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

Summary record of the twenty nineth (29th) meeting of Re-Constituted Expert Appraisal Committee (REAC) held on 27th January, 2021 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.

The twenty nineth 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 **27th January, 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) issue. The list of EAC attendees is as follows.

S.No.	Name	Position	27/01/2021
1.	Dr. ChhaviNath Pandey	Chairman	Present
2.	Dr. Bipin Prakash Thapliyal, Director, CPPRI.	Member	Absent
3.	Dr. Siddharth Singh, Scientist 'E' IMD.	Member	Present
4.	Dr. Jagdish Kishwan	Member	Present
5.	Dr. G.V. Subramanyam	Member	Present
6.	Dr. Tejaswini Ananth Kumar	Member	Present
7.	Shri. Ashok Upadhyaya	Member	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present
9.	Dr. Sanjay Deshmukh	Member	Absent
10.	Prof. S.K. Singh	Member	Present
11.	Dr. R. Gopichandran	Member	Absent
12.	Shri Jagannadha Rao Avasarala	Member	Present
13.	Shri. J.S.Kamyotra	Member	Present
14.	Shri. A.K. Agrawal	Member Secretary	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 28th meeting held during 18th – 20th January, 2021 were confirmed by the EAC as already uploaded on PARIVESH.

27th January, 2021

29.1 Expansion of existing steel plant from 0.1 MTPA billet to 0.26 MTPA billet out of which 0.132 MTPA to be converted to TMT rods by **M/s. Bhaskar Steel & Ferro Alloy Pvt Ltd** located at Badtumkela **District Sundergarh, Odisha**. [Online Proposal No. IA/OR/IND/193242/2020; File No. J-11011/491/2008-IA.II(I)] **– Environment Clearance – regarding.**

29.1.1 M/s Bhaskar Steel & Ferro Alloys Ltd has made an online application vide proposal no. IA/OR/IND/193242/2020 dated 15/01/2021 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 appraised at the Central level.

Details submitted by Project proponent

29.1.2 The proposal titled "*modification cum expansion of existing project form 0.1 MTPA billet to 0.25 MTPA rolled product at Badtumkela District Sundergarh, Odisha by M/s Bhaskar Steel and ferro Alloys"* was originally accorded ToR on 31/07/2015 and subsequently amended on 18/07/2017. Public hearing for the project was held on 25/05/2018 and application for grant of EC was submitted on 29/06/2020. The maximum extended validity period of the ToR is for a period of four years i.e., till 30/07/2019. As per the Ministry's O.M. dated 29/08/2017, if the proposal for EC has not been submitted within the validity period of ToR, the process shall be started de-novo. In view of this, the proposal was returned to the PP with a request to start the process de-novo. Accordingly, the proponent started the process de-novo by applying for fresh ToR along with a request to consider the proposal based on the public hearing held on 25/05/2018.

29.1.3 The details of the ToR are furnished as below:

Date of Application	Consideration	Details	Date of Accord
07/08/2020	22nd meeting of EAC held during 26th - 28th August 2020	Terms of Reference	18/09/2020

29.1.4 The project of M/s Bhaskar Steel & Ferro Alloys Ltd located in Badtumkela Village, Banei.Tehsil, Sundergarh District, Odisha State is for enhancement of production of steel billet from 0.1 MTPA to 0.26 MTPA out of which 0.132 MTPA to be converted to TMT rods.

29.1.5 Environmental Site Settings

S. No.	Particulars	Details	Remarks
i.	Total land	33.99 ha [Private: 33.99 ha]	Land use: Land already acquired and converted for Industrial usage.
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Land already acquired and converted for Industrial usage.	
iii.	Existence of habitation & involvement of R&R, if any.	The expansion is carried out within existing premises with no habitation within the premises.	R&R is not applicable
iv.	Latitude and Longitude of the project site	21º49'48.53''N to 21º49'56.73'' N Latitudes and 84º55'30.52'' E to 84º 56'01.31'' N Longitudes.	
v.	Elevation of the project site	152 m	

S. No.	Particulars	Details	Remarks
vi.	Involvement of Forest land if any.	Not Applicable	No forest land is involved
vii.	Water body exists within the project site as well as study area	**Project site:** Nil **Study area** Name with distance – Brahmani River at a distance of 1.68 km	1.3 km from project boundary
viii.	Existence of SZ/ ESA/ national park / wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	NIL	

29.1.6 The existing project was accorded environmental clearance vide letter no. J-11011/491/2008-IA II(I) dated 11/11/2008. Consent to Operate for the existing unit was accorded by Odisha State Pollution Control Board vide lr. no. 3662/IND-I-CON-523. The validity of CTO is up to 31.03.2021.

29.1.7 Implementation status of the existing EC:

Sl. No.	Facilities	Units	As per EC dated 11/11/2008	Implementation Status as on 20.03.2020	Production as per CTO
1.	DRI Kiln	TPD	1 X 300	Commissioned	96000 TPA
2.	Induction Furnace	T	4 X 8		102400 TPA
3.	Ladle Furnace	T	1X20, 1X15		Matching
4	CPP -WHRB	MW	8		8 MW
5.	CPP - AFBC	MW	4		4 MW
6.	Coal Sizer	TPH	200 (CTE no 18563/Ind-II-NOC-5235 dt 04.11.2011)		200 TPH
7.	Iron Ore Crusher	TPH	100 (CTE no 18563/Ind-II-NOC-5235 dt 04.11.2011)		100 TPH
8.	Slag Crusher	TPH	10 (CTE no 18563/Ind-II-NOC-5235 dt 04.11.2011)		10 TPH
9.	Dry Coal Separator	TPH	50 (CTE no 18563/Ind-II-NOC-5235 dt 04.11.2011)	Installed not commissioned	CTO shall be considered only obtaining EC.

29.1.8 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.	DRI Kiln	1X300 TPD	96000	1X350 + 1X100 TPD	144000	1X300 + 1X350 + 1X300 TPD	240000
2.	IF with LF	4X8 T IF, 1X20 T & 1X15 T LF	102400	4X12T, 1X3T IF & 1X16T LF	163200	4X8 T + 4X12T +1X3 T IF with 1X20 T+1X15t+1 X 16T LF	265600
3.	RM	Nil	nil	25 TPH	1,32,000	25 TPH	1,32,000
4.	CPP (WHRB)	1x8MW	8 MW	1x10MW	10MW	1x8 MW+1x10 MW	18 MW
5.	CPP (AFBC)	1X4MW	4 MW	1X6 MW	6MW	1x4MW+ 1x6MW	10MW
6.	Dry coal separator	1x50 TPH	Installed Not commissioned	-	-	1x50 TPH	
7.	Coal sizer with Truck tipper	1X200 TPH	Nil	-	-	1x200 TPH	
8.	Mobile crusher	1x100TPH	Nil	-	-	1x100 TPH	
9.	Slag crusher	1x10 TPH	Nil	-	-	1x10 TPH	

29.1.9 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:

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Hematite Iron ore	143200	214800	358000	OMC	140	Rail
2	Coal for DRI	116000	174000	290000	MCL	138	Rail
3	Boiler grade Coal	24000	36000	60000	MCL	138	Rail
4	Pig	13520	16480	30000	Local purchase	11	Road

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
5	Scrap	6760	8240	15000	Local purchase	4	Road
6	Sponge Iron	-	20000	20000	Local purchase	11	Road
7	Lime stone	6000	9000	15000	Biramitrapur	95	Rail

29.1.10 The water requirement for the project is estimated as 1400.5 m^3 /day, out of which 1257.7 m^3/day of fresh water requirement will be obtained from Brahmani river and the remaining requirement of 142.5 m^3 /day will be met from the rain water harvesting pond. The permission for drawl of surface water is obtained from Govt. of Odisha vide agreement dated 17/01/2020.

29.1.11 The power requirement for the project is estimated as 28 MW, out of which 28 MW will be obtained from the CPP.

29.1.12 Baseline Environmental Studies:

Period	01st Mar 2019 to 31st May 2019
AAQ parameters at 8 locations	$PM_{2.5}$ = 15.0 to 35.0 µg/m^3 PM_{10} = 45.0 to 85.0 µg/m^3 SO_2 = 4.0 to 13.0 µg/m^3 NOx = 8.0 to 29.0 µg/m^3 CO = 202.0 to 899.0 µg/m^3
AAQ modelling	PM_{10} = 3.0 µg/m^3 SO_2 = 4.45 µg/m^3 NOx = Nil
Ground water quality at 8 locations	pH: 6.8 to 7.3, Total Hardness: 102 to 165 mg/l, Chlorides: 16 to 53 mg/l, Fluoride: 0.13 to 0.45 mg/l. Heavy metals are within the limits.
Surface water quality at 8 locations	pH: 6.8 to 7.8; DO: 5.9 to 7.2 mg/l and BOD: 4 to 10 mg/l. COD from 6.8 to 17 mg/l
Noise levels	54.1 to 63.2 for the daytime and 43.1 to 53.6 for the Night time.
Traffic assessment study findings	At present 495 heavy, 421 light, 239 two wheelers and 216 three wheelers move in adjacent road meeting NH143. The total emission for present scenario is 1.46 µg/m^3 Total suspended particulates (TSP), 5.0 µg/m^3 NOx and 6.0 µg/m^3 CO. Due to proposed expansion additional 100 heavy, 90 light, 316 two wheelers and 48 three wheelers will ply resulting in additional 0.35 µg/m^3 TPS, 2.00 µg/m^3 NOx and 2.04 µg/m^3 CO.
Flora and fauna	No schedule I fauna exists in the study area.

