, West Bengal
Presiding Officer	Sri Naba Kumar Burman (District Magistrate)
Major issues raised	i) Source of Water to be used for project. ii) Disposal method for solid waste iii) Environment Management plan iv) Local development and abatement of pollution v) Health consciousness program vi) Employment vii) Tree plantation programme

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

Sl. No.	Description	Expenditure (Rs. In lakh)		
		1 st Yr	2 nd Yr	Total
1	Sinking of new bore wells in Bonra, Anandpur & Bhamuria @ 5 bore wells /village.	25	20	45
2	Strengthening of approach road in villages Bonra & Biduti 3 km in each.	30	25	55
3	Electrification of the Bonra & Anandpur village with energy efficient LED bulbs.	5	5	10
4	Bonra primary school & Anandpur Higher Secondary School building Renovation.	10	10	20
5	Providing Tractors, dust bins and development of the dump yard in Neturia block.	10	5	15
6	A short term training course to the local unemployed seeking employment into the industry.	2	2	4
	Total	149		

38.9.14 The capital cost of the project is Rs.165.00 Crores and the capital cost for environmental protection measures is proposed as Rs. 660.00 lakh. The annual recurring cost towards the environmental protection measures is proposed as Rs. 66.00 lakh. The employment generation from the proposed project/ expansion is 450 The details of cost for environmental protection measures is as follows:

Sl No.	Description of Item	Existing (Rs. In lakhs)	
		Capital Cost	Recurring Cost
i	Air Pollution Control/Noise	355.1	35.5
ii	Water Pollution Control	118	11.8
iii	Environmental Monitoring and Management	4.65	0.5
iv	Green Belt Development	126	12.6
v	Rain water Harvesting	11.62	1.2
vi	Occupational Health	11.3	1.1
vii	Solid waste Management	13.53	1.4
viii	Safety & Disaster Management	12.4	1.2
ix	EMS & Capacity Development	7.4	0.7
	Total	660	66

38.9.15 Greenbelt will be developed in 4.55 ha which is about 33.01% of the total project area. Green belt consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 11,375 saplings will be planted and nurtured in 4.55 hectares in 3 years.

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

38.9.17 Name of the EIA consultant: M/s. Global Tech Enviro Experts Pvt. Ltd. [S.No. 94, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/IA0066; Valid up to 06/11/2023; Rev. 10, May 13, 2021].

Certified compliance report from Regional Office:

38.9.18 The Status of compliance of CTO was obtained from West Bengal State Pollution Control Board vide memo no 245(I)- 4A/18/2008 (Part –V) dated 18/03/2021. As per the report, the project proponent is complying with the existing CTO conditions except the following.

- i. The leakage from the DRI kiln no. 02 should be repaired.
- ii. The broken part of the coverings of the conveyor belt should be repaired.
- iii. More water sprinkling arrangements should be installed and the same should be operated properly.
- iv. About 50-60% of the internal roads are concreted and the rest also be concreted.
- v. Rain water harvesting should be done.
- vi. The unit has developed about 20-22% green coverage for the existing unit.

38.9.19 M/s. Maithan Steel & Power Limited has made an online application vide proposal no. IA/OR/IND/103521/2019 dated 09/01/2020. The proposal was listed in 15th meeting of Re-constituted EAC (Industry 1) held 16-17th January, 2020. Project Proponent informed the Ministry vide letter dated 13/01/2020 that due to unavoidable circumstances, they are unable to attend the meeting. They requested the Ministry to consider the proposal in the next EAC meeting. Therefore, consideration of the proposal was deferred.

38.9.20 The proposal again considered by 16th meeting of Re-constituted EAC (Industry 1) held 24-25th February, 2020. Accordingly, the observations and recommendations of EAC is given as below:

Observations of the Committee held during 24–25th February, 2020

38.9.21 The Committee noted the following shortfalls in the EIA report:

- i. Execution of agreement with Damodar Valley Corporation for drawl of water from Damodar River has not been submitted.
- ii. Closure report from Regional Office of WBPCB on the observed non-compliance has not been furnished.
- iii. Action plan for solid and hazardous waste utilization has not been furnished.
- iv. BOD parameter in the ground water sample has not been monitored. Hence, fresh assessment of ground water quality for all the parameters is required.
- v. Action plan for rain water harvesting is not furnished.
- vi. Transportation details of materials have not been furnished.

Recommendation of the Committee held during 24–25th February, 2020

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

- i. Execution of agreement with Damodar Valley Corporation for drawl of water from Damodar River shall be submitted.
- ii. Closure report from Regional Office of WBPCB on the observed non-compliances in the existing CTO conditions.
- iii. Action plan for solid and hazardous waste utilization.
- iv. BOD parameter in the ground water sample has not been monitored correctly. Hence, fresh assessment of ground water quality for all the parameters shall be carried out and report submitted.
- v. Provision for one 350 TPD DRI kiln in place of 3 No's of 100 TPD DRI kiln shall be submitted.
- vi. Rain water harvesting plan to harvest more than 100% of annual water consumption shall be furnished.
- vii. Description of the existing condition of the road to be used for transportation of raw materials and finished products inter-alia including its dimensions along with photographs shall be furnished.
- viii. Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be described.
- ix. Reasons for higher level of presence of Particulate matter in the Ambient Air and the source for the same shall be furnished.

38.9.23 The project proponent submitted the ADS reply to the Ministry on 14/03/2021. The reply to the ADS points are summarized as below. The proposal was placed before the EAC (Industry 1) in its 37th meeting held on 31st May to 01st June, 2021 for consideration. Meanwhile, the PP vide email dated 29/05/2021 expressed their inability to participate in the meeting and requested to defer their case till further request from them.

S.No.	ADS sought	PP response
i.	Execution of agreement with Damodar Valley Corporation for drawl of water from Damodar River shall be submitted.	Agreement with Damodar Valley Corporation has been done for drawl of 0.396MGD (1800.25KLD) water for M/s. Maithan Steel & Power Ltd, At/Po-Bonra, has been done vide letter no. MRO/water Tariff/183 on dated 26.03.2019.
ii.	Closure report from Regional Office of WBPCB on the observed non-compliances in the existing CTO conditions.	Report dated 18/03/3021 of WBPCB has been submitted. As per the report, the PP is complying with the CTO conditions.
iii.	Action plan for solid and hazardous waste utilization.	Action plan for solid waste utilization has been submitted.
iv.	BOD parameter in the ground water sample has not been monitored correctly. Hence, fresh assessment of ground water quality for all the parameters shall be carried out and report submitted.	Ground water monitoring has been again carried out and report has been submitted.
v.	Provision for one 350 TPD DRI kiln in place of 3 No's of 100 TPD DRI kiln shall be submitted.	It is now agreed to install one 350 TPD DRI kiln in place of 3 Nos. of 100 TPD DRI kilns; Accordingly, production of sponge iron will be increasing from 1,60,000 TPA to 1,72,000 TPA.
vi.	Rain water harvesting plan to harvest more than 100% of annual water consumption shall be furnished.	Total rain water harvesting per annum is estimated to be 1,84,044 m ³
vii.	Description of the existing condition of the road to be used for transportation of raw materials and finished products inter-alia including its dimensions along with photographs shall be furnished.	Total raw material has been estimated to be 8,48,347 TPA, out of which approximately 80% will be transported by Rail & 20% will be transported on road., but as the project is not having its own Rly siding inside project boundary, material has to be carried a short distance on road from nearby siding to project site.
viii.	Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be described.	Similarly, 1,76,000 TPA sponge iron and 30,000 TPA Ferro-alloys

S.No.	ADS sought	PP response
		and Pig iron products will be transported from the project site on road. Waste product like power plant fly ash, ESP dust, mill accretion, various slags and washery rejects will be transported on road. The existing roads are capable of handling additional traffic load due to the proposed expansion.
ix.	Reasons for higher level of presence of Particulate matter in the Ambient Air and the source for the same shall be furnished.	Maximum Particulate values are instantaneous in nature and does not prevail for a longer time. It can be seen from base line ambient air sample analysis report that arithmetic mean values of sampling locations remain below 80µg/m ³ , but in case of Belapur it is 82.41 µg/m ³ , This location in predominant wind direction and wind gets obstructed by Dandahit hill and sometimes creates a whirl, this can be reason for particulate matter for Belapur as well as sampling location Dandahit are comparatively high.

38.9.24 It was appraised to the EAC to consider the proposal in the absence of proponent and their EIA consultant based on the records made available by them as per the Ministry's O.M. dated 18/11/2020 pertaining to streamlining the process of grant of Environment Clearance. However, the EAC opined that proposal shall be considered in presence of proponent only as they have requested for deferment of the proposal.

Recommendations of the Committee held during 31st May- 1st June, 2021

38.9.25 In view of the foregoing and after detailed deliberations, the Committee recommended to place the proposal in the next EAC meeting for consideration.

38.9.26 The proposal again placed before the EAC (Industry -1) in its 38th Meeting held on 15-16th June, 2021. The observations and recommendations of the EAC are as below:

Observations of the Committee

38.9.27 The Committee observed the following:

- i. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.

- ii. The Committee also deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.
- iii. The additional reply submitted by the project proponent is found to be satisfactory and addressing the concerns raised by the Committee.

Recommendations of the Committee

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

A. Specific conditions

- i. Particulate matter emission from all the stacks shall not exceed 30 mg/Nm³.
- ii. Water supply from Damodar Valley Corporation (DVC) shall be used and abstraction of ground water shall be discontinued.
- iii. Rain Water harvesting shall be implemented as per the action plan submitted in the EIA report.
- iv. Water spray systems shall be included to control fugitive dust from raw material Stockpiles.
- v. Green belt shall be developed in 33% of the total area all along the entire periphery of the plant with a density of 2500 trees per ha.
- vi. 100 % solid waste generated in the facility shall be utilized.

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.

I. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as two Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
- vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- viii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

II. Water quality monitoring and preservation

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

III. Noise monitoring and prevention

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

IV. Energy Conservation measures

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

V. Waste management

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

VI. Green Belt

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

VII. Emergency preparedness

- 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.

VIII. Environment Management

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

IX. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, 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.

38.10 Expansion of Ferro Alloy Plant from 11,500 TPA to 37,500 TPA (Product mix of Ferro Manganese, Silico Manganese & Ferrosilicon) by **M/s. Shree Bholey Alloys Private Limited** located at Phase – IV/C- 1 (P) 3 Industrial Area, Village – Goradih/ Balidih, PO: Bokaro Steel City, Tehsil Jaridih, **District Bokaro Jharkhand** [Online Proposal No. IA/JH/IND/214574/2010; File No. J-11011/317/2009-IA II (I)] – **Environment Clearance** – regarding

38.10.1 M/s. Shree Bholey Alloys Private Limited has made an application online vide proposal no. IA/JH/IND/214574/2010 dated 09/06/2021 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 and being appraised at Central Level.

Details submitted by Project proponent

38.10.2 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
27.07.2018	36 th meeting of the EAC (Industry-I) held during 9-10 th October, 2018	Terms of Reference with public hearing	09.11.2018

38.10.3 The project of M/s. Shree Bholey Alloys Private located in Phase-IV/C-1(P) 3 Industrial Area, Village-Goradih/ Balidih, PO: Bokaro Steel City, Tehsil Jaridih, Dist.-Bokaro, Jharkhand is proposed expansion of Ferro Alloy Plant from 11,500 TPA to 37,500 TPA (Product mix of Ferro Manganese, Silico Manganese & Ferro silicon).

38.10.4 Environmental site settings

S.No	Particulars	Details	Remarks										
1	Total Land	Existing - 1.10 Ha Expansion - 1.18 Ha Total Land – 2.28 Ha	Land Use – Project Site falls within Bokaro Industrial Area.										
2	Land acquisition details as per MoEF&CC O.M dated 7/10/2014	Entire land of 2.28 ha is under the possession of M/s. Shree Bholey Alloys Private.											
3	Existence of habitation & involvement of R&R, if any.	Nil											
4	Latitude and Longitude of the project site	<table border="1"> <thead> <tr> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr> <td>23°40'59.80"N</td> <td>86° 3'33.04"E</td> </tr> <tr> <td>23°40'57.86"N</td> <td>86° 3'35.29"E</td> </tr> <tr> <td>23°41'3.39"N</td> <td>86° 3'41.61"E</td> </tr> <tr> <td>23°41'5.99"N</td> <td>86° 3'40.27"E</td> </tr> </tbody> </table>	Latitude	Longitude	23°40'59.80"N	86° 3'33.04"E	23°40'57.86"N	86° 3'35.29"E	23°41'3.39"N	86° 3'41.61"E	23°41'5.99"N	86° 3'40.27"E	
Latitude	Longitude												
23°40'59.80"N	86° 3'33.04"E												
23°40'57.86"N	86° 3'35.29"E												
23°41'3.39"N	86° 3'41.61"E												
23°41'5.99"N	86° 3'40.27"E												
5	Elevation of the project site	255 Meter											
6	Involvement of Forest land if any.	Nil											
7	Water body exists within the project site as well as study area	Project Site – Nil Study Area Damodar River - 6.90 km - North KhanjoNadi – 4.76 km –West GargaNadi – 6 km – South Garga DEM – 4.20 km – South											
8	Existence of ESZ / ESA/national park /wildlife sanctuary /biosphere reserve /tiger reserve /elephant reserve etc. if any within the study area	Nil											

38.10.5 The existing project was accorded environmental clearance vide Letter No:-J-11011/317/2009-IA.II.(I) dated: 30.09.2010. Consent to Operate renewal for the existing unit

is accorded by Jharkhand State pollution Control Board Vide Letter No:- JSPCB/HO/RNC/CTO-9268822/2021/246 dated 11/02/2021. The validity of CTO is up to 31.12.2025.

38.10.6 Implementation status of the existing EC:

S No	As per EC dated:-30.09.2010		Implementation Status as on date	Production as per CTO
	Facilities	Configuration (capacity)		
1	Ferro Alloy Production	2 x 3.5 MVA SAF (11500 TPA)	Implemented	11,500 TPA

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

S No	Name	Proposed unit	
		Configuration	Production in TPA
1	Ferro Alloy Plant (Silico-Manganese)	Submerged Arc Smelting Furnace 1x15 MVA	26,000

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

S No	Name	Existing Units		Proposed Units		Total (Existing +Proposed)	
		Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
1	Ferro Alloy Unit	2 x 3.5 MVA SAF	11,500	1 x 15 MVA SAF	26,000	2x 3.5 MVA SAF and 1x 15MVA SAF	37,500

38.10.9 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:

Raw Material details for Ferro Manganese

S.No	INPUT	Quantity, TPA	OUTPUT	Quantity, TPA
1	Manganese Ore	82500	Ferro Manganese	37500
2	Coke	16875	Slag	28125
3	Coal	9750	Bag Filter Dust	15000
4	Dolomite	9375	Oxidation / Burning Losses	38546
5	Carbon Paste	750		
Total		119250	Total	119250

Raw Material details for Silico-Manganese

Material Balance for Silico-Manganese				
S No	INPUT	Quantity, TPA	OUTPUT	Quantity, TPA
1	Manganese Ore	34225	Ferro Manganese	18500
2	Coke	8325	Slag	18500
3	Coal	6475	Bag Filter Dust	7400
4	Dolomite	2775	Oxidation / Burning Losses	20165
5	Quartz	4070		

6	Carbon Paste	370		
7	Ferro Manganese Slag	8325		
	Total	64565	Total	64565

Raw Material details for Ferro-Silicon

Material Balance for Silico-Manganese				
S.No	INPUT	Quantity, TPA	OUTPUT	Quantity, TPA
1	Quartzite	32153	Ferro Silicon	17380
2	Mill Scale	6518	Slag	3476
3	Charcoal	17032	Bag Filter Dust	5214
4	Coke Breeze	4345	Oxidation / Burning Losses	34847
5	Carbon Paste	869		
	Total	60,917	Total	60,917

The main raw materials required for manufacture of Si, Mn, I.e., Mn ore is available from the mines of Manganese Ore India Ltd, Nagpur, and also from private mine owners in Orissa & Jharkhand. Coal and Coke required for manufacture are available in and around Jharkhand and Orissa in sufficient quantity while dolomite is brought from Orissa. Other ingredients such as quartz are abundantly available from Jharkhand.