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

S. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment
SOLID WASTE				
1	Char	DRI Kiln	36,000	Use in AFBC
2	IF Slag	Induction Furnace	32,000	To be used in Land Fill after iron recovery
3	Fly Ash	CPP AFBC	1,28,000	To be given to cement plant & use in Brick Manufacturing
4	Bottom ash	CPP AFBC	20,000	Use in brick manufacturing
HAZARDOUS WASTE				
1	Used Grease	Moving equipment	500	Stored temporarily and being lifted by authorized Vendor.
2	Used Oil Filters	Compressors, power packs, vehicles.	70 nos	
3	Waste Jute/Cotton	Use for cleaning machines	200	
4	Oily Sludge	Power Pack Rooms	40	
5	Used Oil	Transformer and all Mechanical Engines	6.2	

29.1.14 Public Consultation:

Details of Advertisement given	17/04/2018
Date of Public Consultation	25/05/2018
Venue	Ground near RMC Godown, Saleibahal, Sunderagrh, Odisha
Presiding Officer	District Magistrate
Major Issues Raised	i. Concern on Pollution control, ii. Employment opportunities, iii. Drinking water facilities, iv. Education & Training and v. other peripheral developments.

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.	Concern on Pollution control,	APC equipment, construction of ETP &	1340	1.5 years

S. NO	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget, Rs Lacs	Target date for implementation of action plan
		STP, Solid waste Management		
2.	Drinking water facilities,	Installation of 10 nos. of tubewells @ 1.1 lakhs in villages after consultation with local administration	11	3 years
3.	Employment opportunities,	Training course for technical persons on advance industrial technology and exposure to industrial process, energy conservation, safety and environment protection	45	3 years
4.	Education & Training			
5.	Other peripheral developments.	• Construction of 2 nos. of community toilets in consultation with local administration • Providing high yield paddy seeds, fertilizers, and drip irrigation points with electricity • Adoption of 5 villages for plantation and distribution of saplings @1000 plants /village • Under swachha Bharat yojana dump yard to be rebuilt, supply of bins for waste collection and tractors	50 16.4 5.5 46	3 years
6	Prevailing Kidney disease	Free health check-up camp and distribution of free medicines in consultation with local administration	35	3 years
7	Free health care facilities			
8	Street light facilities	Providing 12W solar LED street light (preferably solar) on road • Rajamunda to Tumkela – 3.6 km • Lighting in Gamlei, Urumkela &	13.6	3 years

S. NO	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget, Rs Lacs	Target date for implementation of action plan
		Saradhapur @ 10 nos. • Lighting in Gamlei road – 3.6 km		
9	Construction of guard wall along bank of river Brahmani	Not possible		
10	Sale of TMT rods to local public with subsidized rate	Possibility will be explored for creation of local markets		
11	Traffic post at Rajamunda	Construction of traffic post at Rajamunda chawk	5	1 year

29.1.15 The capital cost of the project is Rs. 270 Crores and the capital cost for environmental protection measures is proposed as Rs. 13.4 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 1.34 Crores. The employment generation from the proposed expansion is 1000. The details of cost for environmental protection measures are as follows:

S. No.	Description of Item	Existing (Rs. In lakhs)	
		Capital Cost	Recurring Cost
i.	Air Pollution Control/ Noise	470	47
ii.	Waste water management	80	8
iii.	Solid waste management	200	20
iv.	Environmental monitoring	100	10
v.	Occupational health	210	21
vi.	Safety equipments & Disaster Management budget	180	18
vii.	Green Belt Development	100	10
Total		**1340**	**134**

29.1.16 Greenbelt will be developed in 13.6 ha which is about 40% of the total project area. A 6m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 5160 saplings will be planted and nurtured in 6.02 hectares in 2 years.

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

29.1.18 Name of the EIA consultant: M/s Global Tech Enviro Experts Pvt ltd [S.No. 91, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021].

29.1.19 **Certified compliance report from Regional Office:**

The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar *vide* letter no. 101-520/09/EPE, dated 20/03/2020 in the name of M/s Bhaskar Steel & Ferro Alloys Ltd. The Action taken report regarding the partially/non-complied condition was submitted to Regional officer MoEF&CC, Bhubaneshwar vide letter no. BSFAPL/RKL/20-21/21 dated 06/06/2020. MoEF&CC (RO), evaluated the same and has issued letter dated 11/01/2021. The details of the observations made by RO in the report dated 11/01/2021 along with its re-assessment / present status as furnished by the PP is given as below:

Sl.	**Non-compliances details**	**Observation of RO (abridged)**	**Condition no.**			**Re-assessment by RO / Response by PP**
			EC date	**Specific**	**General**	
1	PAs have not installed online ambient air quality monitoring stations in the project site	PAs are monitoring by third party monitoring agency. Online monitoring will be installed along with expansion project	11/11/2008	No condition mentioned in EC		Partially Complied Response By PP: Online monitoring will be installed along with expansion project.
2	It is required to provide NABL accreditation of M/s R V Briggs & Co. Pvt Ltd	PAs have submitted copies of NABL Accreditation	11/11/2008			Complied.
3	Provide photograph of surface runoff collection & treatment system	Photographs provided	11/11/2008			Complied.
4	As per preamble total project area is 1.8 acres. It is required to provide detailed information regarding development of green belt	Total project area is 34 ha. 1.8 acres mentioned is typographical error.	11/11/2008			Complied.

Sl.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
5	Detailed point wise compliance status of all environmental protection measures and safeguards recommended in EIA/EMP report to be submitted.	PAs are in process of complying all environmental protection measures. Detailed expenditure statement submitted to RO, Bhubaneshwar.	11/11/2008	i) to xi)	-	Being Complied.

Serious non-compliances detected. RO Requested that the Ministry may appraise the issue of coal separator.

It has been observed that PAs have obtained Consent-To-Establish (CTE) from State Pollution Control Board, Odisha for 50 TPH Dry Coal separator and 10 TPH slag crusher vide letter no. 18563/INDII-NOC-5235 dated 04.11.2011. The said components were not mentioned in EC and as per the Special Condition No.-1 of CTE: "The proponent has to seek clarification from the MoEF, Govt. of India or SEIAA, Orissa regarding applicability of EIA notification, 2006 for installation of 50 TPH dry coal separator by air jigging method". However, PAs have not approached Ministry for clarification. The said component was installed in the existing plant and applied for Consent-To-Operate (CTO}. As per the CTO vide letter no. 3181/IND-I-CON-5237 dated 28.03.2019, it has been mentioned that "The CTO for Dry Coal Separator (50 TPH) through air jigging shall be considered only after obtaining EC or Clarification from MoEF&CC, Govt. of India regarding EIA applicability as. per CTE condition." In addition, it has been observed that PAs have obtained CTE for installation of 3 T/Heat of Induction furnace (IF) for production of M.S. Billets of capacity 2700 TPA inside the existing premises vide letter no. 1746/Ind-II-NOC-5963 dated 25.01.2016. The same has also not mentioned in EC. Subsequently, PAs have included the 1 X 3 TPH in the amended TOR vide letter no. J-1011/491/2008-IA.II (} dated 17.11.2016 and 18.08.2017. It is requested to the Ministry may appraise the above issues.

29.1.20 The Member Secretary apprised the EAC that in the instant proposal under consideration, RO reported that the facilities namely for 50 TPH Dry Coal separator, 10 TPH slag crusher, 3 T/Heat of Induction furnace (IF) for production of M.S. Billets of capacity 2700 TPA, coal sizer of 200 TPH and iron ore crusher of 100 TPH have been established and operated at the site except dry coal separator based on the Consents issued by Odisha Pollution Control Board without obtaining prior Environment Clearance. It was suggested to adopt the following principle as approved by the Competent Authority with respect to consideration of violation cases in the instant proposal under consideration.

i. Send the matter to the Sector EAC for consideration of the case on merit.
ii. Take action against the alleged violation as per law.
iii. Do not wait for either the evidence of action having been started or violation proceedings to finish before taking up the case on merit.
iv. The EC if given after consideration on merit would be valid from the date it is given and not with retrospective effect. For the period before it, if violation is established by the court or the competent authority, the punishment/penalty as per law would be imposed.

Observations of the Committee

29.1.21 The Committee noted the following:

i. As per the RO report, the facilities namely for 50 TPH Dry Coal separator, 10 TPH slag crusher, 3 T/Heat of Induction furnace (IF) for production of M.S. Billets of capacity 2700 TPA, coal sizer of 200 TPH and iron ore crusher of 100 TPH have been established and operated at the site except dry coal separator based on the Consent issued by Odisha Pollution Control Board without obtaining prior Environment Clearance. The committee was of the view that dry coal separator and coal sizer is a part of iron ore beneficiation process and PP could have obtained EC prior to the establishment of the same. For the remaining facilities established, EC may not be required under the purview of EIA, 2006.

ii. As per Ministry's O.M. No. J-11015/286/2007-IA.II(I) dated 7/2/2020, any specific non-compliance singled out while the project is being appraised by the EAC, the concerned sector shall issue Show Cause Notice.

iii. TOR point # 9 pertaining to Corporate Environment Policy has not been addressed in EIA Report.

iv. The issues raised during the public consultation in verbatim by each stake holder and action plan to address the same in physical terms as mandated under MoEF&CC O.M. dated 30/09/2020 have not been furnished in EIA report.

v. Action plan for green belt development covering 40% of the project area has not been furnished.

vi. Details of the pollution control devices to achieve 30 mg/Nm^3 particulate emission has not been furnished.

vii. Parking area for 200 trucks shall be provided and the area shall be indicated on the layout drawing.

viii. Details of OHS center to be established shall be furnished. Details of activities to be completed in Rs. 2.1 Cr budget shall be explained.

ix. Capacity of flyash brick manufacturing plant shall be furnished.

x. Chapter 5 of EIA report - Analysis of alternate technology needs to be explained.

xi. Action plan for providing impervious lining for raw material stockpiles and garland drains around the stock piles shall be submitted.

Recommendations of the Committee

29.1.22 In view of the foregoing observations and deliberations, the committee recommended the following:

i. Show cause notice may be issued to the unit as they have established the dry coal separator and coal sizer which are part of iron ore beneficiation process without obtaining prior Environment Clearance under the provisions of EIA, 2006.

ii. Instant proposal is being considered on merit and the same is returned in present form due to the technical shortcomings enlisted at paragraph number 29.1.21.

29.2 Expansion of Dhenkanal Steel Plant from 3.0 MTPA to 3.55 MTPA and Power plant from 385 MW to 695 MW by **M/s Rungta Mines Limited** located at villages Jharbandh, Galpada, Tarkabeda, Kothalu, BeruanPal, Kankalu, Benipathar, Kadala and Badamunda, **District Dhenkanal, Odisha**. [Online Proposal No. IA/OR/IND/151574/2020; File No. J-11011/309/2018-IA.II(I)] – **Environment Clearance** – regarding.

29.2.1 M/s Rungta Mines Limited has made an online application vide proposal no. IA/OR/IND/151574/2020 dated 18/01/2021 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. 2(b) Mineral beneficiation; 3(a) Metallurgical industries (ferrous & nonferrous); 3(b) Cement plants; 4(b) Coke oven plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

29.2.2 The details of the ToR are furnished as below:

Date of Application	Consideration	Details	Date of Accord
11/09/2020	Standard ToR granted	Terms of Reference	19/09/2020

29.2.3 The project of M/s Rungta Mines Limited located in Jharbandh, Galpada, Tarkabeda Kothalu, Beruan Pal, Kankalu, Benipathar, Kadala and Badamunda Villages, Hindol Tehsil, Dhenkanal District, Odisha State is for enhancement of production of steel from 3.0 to 3.55 MTPA.

29.2.4 Environmental Site Settings

S. No.	Particulars	Details
i.	Total land	715.89 ha [Private: 598.02 ha; Govt: 117.87 ha]
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Acquired: 246.25 ha Balance under acquisition. Details given as below in a separate table at para 29.2.5.
iii.	Existence of habitation & involvement of R&R, if any.	No R&R is involved. It has been envisaged that there will be 500 land losers for the proposed plant, which will be provided compensation and preference in the employment.

S. No.	Particulars	Details
iv.	Latitude and Longitude of the project site	**Latitude:** Plant area: 20°45'05'' to 20°46'23'' N Colony area: 20°45'51'' to 20°46'03'' N **Longitude:** Plant area: 85°15'42' to 85°18'39" E Colony area: 85°18'39" to 85°18'55" E
v.	Elevation of the project site	65-100 m AMSL
vi.	Involvement of Forest land if any.	7.8 acres forest land involved. Stage II forest clearance had been obtained from MoEF&C vide letter No. 5-ORB207/2014-BHU dated 02/07/2015.
vii.	Water body exists within the project site as well as study area	**Project site:** 17 ponds, 1 Aquaduct and 5 seasonal first-order drains. **Study area:** Nearest stream is Nigra Nadi (or Lingra Nadi) at 0.7 km North and nearest river is Brahmani River at 4.9 km NE.
viii.	Existence of SZ/ ESA/ national park / wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The nearest National Park (Simplipal National Park), WL (Satkosia WLS) are located at a distance of 137 km (in NE) and 22 km (in SW) respectively from the site.

29.2.5 Land acquisition details

Plant Area	Land owner-ship	Status			Remark
		Acquired, acres	Under acquisition, acres	Total, acres	
Existing as per EC	Private	540.705	0	540.705	Acquired through IDCO vide Deed of Agreement dated 06.11.2008
	Govt.	67.790	0	67.790	**59.99 acres** Govt. Land acquired through IDCO vide Lease Deed dated 20.07.2006 **7.80 acres** Forest Land, vide Memorandum on Handing over possession dated 20.05.2017 and 25.05.2017
	Govt.	0	66.27	66.27	**66.27 acres** land are under advanced stage for allotment as per Tahasildar, Hindol's letter no. 1671 **15.38 acres** from above- possession received by IDCO
	Total	**608.495**	**66.27**	**674.765**	
Expan-	Private	0	937.033	937.033	**1160.505 acres** - IPICOL had issued in-

Plant Area	Land owner-ship	Status			Remark
		Acquired, acres	Under acquisition, acres	Total, acres	
sion	Govt.	0	157.202	157.202	principal approval for allotment (comprising of **1094.235 acres** area for expansion + under acquisition **66.27 acres** of existing) vide letter dated 02.07.2020. Status of **1094.235 acres** is as follows: • **1090.767 acres -** IDCO has issued a letter requiring 10% deposit, which has been paid on 08.01.2021 and communicated vide letter dt. 12.01.2021. • **3.468 acres -** under process
	Total	**0**	**1094.235**	**1094.235**	

29.2.6 The existing project was accorded environmental clearance vide letter no. J-11011/309/2018-IA.II.(I) dated 04/06/2020. Consent to Operate for the existing unit will be obtained after completion of construction.

Chronology of EC obtained:

Sl. No.	EC Details
1.	EC vide letter no J-11011/241/2009-lA.II(I) dated 02.08.2010 for integrated steel plant 1.9 MTPA steel and 385 MW power plant
2.	EC vide letter no. J-11011/241/2009-lA.II(I) dated 25.01.2011 (written as 2010 in letter) for amendments to add lime plant, dolo plant, oxygen plant and vacuum degassing
3.	EC vide letter no. J-11011/241/2009-lA.II(I) dated 27.08.2015 for validity extension (i.e. within 5 years) but due to MoEF&CC's Notification dated, the validity was extended by default to 7 years. Nearing 7 years
4.	EC vide letter no J-11011/241/2009-lA.II(I) 07.07.2017 for extension of validity of EC
5.	EC vide letter no. J-11011/241/2009-lA.II(I) dated 20.09.2018 for change in configuration of power plant
6.	EC vide letter no. J-11011/309/2018-IA. II(I) dated 11.09.2019 for Integrated Steel Plant (2.85 MTPA Steel)
7.	EC vide letter no. J-11011/309/2018-IA. II(I) dated 13.04.2020 for change in configuration of pellet plant from 2x1.47 MTPA to 1x2.948 MTPA
8.	EC vide letter no. J-11011/309/2018-IA.II(I) dated 04.06.2020 for expansion to 3.0 MTPA under clause 7(ii) of EIA Notification 2006

29.2.7 Implementation status of the existing EC:

Sl. No.	Facilities	Unit	As per EC dated 04.06.2020	Implementation Status as on 23.01.2021	Production as per CTO
1	Beneficiation Plant	MTPA	5.4 (2X2.69 MTPA)	To be implemented	Not applicable since plant is under construction
2	Pelletisation Plant	MTPA	2.948 (1X2.948 MTPA)	Under construction	-do-
3	Coal Washery (1X400TPH+1X235 TPH)	MTPA	4.141	To be implemented	-do-
4	DRI Plant				
4.1	DRI (I)	MTPA	0.4745 (2X500 TPD)	Under Construction	-do-
4.2	DRI (II)	MTPA	1.1387 (4X600 TPD)	To be implemented	-do-
	Total	**MTPA**	**1.6132**		
5	Mini Blast Furnace	MTPA			
5.1	MBF I	MTPA	0.567 (1X600 cum.)	To be implemented	-do-
5.2	MBF II	MTPA	0.992 (1X1050 cum.)	To be implemented	-do-
	Total	**MTPA**	**1.559**		
6	Sinter Plant				
6.1	Sinter Plant (I)	MTPA	0.612 (1X64 sq.m.)	To be implemented	-do-
6.2	Sinter Plant (II)	MTPA	1.051 (1X110 sq.m.)	To be implemented	-do-
	Total	**MTPA**	**1.663 (1X64 + 1X110 sq.m.)**		
7	Coke Oven Plant	MTPA	1.12 (16 batteriesX 70,000 TPA)	To be implemented	-do-
8	Steel Melting Shop	MTPA	**2.618**		
8.1	Steel Melting via Induction Furnace	MTPA	0.693 (7X 20 T IF +	5X20 T IF Under	-do-