38.10.10 The water requirement for the project is estimated as 110 m³/day, out of which 8 m³/day of fresh water requirement for domestic use will be obtained from the Ground water and the remaining requirement of 102m³/day will be met from the Bokaro Industrial Area Development Authority (BIADA). The permission is obtained from BIADA vide Letter No. 427 dated 14.05.2009.

38.10.11 The power requirement for the project is estimated as 22 MW (9 MW Existing + 13 MW Expansion) after expansion. The total power demand of the plant will be met from Damodar Valley Corporation.

38.10.12 Baseline Environmental Studies:

Period	Post Monsoon Season: 1 st October 2018 to 31 st December 2018
AAQ parameters at 08 locations	PM _{2.5} = 26.9 to 50.4 µg/m ³ PM ₁₀ = 38.9 to 70.9 µg/m ³ SO ₂ = 4.10 to 9.9 µg/m ³ NO ₂ = 12.7 to 34.5µg/m ³
AAQ modelling	Incremental GLCs due to the expansion proposal: PM ₁₀ = 0.7 µg/m ³ SO ₂ = 0.1µg/m ³ NO _x = 0.1µg/m ³ PM _{2.5} = 0.5µg/m ³
Ground water quality at 08 locations	pH: 6.97 to 7.97, Total Hardness: 197 to 256 mg/l, Chlorides: 58 to 123 mg/l, Fluoride: 0.09 to 0.17 mg/l. Heavy metals are within the limits.
Surface water quality at 7 locations	pH: 7.18 to 7.75, DO: 5.9 to 6.4 mg/l, BOD: 2.5 to 4.7 mg/l and COD from 10 to 21 mg/l

Noise levels	49.30 to 70.20 dBA for the day time and 39.5 to 65.20 dBA For the Night time.
Traffic assessment study findings	Existing Level of Service is A (Excellent) with 0.018 V/C ratio. Incremental Load due to proposed project will be 6 vehicles/ hour. Level of Service after expansion will be remained A (Excellent) with 0.020 V/C ratio.
Flora and fauna	Study area is not rich in biodiversity as majorly industrial area and some part of study area is having sparse vegetation and very few lakes/ponds were observed. One protected forest Gangajal Ghati is situated on the other side of Damodar River at a distance of 8 km from the project site where the Elephant corridor was observed. The conservation plan with budgetary provision has been prepared and will be submitted to concerned authority for further approval.

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

Type of Waste	Quantity, TPA	Mode of Disposal
Slag from production of Ferro Manganese	28,125	Will be reused in manufacture of Si-Mn as it contains high SiO ₂ and Silicon.
Bag Filter Dust	15,000	It is non-hazardous. It will be given to civil contractors for road making, plinth filling, etc

38.10.14 Public Consultation:

Details of advertisement given	08/09/2020
Date of public consultation	10/10/2020
Venue	BAIDA Bhawan, Village Goradih/ Baldih, Tehsil Jardih, Distirct Bokaro
Presiding Officer	Director, District Rural Development Agency
Major issues raised	The issues raised during Public Hearing are: <ul style="list-style-type: none"> ➤ Pollution problems ➤ Employment generation ➤ Timely completion of commitment made by factory owner. ➤ Water spraying on roads

Action plan as per MoEF&CC O.M. dated 30/9/2020: Time frame: Three years

S N o	Concerns raised during public hearing	Physical activity & action plan	Budget INR (Lakhs)	Target for implementation of action plan		
				1 st year	2 nd year	3 rd year
1	Employment to local people (Max 20) Obtain the list	Willing youth will be provided training in Bokaro ITI. (Trade-	Rs.6 lakhs Stipend and fee @ 30000/- per	6 Lakhs	-	-

S N o	Concerns raised during public hearing	Physical activity & action plan	Budget INR (Lakhs)	Target for implementation of action plan		
				1 st year	2 nd year	3 rd year
	from Gram Panchayat	Electrician, Fitter, Welder) Fee and scholarship will be given by PP.	person for 1 year			
2	Plantation in industrial Area in consultation with BIADA	Identify open area, road side space. Procure 3 feet tall saplings, Dig holes, put manure, plant the sapling and water them	6.9 Lakhs 2700 plants	Rs. 202/- per tree plantati on and Rs.600 0 per month for waterin g the plants for 24 months	--	--
3	Mobile sweeping machine for cleaning of roads in the industrial area once a month	Clean the main road every day, once (2.3 km) from plant to NH 23 using the road sweeping machine	7.2 Lakhs 20000/-per month	2.4 Lakhs	2.4 Lakhs	2.4 Lakhs
4	Up-gradation of primary school in Balidih and Khutri village in consultation with BIADA	Make separate toilets with running water, provide fans, table, chairs, computer and other teaching aids	5.0 Lakhs	2.5 Lakhs	2.5 Lakhs	
	Community & Infrastructure Development Programmes	Providing LED Street lighting with solar panels in Balidih, Khutri and Gorabali village in consultation with BIADA.	3 Lakhs 50000/-per light	1 Lakh	1 Lakh	1 Lakhs

38.10.15 The capital cost of the project is Rs 29 Cr and the capital cost for environmental protection measures is proposed as Rs 1.75Cr. The annual recurring cost towards the environmental protection measures is proposed as Rs 0.20Cr. The total employment generation from the proposed project is 114 after expansion.

S No	Particulars	Capital Cost	Annual Recurring Cost
1	Pollution Control during construction stage (1 years)	15	--
2	Air Pollution Control Systems (Covered furnace top and bag filters, chimney, RMH yard cover, bag filter for material handling, closed conveyors).	55	3
3	Water conservation, recycling measures, rainwater harvesting.	10	0.5
4	Wastewater Management (STP)	10	0.5
5	Environmental Management Department	20	5
6	Environmental Monitoring Instruments (CEMS) and Laboratory	20	5
7	Noise Reduction Systems	2	1
8	Occupational Health Monitoring	5	2
9	Green Belt Development	5	1
10	Risk Mitigation Measures	5	2
11	Commitment Made by PP during PH	28	--
	Total	175	20

38.10.16 Total 0.76 ha (existing + expansion) area is earmarked for green belt development along the plant boundary. Tree density would be maintained as 2500 trees per hectare.

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

38.10.18 Name of the EIA consultant: M/s. Grass Roots Research & Creation India (P) Ltd [S.No. 162, List of ACOs with their Certificate / Extension Letter no. QCI/NABET/ EIA/ACO/ 21/1728 and valid up to 09/08/2021; Rev. 11, June 09, 2021]

Certified compliance report from Regional Office

38.10.19 The Status of compliance of earlier EC was obtained from Regional Office, Ranchi vide letter dated 01/01/2021 wherein the several observations have been made by the Regional Office. PP has submitted their action taken report to the Regional Office, Ranchi. The Regional Office has furnished their comments/views on the action taken report vide letter dated 8/6/2021. As per the said letter, following conditions are reported to be partially complied:

- i. Frequency adopted for the AAQ monitoring is not in conformity with the National Ambient Air Quality standards.
- ii. Fugitive emission monitoring data has not been furnished.
- iii. As per the EC accorded total cost of the project is 7.83 Crore. 5% of total cost is 39.15lakhs. PP informed that corporate social responsibilities are under implementation. Total expenditure incurred is INR 24.69 lakhs.