Sl. No.	Facilities	Unit	As per EC dated 04.06.2020	Implementation Status as on 23.01.2021	Production as per CTO
	Route		4X25 T LRF)	Construction	
8.2	Steel Melting via Electric Arc Furnace-Vacuum Degassing-Argon Oxygen Decarburization Route	MTPA	1.925 MTPA (1X90 T + 1X160 T EAF and 1X90 T + 1X160 T LRF)	To be implemented	-do-
8.3	Continuous Casting Machine (Billets/ Bloom Caster/ Slab)	MTPA	2.566 MTPA (3 nos. X 4 strands)	To be implemented	-do-
9	Finished Product Facilities	MTPA	3.0		
9.1	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ others)	MTPA	1.75 (5 nos.X0.2 + 1 no.X0.3 + 1 no.X0.45 MTPA)	1X0.20 MTPA +1x0.30 MTPA Under construction	-do-
9.2	Strip Mill/ Sheet/ Coil/ Wire & Bar Mill/ Wire Rope	MTPA	0.85 (1 no.X0.45 + 1no. X0.4 MTPA)	To be implemented	-do-
9.3	Ductile Pipe Plant	MTPA	0.400 (2 nos.X0.2 MTPA)	To be implemented	-do-
10	Producer Gas Plant	Million Nm^3/ Annum	480 (20 nos.X3000 Nm^3/hr)	To be implemented	-do-
11	Oxygen Plant	MTPA	0.098 (1 no.X100 + 1 no.X180 TPD)	To be implemented	-do-
12	Lime Plant	MTPA	0.3045 MTPA (1 no.X 300 + 1 no.X 570 TPD)	To be implemented	-do-
13	Cement Plant	MTPA	1.686 (1 no.X2600 + 1 no.X2300 TPD)	To be implemented	-do-
14	Captive Power Plant	MW	385		
14.1	Waste Heat Recovery Boiler (WHRB) based Captive Power Plant (CPP)	MW	135		

Sl. No.	Facilities	Unit	As per EC dated 04.06.2020	Implementation Status as on 23.01.2021	Production as per CTO
(a)	DRI Kiln exit gas based	MW	68 (2X50+2 X60 TPH)	25 MW Under Construction	-do-
(b)	MBF Gas based	MW	31 (1 no.X50 + 1 no.X90 TPH)	To be implemented	-do-
(c)	Coke Oven Gas based	MW	36 (1 no.X 60+1 no. X100 TPH)	To be implemented	-do-
14.2	AFBC/CFBC based CPP	MW	250 (2 nos.X125 + 4nos.X250 TPH)	25 MW Under Construction	-do-

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

Sl. No.	Proposed Plant facilities	Unit	Capacity as per the EC dated 04/06/2020	Proposed Additional/ change	Total After Expansion
	Overall finished steel capacity	**MTPA**	**3.0**	**0.55**	**3.55**
1	Beneficiation Plant	MTPA	5.4 (2X2.69 MTPA)	-	5.4 (2X2.69 MTPA)
2	Pelletisation Plant				
	Pellet Plant (I)	MTPA	2.948 (1X2.948 MTPA)	0.802	3.75
	Pellet Plant (II)	MTPA	-	25.0 (4X3.75 +10x1 MTPA)	25.0 (4X3.75 MTPA +10x1 MTPA)
	Total	**MTPA**	**2.948**	**25.802**	**28.75**
3	Coal Washery (1X400TPH+1X235 TPH)	MTPA	4.141	0.888	5.029
4	DRI Plant				
4.1	DRI (I)	MTPA	0.4745 (2X500 TPD)	0.0473 (same kilns)	0.5218 (2X500 TPD)
4.2	DRI (II)	MTPA	1.1387 (4X600 TPD)	-0.2761 (reduced 1 X600 TPD)	0.8626 (3X600 TPD)

Sl. No.	Proposed Plant facilities	Unit	Capacity as per the EC dated 04/06/2020	Proposed Additional/ change	Total After Expansion
4.3	DRI (III)	MTPA	-	0.8626 (2X900TPD)	0.8626 (2X900TPD)
	Total	**MTPA**	**1.6132**	**0.6338**	**2.247**
5	Mini Blast Furnace	MTPA			
5.1	MBF I	MTPA	0.567 (1X600 cum.)	0.210 (same BF)	0.777 (1X600 cum.)
5.2	MBF II	MTPA	0.992 (1X1050 cum.)	0.174 (Configuration revised)	1.166 (2X450 cum.)
	Total		**1.559**	**0.384**	**1.943**
6	Sinter Plant				
6.1	Sinter Plant (I)	MTPA	0.612 (1X64 sq.m.)	0.908 (configuration revised)	1.520 (2X80 sq.m.)
6.2	Sinter Plant (II)	MTPA	1.051 (1X110 sq.m.)	0.256 (same plant)	1.307 (1X110 sq.m.)
	Total	**MTPA**	**1.663 (1X64 + 1X110 sq.m.)**	**1.164**	**2.827 (2X80 + 1X110 sq.m.)**
7	Coke Oven Plant	MTPA	1.12 (16 batteriesX 70,000 TPA)	-0.05 (Configuration revised)	1.07 (6 batteries x 70,000 TPA + 1 battery x 250,000TPA + 1 battery x 400,000 TPA)
8	**Steel Melting Shop**	**MTPA**	**2.618**	**0.602**	**3.22**
8.1	Steel Melting via Induction Furnace Route	MTPA	0.693 (7X 20 T IF + 4X25 T LRF)	0.847 (8 X20T IF + 3x45T LRF)	1.54 (15 X20 T IF + 4x25T LRF + 3x45 T LRF)
8.2	Steel Melting via Electric Arc Furnace-Vacuum Degassing-Argon Oxygen Decarburization Route	MTPA	1.925 MTPA (1X90 T + 1X160 T EAF and 1X90 T + 1X160 T LRF)	-0.245 (Configuration revised)	1.680 (1X90 T+1X110 T and 1x90 T LRF+1x110T LRF)
8.3	Continuous Casting Machine (Billets/ Bloom Caster/ Slab)	MTPA	2.566 MTPA (3 nos. X 4 strands)	0.59 (8 nos. X 4 Strand)	3.156 (11 nos. X 4 Strand)

Sl. No.	Proposed Plant facilities	Unit	Capacity as per the EC dated 04/06/2020	Proposed Additional/ change	Total After Expansion
9	**Finished Product Facilities**	**MTPA**	**3.0**	**0.55**	**3.55**
9.1	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ others)	MTPA	1.75 (5 nos.X0.2 + 1 no.X0.3 + 1 no.X0.45 MTPA)	0.8 (Configuration revised)	2.55 (2 nos.X0.2 + 4 nos.X0.3 + 1 no. X0.45 + 1 nos. X0.5 MTPA)
9.2	Strip Mill/ Sheet/ Coil/ Wire & Bar Mill/ Wire Rope	MTPA	0.85 (1 no.X0.45 + 1no. X0.4 MTPA)	-0.35 (Configuration revised)	0.5 (1 no.X0.2 + 1no.X0.3 MTPA)
9.3	Ductile Pipe Plant	MTPA	0.400 (2 nos.X0.2 MTPA)	0.1 (Configuration revised)	0.5 (2 nos.X0.25 MTPA)
10	Producer Gas Plant	Million Nm^3/ Annum	480 (20 nos.X3000 Nm^3/hr)	4907 (32 nos.X12500 + 28 nos.X7500 Nm^3/hr)	5387 (20 nos.X3000 + 32 nos.X12500 + 28 nos.x7500 Nm^3/hr)
11	Oxygen Plant	MTPA	0.098 (1 no.X100 + 1 no.X180 TPD)	0.196 (Configuration revised & added)	0.294 (2 nos.X180 TPD + 1 no.X220 TPD + 2 nos.X130TPD)
12	Lime Plant	MTPA	0.3045 MTPA (1 no.X 300 + 1 no.X 570 TPD)	0 (Configuration revised)	0.3045 MTPA (1 no.X390 + 1 no.X 480 TPD)
13	Cement Plant	MTPA	1.686 (1 no.X2600 + 1 no.X2300 TPD)	-	1.686 (1 no.X2600 + 1 no.X2300 TPD)
14	**Captive Power Plant**	**MW**	**385**	**310**	**695**
14.1	Waste Heat Recovery Boiler (WHRB) based Captive Power Plant (CPP)	MW	135	100	235
(a)	DRI Kiln exit gas based	MW	68 (2X50+2X60 TPH)	82 (Configuration revised & added)	150 (2 nos.X50 + 3 nos.X85 TPH + 2 nos.X120 TPH)
(b)	MBF Gas based	MW	31 (1 no.X50 + 1	4 (Configuration	35 (1 no.X50 + 2

Sl. No.	Proposed Plant facilities	Unit	Capacity as per the EC dated 04/06/2020	Proposed Additional/ change	Total After Expansion
			no.X90 TPH)	revised)	nos.X45 TPH)
(c)	Coke Oven Gas based	MW	36 (1 no.X 60+1 no. X100 TPH)	4	40 (2 no.X60 + 1no.X40TPH)
(d)	TRT	MW	-	10	10
14.2	AFBC/CFBC based CPP	MW	250 (2 nos.X125 + 4nos.X250 TPH)	210 (Configuration revised & added)	460 (10 nos.x125 + 1 nos.X130 + 3nos.X250 TPH)
15	Colony	Acres	-	-	34

29.2.9 The Company commits to use mill scale in house in pellet making.

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

Sl. No	Raw Material	Total after expansion	Source	Distance from site (km)	Mode of transportation
1.	Coal and coal fines	8,475,526	Domestic open market/ e-auction/ linkage	30	Road/Rail
2.	Iron Ore/ Fines/ concentrate	36,404,530	Pvt. Mines in Odisha/ OMC/ Open market	240	Road/Rail
3.	Bentonite	431,250	Open market	1800	Road/Rail
4.	Clay component	28,905	Open market	300	Road/Rail
5.	Coke, Coke Breeze and fines	488,725	Open market/ imported	185	Road/Rail
6.	Coking Coal	1,615,700	Open Market/ linkage / imported	185	Road/Rail
7.	Dolomite	1,131,903	Open market	300	Road/Rail
8.	Flocculant	269	Open market	130	Road
9.	Fuel oil	60,900	Open market	130	Road
10.	Gypsum	84,280	Open market	130	Road
11.	Hot Metal/ Pig Iron	16,341	Open market	30	Road
12.	Lime Stone	2,439,519	Open market	300	Road/Rail
13.	Others	9,635	Open market		
14.	Quartz	101,010	Open market	300	Road/Rail
15.	Silica component	38,541	Open market	130	Road
16.	Steel Scrap	39,022	Open market	130	Road
17.	**Total**	**51,366,056**			

29.2.11 The total water requirement of the project is estimated as 3752 KLH which will be obtained from the Bramhani River. The permission for drawl of surface water is obtained from Water Resource Department, Govt. of Odisha vide letter no 22055 dated 03/10/2019 for 2950 KLH. IPICOL recommended for allocation of additional water requirement of 801 KLH from river Bramhani vide letter no. CGM/SLNA/RML-226/18/2160 dated 24/08/2020.

29.2.12 The total power requirement of the project is estimated as 694 MW which will be obtained from the captive power plant.

29.2.13 Baseline Environmental Studies:

Period	March to May 2019
AAQ parameters at 8 locations	$PM_{2.5}$ = 22.0 to 42.3 µg/m^3 PM_{10} = 40.7 to 70.9 µg/m^3 SO_2 = 6.6 to 16.9 µg/m^3 NO_x = 8.2 to 21.5 µg/m^3 CO = BDL to 0.790 mg/m^3
AAQ modelling	PM_{10} = 6.53 µg/m^3 $PM_{2.5}$ = 3.75 µg/m^3 SO_2 = 32.23 µg/m^3 NO_x = 15.60 µg/m^3
Ground water quality at 10 locations	pH: 6.87 to 7.76, Total Hardness:288 to 384 mg/l, Chlorides: 21 to 159 mg/l, Fluoride: BDL to 0.71 mg/l. Heavy metals are within the limits.
Surface water quality at 11 locations	pH: 7.16 to 7.86; DO: 6.8 to 7.1 mg/l, BOD: 5 to 15 mg/l and COD: 10.75 to 25.08 mg/l
Noise levels	48.46 to 51.52 dBA for the day time and 39.80 to 42.10 dBA for the Night time.
Traffic assessment study findings	Due to 3.55 MTPA ISP, the increase in traffic will be 26.2% of the maximum carrying capacity after completion of ongoing widening of the NH-55. Received in principle approval for establishment of private railway siding with off take arrangements from Naya Bhagirathipur PH. **Parking:** Total anticipated number of trucks at full plant capacity are anticipated to be 6131 trucks per day i.e. 256 trucks per hour. To & fro movement will be 512 trucks. The maximum anticipated time for which a truck will remain in the plant is 45 mins. Hence the parking facility has been provided for 2 hours i.e. 580 trucks in 10.36 acres land, all within the project area. In addition to this, a 30 m wide approach road is being constructed from NH 55E to the plant and parking shall be permitted on the side of the road from the highway towards plant gate.
Flora and fauna	No schedule I fauna is present. However, site specific wildlife conservation plan has been prepared by the proponent based on the advisory of the State Forest Department and approved

	by PCCF (WL) & Chief Wildlife Warden, Odisha vide memo no 3188/1 WL-SSP-10/2015 dated 09/04/2015. The Wildlife Conservation plan will be updated and approval will be obtained from the PCCF, Odisha by 31/07/2021.

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

Sl. No.	Source	Type of Waste	Quantity generated (TPA)	Mode of Treatment/ Disposal
1	Beneficiation Plant	Tailing	2,156,240	Collected in small tailing pond, dewatered and dredged for 100% reutilisation as sand substitute in infrastructure/ fine concrete aggregate/ cement manufacture
2	Pellet Plant	Dust (Iron Ore, Coke, Coal Fines)	2,348,097	100% reused in sinter making or recirculated to mixing bin of the pellet plant
3	Coal Washery	Middlings	2,137,410	100% reused in CFBC boiler within project
		Reject from washery	377,190	100% temporarily stored in solid waste disposal area within project site till sent for backfilling in mine or used for road making/ filling of low-lying area.
4	DRI Kilns	Char	414,347	100% reused in CFBC boiler within project
		ESP dust Bag Filter Dust, scrapper etc	141,447	100% reused in sinter making within project
		Kiln Accretion	40,414	100% stored in in land fill temporarily till reused in road sub-based
5	MBF	BF Slag	582,750	100% reutilized in making PBS cement within project
		Dust (Iron Ore, Coke, Sinter Fines)	97,125	100% reused in sinter making within project
		Sludge from GCP	0	100% eliminated after shifting to dry GCP
6	Sinter Plant	Sinter Return Fines	424,116	100% reused in sinter making within project
7	Coke Oven Plant	Bag Filter Dust	48,471	100% reused in sinter making within project
8	Induction Furnace	Bag filter dust	37,496	100% reused in sinter making within project

Sl. No.	Source	Type of Waste	Quantity generated (TPA)	Mode of Treatment/ Disposal
		Slag	297,287	100% given for metal recovery, converted to aggregates (special balls) and used in road making
	SMS (Caster)	Mill Scale	44,660	100% reuse/ sale in own/ other cement plant, useable in pellet making & sinter plant, LRF dephosphorization process
9	Electric Arc Furnace	Slag	430,206	100% used in road making, filler in embankment and new development show success in use for ceramic tile production and cement making
		Bag Filter dust	38,094	100% reused in sinter making or pellet plant within project
	SMS (Caster)	Mill scale	33,600	100% sale
10	Rolling Mill	Reject from RMS/SM/DPP	35,490	100% reused in steel making within project
		Mill Scale	43,376	100% sale
11	Strip Mill	Reject	4,592	100% reused in steel making within project
		Mill Scale	5,612	100% sale
12	Ductile Pipe Plant	Reject	4,592	100% reused in steel making within project
		Mill Scale	5,612	100% sale
		Zinc recovered	Not separately estimated	100% sale to paint manufacturer
		Cement slurry	Not separately estimated	100% recover water & manufacture brick/ cement tiles
		Core sand (in casting area & annealing furnace)	Not separately estimated	100% used for land levelling
13	Producer Gas Plant	Coal Ash	359,120	100% reused as per MoEF&CC Notification 2009. Used in cement making, brick making, block making, aggregate making, and road making.
		Coal Tar	65,295	100% sale
14	CPP	Fly Ash from Char, middlings, coal fines &	2,022,412	100% reused as per MOEF Notification 2009. Used in cement making, brick making, block making, aggregate making, and road making.