- iv. Environmental management measure such as development of green belt as per CPCB norms, fume extraction system along with Bag filter for tapping, water sprinkling, storage of raw material in covered space, pucca haul road partially constructed, water spray arrangement at all the dusty places and during unloading process are under progress.
- v. PP reported the condition as already informed. Date of start of construction activity reported to be 07.10.2010. However, the date of financial closure and final approval of the project by the concerned authorities has not been furnished.
- vi. During visit construction activity observed inside the plant (as depicted in Photo 1). It was stated that the construction activity is for raising column to lift on water pipeline from underground to surface as MS pipes began to leak and to prevent from them from further rusting.

38.10.20 The PP has made earlier an online application vide proposal no. IA/OR/IND/103521/2019 dated 04/03/2021. The proposal was considered by the EAC (Industry 1) in its 33rd meeting of the Re-constituted EAC (Industry-I) 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

38.10.21 The Committee noted the following:

- i. Project proponent has not taken any concrete initiatives to comply with the observations of RO listed at paragraph number 33.4.20.
- ii. RM storage areas shall be covered. No mention has been made about provision of garland drains and collection pits for run off material.
- iii. Industrial vacuum cleaners are proposed for regular sweeping of roads.
- iv. Side extraction hoods have been proposed for SAFs.
- v. Bag filters have not been proposed in RM handling area.
- vi. EIA report has following deficiencies;
 - a. SAF proposed is open type with side extraction hoods.
 - b. Slag storage capacity inside the plant has not been given. It shall not be more than 90 days.
 - c. Noise levels are monitored as far away as 8 Km from plant.
 - d. BOD level has been reported as 0.6 mg/L in surface water containing 1050 MPN/100 cc Coliform. No explanation for the same is available in the report. It is also not clear which method has been used to determine BOD values in less than 01 ppm range.
 - e. SE and EB data have not been subjected to quality check and also not interpreted. One cannot distinguish between primary and secondary data.
 - f. There is a list of references given in chapter three in 3 pages. One does not understand the purpose of the reference list and no cross references are mentioned.
 - g. Chapter 4 is a text book. Impacts and mitigation measures have not been quantified.
 - h. CER table # 8.1 in Section 8.2 of EIA report has not been presented as per the requirement of OM dated 30th Sept 2020.
 - i. Only 1500 trees per ha have been proposed for green belt against a requirement of 2500 trees per ha.
 - j. TOR point #9 has not been addressed in section 10.3 and 10.4 of EIA report as required.

- k. Under section 10.6, the EMPs considered for implementation in post project scenario are like a text book. EMPs have not been quantified and budgeted, no time bound program given, no monitoring and reporting system has been described.
- l. Chapter 11 has not been presented as per EIA notification 2006.
- vii. Incomplete information is provided in Form 2 (For instance in section 5, 13, 21, 29, 30 etc.,) which needs to be revisited.

Recommendations of the Committee held during 30-31st March, 2021

38.10.22 In view of the foregoing, EAC after deliberations recommended to return the proposal in its present form to address the shortcomings enumerated above.

38.10.23 The PP has made again an online application vide proposal no. IA/JH/IND/214574/2010 dated 09/06/2021. Accordingly, the proposal was considered in 38th meeting of the Re-constituted EAC (Industry-I) held on 15-16th June, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

38.10.24 The Committee noted the following:

- i. The EAC found that the revised 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.
- ii. The EAC also deliberated on the certified compliance report from RO, public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.

Recommendations of the Committee

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

A. Specific conditions

- i. Particulate Matter emissions from all the stacks shall be less than 30mg/Nm³.
- ii. Submerged Arc Furnace shall be equipped with the fourth hole fume extraction system.
- iii. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report.
- iv. All roads shall be made Pucca and a vacuum cleaner shall be used to clean the roads.
- v. Green Belt shall be developed in 33 % land with tree density of 2500 trees per ha. (or 1000 trees per acre).
- vi. 100 % slag generated in the facility shall be utilized.

- vii. An affidavit shall be submitted to the Ministry stating that observations made in the inspection report of Regional Office dated 8/06/2021 has been complied within three months from date of issue of the Environment Clearance.

B. General conditions

I. Statutory compliance:

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

II. Air quality monitoring and preservation

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

III. Water quality monitoring and preservation

- i. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- ii. 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.

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

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

VI. Waste management

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

VII. Green Belt

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

VIII. Public hearing and Human health issues

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

IX. Environment Management

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

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for

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

38.11 Proposed MS Billets/Alloys Billets– 5,50,000 TPA TMT Bars/MS Structural Steel/Gutter/Angles/Channels/Pipes – 5,50,000 TPA Ferro alloys unit with 1 x 5 MVA Submerged Electric Arc Furnace – Ferro Manganese – 12,800 TPA or Silico Manganese – 9,500 TPA by **M/s. Shree Om Rolling Mills Private Limited** located at Gat no. 56 and 57, Village Daregaon, Adjacent to MIDC Phase II, Taluka- Jalna, **District- Jalna, Maharashtra** [Proposal No. IA/MH/IND/108058/2019, MoEF&CC File No. IA-J-11011/207/2019-IA-II(I)] – **Reconsideration for grant of Environment Clearance based on ADS reply** – regarding.

38.11.1 M/s Shree Om Rolling Mills Private Limited (SRMPL) has made an online application vide proposal no. IA/MH/IND/108058/2019 dated 16/03/2021 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) Under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

38.11.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
14/06/2019	8 th meeting of EAC held on 26/06/2019.	Terms of Reference	06/08/2019

38.11.3 The project of M/s. Shree Om Rolling Mills Private Limited at located at Gat no. 56 and 57, village Daregaon, Adjacent to MIDC Phase II, Taluka - Jalna, District – Jalna, Maharashtra State is for Proposed MS Billets/Alloys Billets – 5,50,000 TPA TMT Bars/MS Structural Steel/Gutter/Angles/Channels/Pipes – 5,50,000 TPA Ferro alloys unit with 1 x 5 MVA Submerged Electric Arc Furnace – Ferro Manganese – 12,800 TPA or Silico Manganese – 9,500 TPA.

38.11.4 Environmental Site Settings

SNo	Particulars	Details	Remarks
i	Total land	12.58ha [Private: 12.58 ha; Govt: 0 ha; Agriculture: 0ha; and Grazing land: 0]	Land use: Industrial
ii	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014.	SRMPL has acquired 12.58 ha of land.	NA
iii	Existence of habitation & involvement of R & R, if any.	No R & R issues involved.	
iv	Latitude and Longitude of the project site.	Points	Longitude
		A	19 ⁰ 50'20.91"N 75 ⁰ 50'47.55"E
		B	19 ⁰ 50'19.12"N 75 ⁰ 50'32.22"E
		C	19 ⁰ 50'15.08"N 75 ⁰ 50'32.09"E
	D	19 ⁰ 50'15.76"N 75 ⁰ 50'47.27"E	
v	Elevation of the project site.	528 m	

SNo	Particulars	Details	Remarks
vi	Involvement of Forest land if any.	Nil	
vii	Water body exists within the project site as well as study area.	Project site: No water bodies with in Core Zone. Study area Moti Talav 1.5 KM, ESE	
viii	Existence of ESZ/ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area.	Nil	

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

S No	Name	Configuration	Production TPA
1.	IMS Billets/ Alloys Billets	3 x 40 TPH	5,50,000
2.	TMT Bars/ MS Structural	Steel/ Gutter/ Angles/ Channels/ Pipes	5,50,000
3.	Ferro Alloys	Ferro Manganese or Silica Manganese	12,800 9,500

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

S No	Raw Material	Quantity in TPA	Source	Distance from site (km)	Mode of transportation
1.	Billets Manufacturing		Open Market	100 km	By road
	Scrap,	323400			
	Sponge iron,	323400			
	other Minerals	17325			
2.	TMT Bars/ MS Structural Steel/ Gutter/ Angles/ Channels/ Pipes	Billets 5,50,000	In house	0	NA
3.	Ferro Manganese	Mn Ore 2.1-2.4	Open Market	6	By road
		Coke 0.30	Open Market	6	By road
		Coal 0.3	Open Market	6	By road
4.	Silico Manganese	Mn Ore 2.5-2.8	Open Market	NA	By road
		Coke & Coal 0.8	Open Market	NA	By road
		Dolomite 0.2	Open Market	2	By road

38.11.7 The water requirement for the project is estimated as 250 KLD, out of which 250 m³/day of fresh water requirement will be obtained from the Own Water Reservoir.

38.11.8 The power requirement for the project is estimated as 25 MW, out of which 25MW will be obtained from Maharashtra State Electricity Board.

38.11.9 Baseline Environmental Studies:

Period	October 2019 to December 2019
AAQ parameters at 8 locations	PM _{2.5} = 16.5 to 34.6 µg/m ³ PM ₁₀ = 41.5 to 82.6µg/m ³ SO ₂ = 10.2 to 18.4µg/m ³ NO _x = 12.3 to 21.8µg/m ³ CO =0.22 to 0.82µg/m ³
AAQ modelling	PM ₁₀ = 82.6to 83.9µg/m ³ NO _x = 21.8 to 26.16µg/m ³
Ground water quality at 8 locations	pH: 7.31 to 7.83, Total Hardness: 303 to 803 mg/l, Chlorides: 40.27 to 523.5 mg/l, Fluoride: 0.5 to 0.85 mg/l. Heavy metals are within the limits.
Surface water quality at 3 locations	pH: 7.32 to 8.07; DO: 5.4 to 5.7 mg/l and BOD: 3 to 4 mg/l. COD from 8 to 12 mg/l.
Noise levels at 8 locations	48.4 to 68.4 dBA for the day time and 42.2 to 63.0 dBA for the Night time.
Traffic assessment study findings	About 489 PUC will be added in existing traffic.
Flora and fauna	No Schedule-I species are found.

38.11.10 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 (TPA)	Mode of treatment/disposal
1.	Slag	Induction Furnace	17325	Brick Manufacturing
2.	Slag	Submerged Electric Arc Furnace	8250	Brick Manufacturing
3.	Waste Oil	Industrial Waste	3 KL	Authorized Vendor

38.11.11 Public Consultation:

Details of advertisement given	31/07/2020
Date of public consultation	06/08/2020
Venue	M/s. Om Rolling Mills Private Limited, Gut No 56, 57, Village Dargaon, Additional MIDC, Phase II, Tehsil & District Jalna.
Presiding Officer	District Collector, Jalna District
Major issues raised	i. Health Problem ii. Effluent, solid waste and management. iii. Run off rain water

	<ul style="list-style-type: none"> iv. Pollution control v. Area Development vi. Employment Regarding vii. Solid waste generation
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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	Target date for implementation of action plan
1.	Community health	Medical Camp for health check up. <ul style="list-style-type: none"> • Daregaon Panchayat • Medical camp in Indevadi • Medical Camp in Sirsawadi 	10 Lacs	Annually
2.	Effluent generated from the project	The waste water generated from domestic use will be treated in STP and treated effluent will be used for garden on own land.	0.75 Cr	Before COD of the plant
3.	Social & educational activities	1. Annual Maintenance of two computer Centres (Daregaon Village and Sirsawadi Village) @ 15,000.00/ Month = 2x15,000x12 = INR 3,60,000.00 2. Skill Development Training to local 25 students/per year @ 10,000.00 per Month = INR 2,50,000.00 3. Drinking Water Facility and its Maintenance (Indewadi and Sirsawadi villages) @ INR 12,000.00 per month = 12,000x2x12 = 2,88,000.00. 4. Maintenance of library annual INR 1,02,000.00 We will provide free education and scholarship for the needy students of nearby villages.	10 Lacs	Annually
4.	Plantation	Plantation will be done in Daregaon Panchayat, Indewadi Village, Sirsawadi. We are planned to provide tree gaurd to the plants in the nearby villages. 2000 nos of trees will plant in daregaon in first year, for the better growth of plants we will be used soil of nearest pond. We will also provide drip irrigation system	20 Lacs	Within one year

S No	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget Rs	Target date for implementation of action plan
		to our green belt.		
5.	Solid waste generated from the project	Solid waste generated will be crushed. Slag will be used for bricks manufacturing.	1.5 Cr	Before COD of the plant

38.11.12 The cost of the project is Rs. 200 crores. The capital cost for environmental protection measures is proposed as Rs. 15.65 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 0.85. The employment generation from the proposed project is 200 Nos. The details of cost for environmental protection measures are as follows:

S. No	Item	Capital Cost (Crores)	Recurring Cost per annum (Lac)
1.	Air Pollution Control	10.0	20
2.	Water Pollution Control	0.75	15
3.	Noise Pollution Control	1.0	5
4.	Environment Monitoring and Management	0.5	15
5.	Occupational Health	0.5	10
6.	Greenbelt	0.5	5
7.	Solid Waste Management	1.5	5
8.	Safety Management	0.50	5
9.	Laboratory and Chemicals	0	5
10.	Commitment during public hearing	0.4	0
	Total	15.65	85.0

38.11.13 Greenbelt will be developed in 3.99 ha which is about 33.3% of the total project area. A 3m wide green belt, 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 9975 saplings will be planted and nurtured in 3.99 hectares in three years.

38.11.14 Name of the EIA consultant: Ampl Environ Pvt. Ltd. [S.No. 127 List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/IA0061 validity till 13/08/2023; Rev. 11, June 09, 2021].

38.11.15 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 on 30-31st March, 2021

38.11.16 The Committee noted the following:

- i. No vacuum cleaner has been envisaged for road cleaning. Water spraying only has been suggested.

- ii. TOR point # 9 pertaining to corporate environment policy has not been addressed.
- iii. Criteria for selection of Soil sampling stations and Noise monitoring stations have not been furnished in EIA report.
- iv. Traffic survey analysis has not been presented.
- v. Project benefits have not been quantified.
- vi. Chapter 11 is only two pages and not in line with the requirement of EIA notification 2006 Appendix III.
- vii. Action plan to address the issues raised during public hearing has not been prepared as per MoEF&CC O.M. dated 30/09/2020.

Recommendations of the Committee held on 30-31st March, 2021

38.11.17 In view of the foregoing and after deliberations, the Committee deferred the consideration of the instant proposal and sought following additional information for further consideration of the proposal.

- i. Action plan for green belt development in 3.99 ha shall be with a tree density of 2500 per hectare shall be submitted.
- ii. Land for water reservoir of 6070 Sq M has shall be included in the total plant area.
- iii. TOR point # 9 pertaining to corporate environment policy shall be addressed.
- iv. Criteria for selection of Soil sampling stations and Noise monitoring stations shall be furnished in EIA report.
- v. Traffic survey analysis shall be furnished.
- vi. Summary and conclusion of EIA report needs to be revised.
- vii. Action plan to achieve PM level in stacks less than 30 mg/Nm³ shall be submitted.
- viii. Action plan for slag utilization shall be submitted.
- ix. Action plan to address the issues raised public hearing as per MoEF&CC O.M. dated 30/09/2020 shall be submitted.

38.11.18 The PP has submitted the reply of additional detail sought (ADS) on 9/6/2021. The details of ADS reply are summarized as below:

S No	Additional detail sought	Reply of PP
1.	Action plan for green belt development in 3.99 ha shall be with a tree density of 2500 per hectare shall be submitted	Green belt will be developed in 3.99 ha area with density of 2500 trees/ ha means 9975 trees for 3.99 ha.
2.	Land for water reservoir of 6070 Sq M has shall be included in the total plant area.	Revised land breakup detail has been submitted including the land for water reservoir for rain water storage.
3.	TOR point # 9 pertaining to corporate environment policy shall be addressed.	Company Environment policy is submitted.
4.	Criteria for selection of Soil sampling stations and Noise monitoring stations shall be furnished in EIA report.	Revised chapter 3 has been submitted by PP including the selection criteria for Soil sampling stations and Noise monitoring stations.