Sl. No.	Source	Type of Waste	Quantity generated (TPA)	Mode of Treatment/ Disposal
		coal		
	Total		**12,195,050**	

29.2.15 Public Consultation:

Details of Advertisement given	The New Indian Express dated 18/11/2020 (English) Prameya dated 18/11/2020 (Odiya)
Date of Public Consultation	20/12/2020
Venue	Tehsil Office, Hindol
Presiding Officer	Additional District Magistrate
Major Issues Raised	Employment opportunity, provision of health care & water supply facility, repair of roads, establishment of healthcare unit, pollution control measures, etc.

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

Sl. No.	Concerns raised during the PH	Physical activity and action plan	Tentative Budget, Rs. Lakhs	Target date for implementation of action plan
1	Health Care Facility	• Provision of air-conditioned ambulance facility for shifting of the patients to Cuttack and Bhubaneswar as ambulance facility provided by the government (108) is available only to Dhenkanal Government Hospital. • Free health camp • free cataract operation camp	36.74	• December 2021 onwards • March 2021 & thereafter six monthly • December 2021 & thereafter annually
2	Educational Facility	Establishing an ITI and all interested students can join the Institute to be qualified as skilled personnel.	197	March 2023
3	Infrastructure Development	• Development, maintenance & concreting of village roads • Development of village school building	28	June 2021 to May 2025

Sl. No.	Concerns raised during the PH	Physical activity and action plan	Tentative Budget, Rs. Lakhs	Target date for implementation of action plan
4	Drinking Water & Development of Water Bodies	• Provide bore wells and Water storage tanks in the nearby villages for drinking water facility. • Cleaning of Ponds etc.	24	• June 2021 to May 2025 • May-June of 2021 to 2025
5	Pension facility for Senior Citizen	Pension provision for Senior Citizens in villages Rs. 1000/- per person per half year. (5-10 persons/villages).	1.9	June 2021 to May 2025
6	Peripheral Development	Construction of Community Centre, Sport Centre, Recreation Centres & Provide equipment to village level team in Cricket/Football	13	June 2021 to May 2025
	TOTAL		**235.84**	

29.2.16 The capital cost of the project expansion is Rs. 5500 Crores and the capital cost for environmental protection measures in expansion is proposed as Rs 4702.69 Lakhs. The annual recurring cost towards the environmental protection measures for expansion is proposed as Rs 168.99 Lakhs. The employment generation from the proposed expansion is 2200 person. The details of cost for environmental protection measures is as follows:

Description	Capital cost			Recurring cost		
	Sanctioned as per ECs till day	Additional	Total	Sanctioned as per EC	Additional	Total
Air pollution control	8919.88	4055.12	12975	2096.51	13.42	2109.93
Water pollution control	277.5	77	354.5	17.13	2.63	19.76
Noise pollution control	10	0	10	1.43	Revised	1.13
Env. Monitoring and management	274.1	225	499.1	79.54	57.64	137.18
Occupational health	150	30	180	75.76	46.02	121.78
Green belt	225.28	365.57	590.85	36.88	48.74	85.62
Others (expert advice, vehicle for environment monitoring & management work, additional for expansion under clause 7 (ii) of EIA Notification 2006)	10.00+50#	0	10	7.91+2#	0	7.91
Overheads (3% of dep., energy, R&M & interest)	0	0	0	59.37	2.84	62.21
Total	**9916.76**	**4702.69**	**14619.45**	**2376.53**	**168.99**	**2545.52**

 # for expansion under clause 7 (ii) of EIA Notification 2006 from 2.85 to 3.00 MTPA dated 04.06.2020

29.2.17 Greenbelt will be developed in 236.34 ha which is about 33% of the total project area. A 10 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total number of 585000 saplings will be planted and nurtured in 236.34 hectares in 5 years.

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

29.2.19 Name of the EIA consultant: The EIA report was originally prepared by the consultant namely Min Mec Consultancy Pvt. Ltd. and thereafter the report was revalidated by the M/s Centre for Envotech and Management Consultancy Pvt Limited [S.No. 89, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021] as the former consultant was not accredited by the QCI/NABET.

29.2.20 **Certified compliance report from Regional Office:**

The Status of compliance of earlier EC dated 11/09/2019 and amendment dated 13/04/2020 was obtained from Regional Office, Bhubaneswar vide letter no. 101-1069/19/EPE/438 on 11/06/2020 in the name of M/s. Rungta Mines Limited. The Action taken report regarding the partially condition was submitted to Regional Office MoEF&CC, Bhubaneswar vide letter dated 08/07/2020. MoEF&CC (RO), Bhubaneswar evaluated the same and has issued letter dated 19/10/2020 The details of the observations made by RO in the report dated 19/10/2020 along with its re-assessment / present status as furnished by the PP is given as below:

SI. No	Non compliances Details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP as on 23/01/2021	Action taken by PP as on 27/01/2021	Timeline as on 27/01/2021
			EC date	Specific	General			
1.	Greenbelt development	Fruit bearing trees are being planted. To follow CPCB guidelines for selection of species	11/09/2019 and amendment dated 13/04/2020	ii	-	**ATR:** Green belt shall be completed in 3 years within 33% of the area having species like Kaner, Ber, Gulmohar, Babool, Siris, Neem, Mango, Peepal, etc. **Updated status:** 40,000 trees over 16 ha already planted. **RO Comment:** Being Complied	• Plant is under construction and green belt is being simultaneously established • Green belt shall be completed in 3 years within 33% of area having species like Kaner, Ber, Gulmohar, Babool, Siris, Neem, Mango, Peepal, etc. • 40,000 trees over 16 ha already planted. • Additional 2 ha as per EC dated 04.06.2020 has been planted at a distance of 33 km from the project. But, additional 2 ha will also be undertaken inside the existing plant and 3 ha in the expansion area in addition to the mandatory 33% greenbelt in plant area	Within 3 years
2.	Environmental Monitoring	Environmental parameter to be monitored at least once in two months by	11/09/2019 and amendment dated 13/04/2020	-	II(ii) III(ii) IV (I)	**ATR:** Committed to carry out monitoring once in two months for which work order has already been issued.	Started once in two months monitoring already and submitted with six monthly compliance report of Dec 2020.	Already started & shall be continued

SI. No	Non compliances Details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP as on 23/01/2021	Action taken by PP as on 27/01/2021	Timeline as on 27/01/2021
			EC date	Specific	General			
		MoEF&CC/NABL accredited lab and to be submitted along with six monthly compliance report.				The same shall be submitted along with six monthly compliance report. **Updated status:** Started once in two months monitoring already and submitted with six monthly compliance report of Dec 2020. **RO Comment:** Assured to comply		
3.	Environmental Monitoring	To install continuous monitoring stations within and outside plant at 4 locations for PM_{10}, $PM_{2.5}$, SO_2, NO_X.	11/09/2019 and amendment dated 13/04/2020	-	II (iii)	**ATR:** Committed to install the same within 4 months **Updated status:** Instruments received at site and under installation. **RO Comment:** Assured to comply	Instruments received at site and under installation.	Operational by 31.03.2021
4.	CER & CSR	Implementation of CER and CSR as per the activities and timeline as mentioned in EC letter.	11/09/2019 and amendment dated 13/04/2020	v	-	**ATR:** The implementation is being carried out and the details were submitted. **RO Comment:** Being complied	The GHG emissions inventory report is under preparation by specialists. The report shall be submitted.	Submission by 31.03.2021
5.	GHG Emissions	Preparation of GHG emission inventory and submit the programme for the reduction of the same	11/09/2019 and amendment dated 13/04/2020	-	VII (ii)	**ATR:** Work order has been issued for preparation of GHG emissions inventory report. **Updated status :** The GHG emissions inventory report is under preparation by specialists. **RO Comment:** Being complied.	1) Manual display board in front of the main gate installed and monitored data also made available at company's website. **2)** Automatic display board will be installed and become operational along with the CAAQS	Already started. Operational by 31.03.2021
6.	Environmental Monitoring	Display the emission levels of the pollutants at convenient location for disclosure to the public and put on the website of the company.	11/09/2019 and amendment dated 13/04/2020	-	-	**ATR:** Displayed in front of the main gate and also available at company's website. **RO Comment:** Partially complied.	The implementation is being carried out and the details were submitted.	Already submitted
7.	Health & Safety	To submit the copies of	11/09/2019 and	-	VIII (i)	**ATR:** Work order has been issued for the	HIRA, emergency plan and Disaster Management plan has	The same is submitted.