S No	Additional detail sought	Reply of PP
5.	Traffic survey analysis shall be furnished.	Detail has been submitted Traffic survey analysis. Total 489 PUC (163 trucks per day) will be added to existing 11074 PUC.
6.	Summary and conclusion of EIA report needs to be revised.	Revised Summary and Conclusion of EIA report submitted.
7.	Action plan to achieve PM level in stacks less than 30 mg/Nm ³ shall be submitted.	PTFE bag Filter will be installed to control the particulate matter emission below 30 mg/Nm ³ .
8.	Action plan for slag utilization shall be submitted.	Slag will be used in brick manufacturing unit of M/s. Dhanlakshmi Sponge Iron Private limited (Shree OM sister concern). Consent letter for the same submitted.
9.	Action plan to address the issues raised public hearing as per MoEF&CC O.M. dated 30/09/2020 shall be submitted.	Revised action plan to address the issues raised public as per MoEF&CC O.M. dated 30/09/2020 has been submitted.

38.11.19 Based on the ADS reply, the proposal was again considered by the EAC (Industry 1) in its 38th meeting held on 15-16th June, 2021. The observations and recommendations of EAC are given as below.

Observations of the Committee

38.11.20 The Committee noted the following:

- i. 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.
- ii. The EAC also deliberated on the ADS reply, public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.

Recommendations of the Committee

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

A. Specific conditions

- i. Particulate Matter emissions from all the stacks shall be less than 30mg/Nm³.
- ii. 250 KLD of water shall be used from company's own water reservoir and abstraction of ground water is not permitted.
- iii. All roads shall be made Pucca and a vacuum cleaner shall be used to clean the roads.
- iv. Rain Water Harvesting shall be carried out as per the action plan submitted in the EIA report.
- v. 100 % slag generated in the facility shall be utilized.

- vi. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
- vii. Submerged Arc Furnace shall be equipped with the fourth hole fume extraction system.
- viii. Green Belt shall be developed in 33 % land with tree density of 2500 trees per ha. (or 1000 trees per acre).
- ix. No Ferro Chrome shall be manufactured without obtaining prior EC from MoEF&CC.

B. General conditions

I. Statutory compliance:

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

II. Air quality monitoring and preservation

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

III. Water quality monitoring and preservation

- i. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells

in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.

- ii. 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.
- iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- iv. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

VI. Waste management

- i. Used refractories shall be recycled as far as possible.
- ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces
- iii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

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

VIII. Public hearing and Human health issues

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

IX. Environment Management

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms

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

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

38.12 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 phase III Alumina Refinery** – regarding.

38.12.1 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 in Environmental Clearance accorded by the Ministry vide letter no. J – 11011/406/2011/IA. II(I) dated 20/11/2015.

Details submitted by the project proponent

38.12.2 M/s. Vedanta Limited submitted their application to MoEF&CC on 19/08/2014 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”.

38.12.3 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 green belt	420	0	0	0	420
2.	Red Mud Storage Pond with green belt	211.47	0	53.5 ha (process of acquisition)	518.03 (yet to be acquired)	783

S. No.	Facility	Existing area (ha)	Addl. land for Phase I (ha)	Addl. land for Phase II	Addl. land for Phase III	Total
				initiated)		
3.	Ash Pond with Pipeline with green belt	95.4	0	0	80 (yet to be acquired)	175.4
4.	Township & Misc including green belt	52.5	0	0	28 (yet to be acquired)	80.5
5.	Railway including Green belt	53.8	0	0	40 (yet to be acquired)	93.8
	TOTAL	833.17 ha	0	53.5	666.03 ha	1552.7 ha

38.12.4 The instant amendment proposal is for seeking amendment in 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. The major additional land requirement for red mud storage got reduced **to 263.5 ha against 571.53 ha** as per EC 2015 due to adoption of new technology and conversion from Wet disposal to Dry disposal of red mud.
- ii. Technical justification for Reduction of Land requirement for Red mud storage is due to following points to be adopted for disposal of red mud.
 - a) Switching from Wet disposal to Dry disposal through red mud Filtration unit by reducing the moisture percentage to 20-25%.
 - b) Adoption of Wick drain technology in the earlier Wet red mud storage area for extraction of moisture content and utilize the area for Dry stacking.
 - c) Adoption of stage-wise dry stacking methodology with proper design analysis.
 - d) Development of a new red mud disposal area contiguous to the existing red mud disposal area so as to increase the base of the dry stacking as well as height of the stack.
 - e) Separate storage to handle the run-off water of red mud stacking area during monsoon.
 - f) It is to be noted that with dry mud stacking, the disposal area is not a pond but a dry disposal area for Bauxite Residue.
- iii. Design aspects of red mud storage area with Dry disposal with increasing Height.

M/s. Vedanta appointed M/s. Golder Associates who has experience in dry stacking of tailings. Based on M/s. Golder Associates design report, the following points need to be ensured for the safe disposal of dry red mud.

- a) Stacking height will vary from **RL 463m to RL 550m**
- b) At the center of the dry stack, the height will be 87m. The overall slop is very safe at 4. 5H:1V.
- c) Height of each stack limited to 7m height.
- d) Berm width of 15m to be kept after each stack

- e) Side slope over the wick drain area to be kept 3H: 1V and in other area 2H: 1V
- f) 500mm thickness of soil blanketing to be done outer surface of the slope followed by coir mats with seeding for green vegetation.
- g) After reaching the final height of proposed stack, slope to be regraded & convert to single slope which will be kept in 4.5H: 1V.

After completion of design by M/s. Golder, for reassurance of the safety of the proposed design M/s Vedanta Limited (VL) had taken the services from IIT, Bhubaneswar for independent analysis. Dr. B Hanumantha Rao, Asst. Prof. IIT, Bhubaneswar had done the analysis through simulation for the proposed dry red mud stack. The action plan delineated by the IIT, Bhubaneswar is as below:

Emergency Response Plan for risk management: This report primarily comprises of emergency preparedness and response plan under an eventuality of breach in dyke of existing or proposed new solid waste red mud storage facility. The action plan is prepared considering two scenarios: breach in dyke of the red mud storage facility and rupture of red mud slurry carrying pipeline. The report highlighted Emergency Command Structure in G-shift working hours and silent hours, which comprises of combat group, Rescue team and Communication coordination group. The duties and responsibility of each group also clearly mentioned in the report.

Checklist of monitoring tailings storage facility: The monitoring check list comprised of reporting the present condition of tailings storage on Daily, Weekly, Monthly, and Quarterly basis, which follows a hierarchy.

Instrumentation for monitoring of tailings storage facility: The monitoring aspects include sliding of the slope, fluctuation in seepage and settlement of embankment. The action plan delineates monitoring of these aspects by installing vibrating wire piezometer in wick drain area, piezometer in dykes for the pore pressure measurement & calculation of FOS (factor of safety), survey monuments in the embankment and inclinometer on the slope of the starter embankment. Through these instruments, safety of the dyke will be monitored on regular basis to avoid any critical situations. It is also recommended to monitor the pore pressure so that pore pressure should not increase beyond 40KPa and 55KPa in stage-1L & 2B-2.

Water Management: The action plan addresses two aspects of water management: surface runoff water within the stacking area and fresh water coming from hillside catchment area. Surface runoff from the stacking area will be diverted into process Water Lake which is utilized internally by proponent. To manage the fresh water, it is first collected in the storm water pond to be constructed on the upstream side of stacking area and shall be released into natural stream or nalla. The action plan by proponent on the recommendation of IIT Bhubaneswar for utilization of fresh water is by implementation of 100% pumping system.

Closure plan: The action plan on Closure plan includes regrade the slope by benching, redesign of toe drain, covering the red mud with 500 mm thick natural soil, covering the natural soil with coir mats and plantation on coir mats to minimize the precipitation

infiltration, to enhance the greenery, and to reduce the erosion.

Post closure monitoring plan: Action plan on post closure includes erosion prevention by gully formations, habitat assessment, retention of greenery by monitoring the surveillance of plant species, quality checking of surface water and ground water on regular basis, and land use for beneficial purpose.

Dam break analysis to minimize the impact on Environment and human habitat: M/s. Golder Associates vide report no.: 1786571/A.0 has submitted a detailed report on dam break analysis of red mud storage facility. Action plan of proponent is to evacuate the habitants of Bundel village and the habitants of the temporary shops developed near to the plant gate with the help of rescue team and shift the habitants to safe location. Action plan of proponent also includes to have material resources such as 3600 sandbags, 360 m³ of boulders, 300 m³ of stone aggregates and 120 m³ of stone clips to hinder the flow of debris under contingency plan.

- iv. 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 833.17ha and 269.63ha respectively. Out of 269.63 ha, 87.81 ha is in final stage of acquisition and land filed for acquisition is 183.7 ha.
- v. 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	In view of proportionate reduction in Green belt land requirement by IPICOL, the condition will be read as under:	Present green belt is 29% of land in possession

S No	EC condition	Capacity as per EC letter dated 20/11/2015	Amendment	Remarks
		balance area of 297.17 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.	“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.”	

38.12.5 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.**

38.12.6 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

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
				power plant. 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.

38.12.7 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. 01 of 2016) 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 was last listed for hearing on 17/02/2021. 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.

- 38.12.8 Name of the EIA Consultant: GLOBALTECH Enviro Experts Pvt. Ltd. [S.No.96 in the List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/IA0066 Rev. 10, May 13, 2021].
- 38.12.9 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

- 38.12.10 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 meters. 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

- 38.12.11 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.
- 38.12.12 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, wherein EAC sought additional information regarding red mud pond design. PP submitted the ADS reply on 29/05/2021 and placed before EAC for consideration in its meeting held on 31/05/2021 to 01/06/2021.

Recommendations of the Committee held on 31st May- 1st June, 2021

38.12.13 In view of the foregoing the Committee felt that the red mud pond design report submitted by the project proponent needs to be studied in details and recommended to internally deliberate upon the said report in the forthcoming EAC meeting.

38.12.14 As per EAC recommendation of 37th meeting of Re- EAC (Industry-I) held on 31st May- 1st June, 2021 the proposal place before EAC (Industry-I) in its 38th Meeting held on 15-16th June, 2021. The EAC observations and recommendations are as given below:

Observations of the Committee

38.12.15 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 accord of the said EC with a 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. The Committee satisfied with the additional information submitted by the proponent with respect to red mud pond design report.

Recommendations of the Committee

38.12.16 In view of the foregoing and after deliberations, the Committee recommended for amendment in the EC dated 20/11/2015 as mentioned above at para number 38.12.15 subject to the stipulation of following additional specific conditions in addition to the EC conditions dated 20.11.2015:

- i. Project proponent shall abide by all orders and judicial pronouncements, made from time to time, passed by Hon'ble National Green Tribunal, in Appeal No. 1 of 2016.
- ii. Particulate matter emission from the stacks shall not exceed 30 mg/Nm³ for the expansion project i.e. 4 to 6 MTPA and existing project pollution control devices shall be retrofitted to achieve PM emissions less than 30 mg/Nm³ in next three years from the date of issue of the EC amendment letter.
- iii. Red Mud Pond (RMP) and Process Water Lake (PWL):
 - a. Installation of a warning system that provides immediate warning to the surrounding population and mine staff in the event of a dam break shall be provided.
 - b. Assessment of Dam Safety once a year (Dam Safety Assessment) in order to check the stability of the dykes of the RMP and the embankments of the PWL will be carried out and report submitted to the Regional Office of MoEFCC.
 - c. Avoidance of the construction of any infrastructure within the area immediately downstream of the dyke of the RMP or the embankment of the PWL in order to prevent congregations in zones where the warning time is shorter than 30 minutes.
 - d. A special Disaster Management Action Plan shall be prepared and implemented to address the risks and safety associated due to construction and operation of the red mud pond. This should also include the Site Specific Seismic Analysis. The necessary actions points arising out of this Action Plan / seismic analysis will be implemented and report submitted to the Regional Office of MoEFCC from time to time.
 - e. Mock drills exercise related to breach/failure of RMP shall be conducted once in six months and report submitted to the Regional Office of MoEFCC
 - f. All Instrumentation sensors shall have valid calibration certificate and shall be recalibrated before expiry of validation certificate.
 - g. An independent agency having requisite expertise for the continuous monitoring, evaluation of the safety and environmental concerns of the proposed red mud pond shall be engaged. This shall also include, among all other things including the points listed above, study on rheology of the tailings, factor of safety analysis of red mud pond using appropriate scientific method, impact on red mud pond storage capacity, and schedule of stacking, limitation of storage capacity-based stack slope

and drainage system for handling flash floods etc. Based on the reports, including monitoring reports, regularly submitted by this agency, the project proponent shall submit half yearly progress report on the status of implementation of mitigative measures to the Ministry and to its Regional Office.

38.13 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/214411/2021, File No. J- 11011/10/2011-IA.II (I)] – **Prescribing of Terms of Reference – regarding**

38.13.1 M/s. Nilkanth Ferro Limited has made an application online vide proposal no. IA/WB/IND/214411/2021 dated 08/06/2021 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) under Category “A” of the schedule of the EIA Notification, 2006 and being appraised at Central Level.

Details submitted by Project proponent

38.13.2 The project of M/s. Nilkanth Ferro Limited located at Village: Radha Madhavpur, Mouza & P.O.: Chousal, District: Bankura, West Bengal is for Proposed 3 x 9 MVA Ferro Alloys Plant [Ferro Manganese: 61,365 TPA, Silico Manganese: 45,256 TPA, Ferro Silicon: 21,049 TPA].

38.13.3 Environmental site settings:

S.No	Particulars	Details	Remarks
i.	Total Land	5.13 ha	Land use: Industrial
ii.	Existence of habitation & involvement of R&R, if any.	Nil	Entire land is in possession of the PP
iii.	Latitude and Longitude of the project site	Latitude : 23°28'15.90" to 23°28'23.48" N Longitude : 87°09'50.09" to 87°10'03.62" E	Measured from Google earth KML
iv.	Elevation of the project site	109 m AMSL	
v.	Involvement of Forest land if any.	Nil	
vi.	Water body exists within the project site as well as study area	Project site: Nil Study area: Damodar River: 7.7 km/ SE Barjora Nala: 3.7 km/ SE. 16 other nalas, reservoirs, streams, bil, canal, etc are also present in study area.	

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

38.13.4 The existing project was accorded environmental clearance vide letter no. J-11011/10/2011-IA-II(I) dated 26/09/2012. The validity of the EC lapsed on 26/09/2019 and was not extended. CTE had been obtained from WBPCB vide memo no. 26-2N-42/2011(E) dated 08/01/2014 and CTE validity extension obtained on 15/03/2019 with validity period up to 31/12/2023.

38.13.5 Implementation status of the existing EC - Physical progress has been undertaken which has an overall more than 50% significance in the progress of the project in terms of 100% land acquisition, 100% land use change, 100% boundary wall construction, 90% land development, 23% of the plot area has been covered by greenbelt, bore well has been constructed to meet 100% of water requirement after permission from SWID, 100% of the 3.5 km power line & poles have been drawn from DVC to the plant specifically for this power intensive project, 80% of the electrical parts & several components have been procured and stored, 25% of the stainless steel sections required for construction have been procured and Sheds/ watchtower in an area of approx 700 sq. m were made.

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

S. No	Name	Configuration	Production, TPA
1	Submerged Arc Furnaces:		
A	Ferro Manganese	9 MVA	61,365
B	Silico Manganese	9 MVA	45,256
C	Ferro Silicon	9 MVA	21,049

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

S No	Raw Material	Quantity required, MTPA	Source	Distance from site, kms	Mode of transportation
1	Mn Ore	115,750	Nagpur, Maharashtra	1200	By Rail/Road
2	Coke Breeze	49,589	Dhanbad, Jharkhand	120	By Road
3	Dolomite	28,381	Jalpaiguri, West Bengal	610	By Road
4	Fe-Mn Slag	31,537	In house	-	-
5	Iron Scrap	11,242	Durgapur, West Bengal	35	By Road
6	Pet Coke	12,124	Durgapur, West Bengal	35	By Road
7	Quartz	33,205	Bankura, West Bengal	15	By Road

38.13.8 The water requirement for the project is estimated as 40.5 m³/day, which will be obtained from Bore well and rainwater. The permission for drawl of groundwater / surface water is obtained from State Water Investigation Directorate (SWID).