SI. No	Non compliances Details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP as on 23/01/2021	Action taken by PP as on 27/01/2021	Timeline as on 27/01/2021
			EC date	Specific	General			
		Emergency preparedness plan, Hazard Identification and Risk Assessment and Disaster management plan.	amendment dated 13/04/2020			preparation of the same. **Updated status:** Prepared by IIT Kharagpur and received in Dec 2020. **RO Comment:** Being complied	been prepared by IIT Kharagpur and received in Dec 2020. The same is being submitted.	
8.	Public Hearing issues	Implement the issues raised during public hearing as per activities and time line mentioned in EC	11/09/2019 and amendment dated 13/04/2020	-	X (ix)	**ATR:** Implementation status was submitted. **RO Comment:** Being complied	Implementation status was submitted.	Already submitted
9.	Facilities to construction labours	To provide all necessary infrastructures and facilities such as fuel for cooking, mobile toilet, mobile STP, safe drinking water, medical health care, creche, etc.	11/09/2019 and amendment dated 13/04/2020	-	VIII (iii)	**ATR:** Details of the infrastructures and facilities provided were submitted. **RO Comment:** Being complied.	Details of the infrastructures and facilities provided were submitted.	Already submitted

Public representation by M/s. Akhil Bhartia Paryavaran Suraksha Trust

29.2.21 The members of Expert Appraisal Committee were in receipt of a public representation from M/s. Akhil Bhartia Paryavaran Suraksha Trust alleging that the project proponent has not complied with the following points.

i. Green belt development in additional 2 ha area as committed in the EC dated 04/06/2020 has not been carried out.

ii. Non installation of Continuous Ambient Air Quality Monitoring station

iii. Non submission of greenhouse gas emission report and HIRA

iv. Revisit of wildlife conservation plan once in five years has not been carried out.

Written submission made during the course of meeting

29.2.22 PP has submitted written clarifications on the following points during the course of meeting:

i. Commitment with time frame for compliance to the points raised by Regional Office in their report on status of EC compliance

ii. Plan showing parking area for trucks

iii. Revised modelling for prediction of Ground Level concentration taking into account additional measures for SO_2 and NO_2 control in DRI

iv. Timeline for submission of updated Wildlife Conservation Plan

Observations of the Committee

29.2.23 The Committee noted the following:

i. The Committee found the EIA/EMP in order reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee also found that the baseline data reported and incremental GLC due to the proposed project were within NAAQ standards.

ii. The Committee also deliberated on the public hearing issues as well as action plan to address the issues raised during public hearing and found it satisfactory.

iii. The Committee also deliberated upon the findings of the Regional Office report and satisfied with the corrective action taken by the PP against the RO observations.

iv. As per the written submissions made during the course of meeting by the project proponent, the Committee noted that PP has already carried out the plantation in additional 2 ha area outside the plant premises and submitted the HIRA report. Relevant supporting documents have been furnished in this regard. With respect to installation of CAAQMS and GHG report, the PP has committed to comply with the same by 31/03/2021. Further, the PP also committed that wildlife conservation plan will be updated in consultation with concerned department and requisite approval will be obtained by 31/07/2021. The committee satisfied with the written submissions of the project proponent.

Recommendations of the Committee

29.2.24 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 following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to integrated steel plants based on project specific requirements:

A. Specific conditions

i. Particulate matter from the stacks shall not exceed 30 mg/Nm^3.
ii. Air cooled condensers shall be provided.
iii. No ground water shall be used.
iv. Alternate fuels including colony/canteen waste and waste oil shall be used in cement kiln.
v. Dioxin and Furan monitoring shall be carried out once in six months at cement kiln stack.
vi. Application for the environmental clearance for the residential colony envisaged within the plant site shall be submitted to the appropriate authority.
vii. Blast furnace shall be equipped with TRT, Dry Gas cleaning plant, stove heat recovery and cast house /stock house ventilation facilities.
viii. 85-90% billets/slabs shall be hot charged for rolling and balance through RHF using LDO/FO/BF Gas/Producer gas as fuel.
ix. Zinc dust shall be monitored in AAQ inside the plant and DI Pipe area. Scrubber shall be proposed in Paint and bitumen coating plant of DI pipe complex.
x. Proper ventilation shall be provided in bitumen coating area of DI Pipe for odor control.

xi. Sinter cooler waste heat recovery system shall be installed.
xii. Producer Gas Plant shall be of closed-circuit type. Phenolic water shall be burnt in DRI Kilns.
xiii. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species. The greenbelt shall inter alia cover the entire periphery of the plant. Additional green belt shall be planted in 5 ha within the project area.
xiv. Adequate parking space for trucks shall be provided. No trucks pertaining to plant/ plant activity will be parked on road side/public places.
xv. Industrial vacuum cleaner shall be deployed to clean the roads regularly to keep fugitive emission under control.
xvi. RWH and recharge shall be carried out in the premises extensively.
xvii. Treated effluent from the plant shall be reused and recycled completely. STP shall be installed to treat domestic wastewater.
xviii. Project proponent shall ensure that the railway siding is established within a period of 5 years or before commissioning of the full capacity of the plant, whichever is earlier.
xix. IOBP tailings shall be dewatered in filter press and no slime /tailing pond shall be permitted.
xx. Ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system shall be used.
xxi. Installation of continuous monitoring stations within and outside plant at 4 locations for parameters PM_{10}, $PM_{2.5}$, SO_2, NO_x shall be completed by 31/03/2021 and compliance status shall be furnished to the Ministry as well as Regional Office.
xxii. Preparation of GHG emission inventory report for the reduction of the GHG emission shall be submitted by 31/3/2021 and compliance status shall be furnished to the Ministry as well as Regional Office.
xxiii. Display the emission levels of the pollutants at convenient location for disclosure to the public and put on the website of the company shall be completed by 31/03/2021. Compliance status in this regard shall be furnished to the Ministry as well as Regional Office.
xxiv. The wildlife conservation plan shall be updated in consultation with concerned department and requisite approval from the Competent Authority will be obtained by 31/07/2021. Compliance status in this regard shall be furnished to the Ministry as well as Regional Office.
xxv. PP shall use mill scale inhouse.

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 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. The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.

iv. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.

v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

vi. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

vii. Secondary emission control system shall be provided at SMS Converters.

viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

ix. 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.

x. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.

xi. 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).

xii. Land-based APC system shall be installed to control coke pushing emissions.

xiii. Monitor CO, HC and O_2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.

xiv. 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.

xv. In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NOx control facility shall be provided to meet the prescribed standards.

xvi. The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.

xvii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

xviii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

xix. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.

xx. Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 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. Adhere to 'Zero Liquid Discharge'

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

vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

vii. Tyre washing facilities shall be provided at the entrance of the plant gates.

viii. CO_2 injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.

ix. The project proponent shall practice rainwater harvesting to maximum possible extent.

x. Treated water from ETP of COBP shall not be used for coke quenching.

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

xii. The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

i. Noise 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. The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.

ii. Coke Dry Quenching (CDQ) shall be provided for coke quenching for the coke oven plant.

iii. Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.

iv. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.

v. Use hot charging of slabs and billets/blooms as far as possible.

vi. Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.

vii. Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.

viii. Restrict Gas flaring to < 1%.

ix. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;

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

xi. Ensure installation of regenerative type burners on all reheating furnaces.

VI. Waste management

i. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.

ii. Tar Sludge and waste oil shall be blended with coal charged in coke ovens.

iii. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.

iv. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.

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

vi. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.

vii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

viii. 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.

ix. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

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

VIII. Public hearing and Human health issues

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

ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

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

IX. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.

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

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

X. Miscellaneous

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

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

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

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

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

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

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

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

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

29.3 Enhancement of integrated cement plant clinker production from 1.19 to 1.428 MTPA and cement production from 1.80 to 2.16 MTPA by optimising process operations by **M/s. The India Cements Limited** located at Banswara works, VPO-Vajwana, Tehsil- Garhi **Dist. – Banswara, Rajasthan**. [Online Proposal No. IA/RJ/IND/191793/2021; File No. J-11011/630/2008-IA.II(I)] – **Environment Clearance under para 7 (ii) of EIA Notification, 2006** – regarding.

29.3.1 M/s. The India Cements Limited (ICL)., has made an online application vide proposal no. IA/RJ/IND/191793/2021 dated 16/01/2021 along with copy of EIA/EMP report and Form –

2 seeking Environment Clearance (EC) under Clause 7(ii) of EIA Notification, 2006. The proposed project activity is listed at schedule no 3(b) Cement plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

29.3.2 The project of M/s The India Cements Limited located in Banswara works, VPO-Vajwana, Tehsil- Garhi Dist. –Banswara, Rajasthan State is for enhancement of production of clinker from 1.19 to 1.428 MTPA and cement from 1.80 to 2.16 MTPA (with no change in power generation of 50 MW & 1.872 MTPA of limestone).