38.13.9 The power requirement for the project is estimated as 25 MW, which will be obtained from the Damodar Valley Corporation. During power failure, 2x125 MVA DG sets are proposed.

38.13.10 The capital cost of the project is Rs 49.26 Crores and the capital cost for environmental protection measures is proposed as Rs 4.5 Crores. The employment generation from the proposed project is 350.

38.13.11 Proposed Terms of Reference (**Baseline data collection period: 01/03/2021 to 31/05/2021**):

Attributes	Parameters	Sampling		Remarks
		No. Of stations	Frequency	
A. Air				
a. Meterological Parameters	Wind speed, direction, relative humidity, temperature and rainfall	1 (Core Zone of existing plant)	Measured at hourly duration	90 days duration
b. AAQ parameters	PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , CO	8 (one in core zone and 7 in buffer zone)	24 hourly samples, twice a week	Total 192 samples
	Benzene, NH ₃ , BaP, Arsenic, Selenium and Lead	8 (one in core zone and 7 in buffer zone)	Twice a week at core zone and once in monitoring period in buffer zone	Total 31 samples
B. Noise	Leq (Day), Leq (Night)		Hourly readings taken for 24 hours	Total 8 measurements
C. Water				
Surface water/ Ground water quality parameters	Ground Water: Odour, turbidity, pH, EC, TDS, TSS, Hardness, Alkalinity, Sulphate, Chloride, Calcium, Sodium, Potassium, Magnesium, Iron, Fluorides, Aluminium, Silver, Barium, Boron, Bismuth, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Nickel, Selenium, Arsenic, Zinc, Mercury, Molybdenum, Nitrate Surface Water: in addition to above parameters- DO,	16 (Surface Water-8 and Ground water-8)	Once in monitoring period	Grab sample

Attributes	Parameters	Sampling		Remarks
		No. Of stations	Frequency	
	BOD, COD, Oil & Grease, Total Coliform, E. Coli			
D. Land				
a. Soil quality	pH, EC, CaCO ₃ , Specific Gravity, Moisture, Sodium, Potassium, Textural Classification, Grain Size analysis, Colour, Organic Carbon, Organic Matter, Phosphorous, Nitrate-Nitrogen	3	Once in monitoring period	-
b. Land Use	Satellite Imagery interpretation, Land use details	10 km study area	once	Will be done during EIA
E. Biological				
a. Aquatic	Flora and Fauna species	10 km study area	Once	Will be done during EIA
b. Terrestrial	Flora and Fauna species	10 km study area	Once	Will be done during EIA
F. Socio-Economic Parameter	1) Various amenities, demography, employment pattern, 2) need assessment for CSR	1) 10 km study area 2) Nearby villages	1) Census data 2) sample survey-once	Will be done during EIA
G. Traffic	Traffic volume (PCU)	2	Once in monitoring period	Hourly for 24 hours

38.13.12 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.

38.13.13 Name of the EIA consultant: M/s. Min Mec Consultancy Pvt Ltd.

38.13.14 The proposal was considered by the EAC (Industry 1) in its 38th meeting held on 15-16th June, 2021. The observations and recommendations of EAC are given as below:

Observations of the Committee

38.13.15 The Committee noted the following:

- i. PP has completed part of the project like construction of boundary wall, 60- 65 % green belt development, design and engineering and procurement action has been completed. Some equipment has already arrived. PP is requesting for waiver of Public Hearing in line with MoEF&CC Notification dated 18/03/2021.
- ii. As per the records made available by the proponent, project has not been implemented accounting for fifty percentage in its physical form or construction as mandated under

the MoEF&CC Notification dated 18/03/2021. Hence, Committee not acceded to the request of the proponent.

- iii. 12.68 acres land is available for the plant installation.

Recommendations of the Committee

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

- i. Action plan to limit the dust emission from all the stacks below 30 mg/Nm³ shall be furnished.
- ii. Action plan for fugitive emission control in the plant premises shall be provided.
- iii. Action plan for green belt development covering 33% of the plant area shall be submitted.
- iv. Action plan for 100 % solid waste utilization shall be submitted.
- v. Action plan for rain water harvesting shall be submitted.
- vi. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

38.14 Any other item: 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)] – **Revisit of conditions prescribed by the EAC – regarding.**

38.14.1 The proposal cited above was considered and recommended by the EAC in its meeting held on 18-19th May, 2021. The said proposal was referred back by the Ministry to the EAC with a request to revisit the recommended conditions. Accordingly, the conditions prescribed have been examined and revisited by the EAC. The optimized specific and general conditions for the project cited above is given below:

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 only be used either in the captive power plant (or) in the Thermal Power Plants meeting emission standards.
- iv. Tailings from Iron Ore washing plant shall be dewatered in filter press and stored dry maximum for a period of 30 days inside the plant premises.
- v. Solid waste utilization
 - Maximum 90 days of slag storage area shall be permitted inside the plant.
 - PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making.
 - PP shall recycle/reuse 100 % solid waste generated in the plant.

- Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
- Used refractories shall be recycled as far as possible.
- vi. Sinter Plant
 - Sinter cooler waste recovery system shall be installed to generate process steam or power.
 - Equipped with MEROS technology to reduce emission of SO₂, NO_x and heavy metals.
- vii. Producer gas plant shall not be established by the proponent.
- viii. Coke Oven Plant
 - Coke Dry Quenching (CDQ) shall be installed.
 - Coke Oven Gas shall be desulfurized.
 - Tar sludge shall be mixed with coal and reused.
- ix. 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.
- x. Secondary fume extraction system shall be installed on converters of Steel Melting Shop.
- xi. Basic Oxygen Furnace (BOF) gas shall be cleaned dry.
- xii. Waste Heat Recovery system for charge preheating shall be included for 65 T Electric Arc Furnace.
- xiii. Submerged Arc Furnace and Electric Arc Furnace shall be closed type with 4th hole extraction system.
- xiv. 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.
- xv. Cold Rolling Mill (CRM), color coating and galvanizing plants shall have CETP to treat and recycle the treated water from CRM complex. Sludge generated at CRM ETP shall be sent to TSDF.
- xvi. Acid recovery plant shall be included to recover acid from pickling lines.
- xvii. Dust emission from Steel Plant stacks shall not exceed 30 mg/Nm³.
- xviii. Water requirement for the plant shall be met from River Tungbhadra or Krishna. Ground water abstraction is not permitted.
- xix. Green Belt shall be developed in 33 % land with tree density of 2500 trees per ha. (or 1000 trees per acre).
- xx. Specific water consumption in the steel plant shall be less than 6.0 m³/t of finished product.
- xxi. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.
- xxii. Dedicated railway siding within the steel plant complex shall be established by the proponent by December, 2023 for the transportation of materials as committed.
- xxiii. 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

- ii. 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. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.
- ii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

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

VIII. Public hearing and Human health issues

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

IX. Environment Management

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

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

X. Miscellaneous

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

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 NAQPM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

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

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
- ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyer-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 changing, charging emission centre, Coke quenching technology, pushing emission control.
5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.

ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

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

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

Executive Summary

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

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

From: cnpandey@iitgn.ac.in

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

Cc: "Sujit Kumar Bajpayee" <sujit.baju@gov.in>, "MAHENDRA PHULWARIA" <m.phulwaria@gov.in>

Sent: Sunday, June 27, 2021 8:17:15 PM

Subject: Re: DRAFT MoM OF 38 EAC HELD ON 15-16TH JUNE 2021

Dear Mr. Sundar,

The final and approved MoM of the 38th EAC is enclosed herewith for further necessary action regarding uploading this on PARIVESH.

With best wishes,

C. N. Pandey,

Chairman,

EAC (industry I), MoEFCC, Govt of India.