29.3.3 Environmental site settings

S.No.	Particulars	Details
i.	Total land: 66.03Ha.	Private Land 20.81 ha. Government Land 45.22 ha.
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Acquired and Owned by ICL
iii.	Existence of habitation & involvement of R&R, if any.	None, No R&R is involved
iv.	Latitude and Longitude of the project site	Latitude: 23°35'47.73"N – 23°36'35.48" N & Longitude 74°15'10.07"E – 74°15'31.10"E,
v.	Elevation of the project site	200 m above MSL
vi.	Involvement of Forest land if any.	No Forest Land Involved
vii.	Water body exists within the project site as well as study area	No water Bodies exists in project area **Study area** 1. Chap Nadi – 4.0 km – N 2. Kagdi Nadi – 9.8 km – ENE 3. Kalol Nadi – 8.0 km – NE 4. Kagdi Picup Lake – 21.0 km – ESE 5. Major Stream – 3.6 km – SE
viii.	Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant	No ESZ/ESA/national park/wildlife sanctuary/ biosphere reserve/ tiger reserve/elephant in Study area

29.3.4 The existing project was accorded environmental clearance vide lr.no. No. J-11011/630/2008-IA-II (I) dated 03-06-2009 in the name of M/s Mahi Cement Ltd. The Ministry Transferred the Environmental Clearance from M/s. Mahi Cement Ltd to M/s. Trinetra Cement Ltd (Formerly M/s Mahi Cement Ltd) vide Letter No to J-11011/630/2008-IA-II (I) dated 15/05/2013 on change of the name of company. Subsequent amendment in Environmental Clearance was granted vide letter no J-11015/118/2016-IA-II (M) dated 21/06/2016. Later, MoEF&CC Transferred the Environmental Clearance M/s Trinetra Cement Ltd to M/s The India Cements Ltd vide letter no and J-11011/630/2008-IA-II (I) dated 29/05/2018. Corrigendum to the Transfer of Environmental Clearance from M/s Trinetra Cement Ltd to M/s The India Cements Ltd vide letter no J-11011/630/2008-IA.II (I) dated 1/10/2018. Consent to Operate (CTO) obtained from Rajasthan State Pollution Control

Board from time to time and current Consent to Operate is obtained from RSPCB vide File No. F (Tech)/Banswara (Garhi)/2(1)/2009-2010/9295-9297, Order No: 2016-2017/CPM/4738 dated 02/01/2017 which is valid till 30/09/2021.

29.3.5 Implementation status of the existing Environmental Clearances.

Sl. No.	Facilities	Units	As per EC dated 03/06/2009	Implementation Status as on 16/01/2021	Production as per CTO
1	Clinker	MTPA	1.19	1.19	1.19
2	Cement	MTPA	1.80	1.80	1.80
3	Limestone	MTPA	1.872	1.872	1.872
4	Captive Power	MW	50	25	25

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

S.No.	Name	Existing Units		Proposed Units		Total (Existing +Proposed)		Remarks
		Configuration (TPH)	Production MTPA	Configuration (TPH)	Production TPA	Configuration (TPH)	Production TPA	
1	Limestone crusher	450	-	0	0	450	-	Adequate. Operational hours increased from 13 to 16 hrs
2	Raw meal	270-280	-	0	0.238	275	-	Adequate and quite possibly to run the VRM 22 to 24 hours per day
3	Coal Mill	40	-	0	0.238	40	-	Present coal mill run hours are about 10.5 - 11 and by increasing 2 / 3 hrs, fine coal will be sufficient for increased 20% capacity

S.No.	Name	Existing Units		Proposed Units		Total (Existing +Proposed)		Remarks
		Configuration (TPH)	Production MTPA	Configuration (TPH)	Production TPA	Configuration (TPH)	Production TPA	
4	Kiln	3500TPD	1.19			4200TPD	1.428	Increase in kiln rpm from 4.6 to 5.2 Raw mix design modification Increasing PH fan rpm
5	Cooler	145	1.19	30	0.238	175	1.428	Retrofitting to increase cooler area
6	Cement Mill-I	135	1.80	0	0.36	135	2.16	Adequate Capacity
7	Cement Mill-II	135		0	0.36	135		Adequate Capacity

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

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Limestone	1.68	0.189	1.869	Captive Mine	0.5	Road
2	Copper Slag /Dolomite/ Red Ochre	0.04	0.034	0.074	Purchased	50	Road
3	Yellow Ochre / Fly Ash	0.08	0.135	0.215	Purchased	50	Road
4	Coal	0.08	0.02	0.10	WCL/SECL (Indian coal), Magdalla/Dahej/Mundra Port (imported coal)	600	Rail, Road
5	Pet Coke	0.04	0.01	0.05	RIL, Jamnagar	490	Road

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
6	Gypsum	0.09	0.02	0.11	Imported/Indigenous-RSMML, Dhankoriya, Nagaur	580	Road
7	Fly Ash	0.63	0.13	0.76	Local Units, Sewalia, Gujarat	50	Road

29.3.8 The water requirement for the project is estimated as 2500 m^3 /day, out of which 1914 m^3/day of fresh water requirement will be obtained from the ground water through bore wells and the remaining requirement of 586m^3 /day will be met from the Mine pit. Permission for withdrawal of 2500 m^3/day of ground water has already been obtained from CGWA. ICL has got Renewal of NOC for ground water from CGWA vide letter no: 21-4(319)/WR/CGWA/2008- 855 dated 27/11/2019.

29.3.9 Present total power requirement for simultaneous running of complete plant is about 25 MW which is met from captive Thermal Power Plant and RSEB.

29.3.10 Baseline Environmental Studies (post Project monitoring):

Period	April 2019 To September 2019
AAQ parameters at 9 Locations	$PM_{2.5}$ = 29.6 to 37.6 µg/m^3 PM_{10} = 39 to 56.3 µg/m^3 SO_2 = 7.1 to 12.1µg/m^3 NOx = 10.5 to 17.7 µg/m^3 CO = 0.124 to 0.672 mg/m^3
AAQ modelling	PM_{10} =54.6 µg/m^3 SO_2 = 13.1 µg/m^3 NOx = 25.5 µg/m^3 CO = 1144 µg/m^3 (<1 ppm)
Ground water quality at 20 locations	pH: 7.21 to 7.68 Total Hardness: 79.2 to 399.96 mg/l, Chlorides: 6.65 to 124.33 mg/l, Fluoride: 0.58 to 0.99 mg/l. Heavy metals are within the limits.
Surface water quality at 05 Locations	pH: 7.32 to 7.55; BOD: 16.8 to 84 mg/l. COD from 79.4 to 337.3 mg/l
Noise levels	60.35 to 50.29 dB (A) for the day time and 50.09 to 38.92 dB (A) for the Night time.
Traffic assessment study Findings	6 trucks/Hr (additional trucks) CO Additional emissions 23ug/m^3
Flora and fauna	There are no schedule I species present in study area.

29.3.11 The project proponent has reported that Solid waste like dust collected in bag filters, burst cement bags, general scraps, bottom ash, fly ash, STP sludge, and sludge from soak pit and used oil from the DG are being generated. Dust, bottom ash and fly ash are being used in the process again. Burst cement bags and used oil are sent to the registered recyclers and sludge generated is being used as a manure for plantation. Cement manufacturing process will not generate major Solid or Liquid Wastes. However, the following wastes are generated from Cement Plant operations. Complete care of these wastes will be taken, as to their disposal etc. as given below:

S. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment / Disposal
1	Used Oil	DG	3 KL	Authorized Recyclers
2	Ash	Captive power plant	81760 TPA	Used in cement plant

29.3.12 Public Consultation – The public consultation for the existing EC was held on 30/01/2009 under the provisions of EIA Notification, 2006. The commitments given during the public hearing have been implemented.

29.3.13 The capital cost of the project is Rs.10 Crores and the capital cost for environmental protection measures is proposed as Rs.3.0 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.0.33 Crores. No additional employment generation for the proposed expansion. The details of cost for environmental protection measures is as follows:

S.No.	Description of Item	Amount (Rs. In Lacs)			
		Capital Cost		Recurring Cost (Per year)	
		Present	For Expn	Present	For Expn
i.	Air Pollution Control/ Noise	2316	200	52	10.4
ii.	Water Pollution Control	558	No change	9.5	1.9
iii.	Environmental Monitoring and Management	39	No change	5.9	1.2
iv.	Green Belt Development	114	100 (Gap filling to attain density of 2500/ha)	11.4	20
v.	Addressal of Public Consultation concerns	NA	NA	NA	NA
Total		**3027**	**300**	**78**	**33.5**

29.3.14 Greenbelt is already developed in 24.0 ha which is about 36% of the total project area. A 10 to 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and

native species will be planted with a density of 2500 trees per hectare.

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

Particulars	As per EC dated 03/06/2009 / 01/10/2018	After proposed change under para 7(ii)	% increase
Land	66.03 Ha.	66.03 Ha.	No Change. No additional land requirement
Greenbelt	24.0 Ha.	24.0 Ha.	No additional green belt proposed
Water	2500 m^3/day	2500 m^3/day	No Change
Power	25 MW	25 MW	No Change
Raw materials			
Limestone	1.68	1.869	Additional consumption by 11%
Yellow Ochre /Fly Ash	0.08	0.215	Additional consumption by 169%
Copper Slag / Red Ochre	0.04	0.074	Additional consumption by 85%
Gypsum	0.09	0.11	Additional consumption by 22%
Fly ash	0.63	0.76	Additional consumption by 21%
Coal for Clinker (Max)	0.08	0.10	Additional consumption by 25%
Pet Coke	0.04	0.05	Additional consumption by 25%
Products			
Clinker production	1.19	1.428	Enhancement of clinker production by 20 % by process optimization
Cement production	1.80	2.16	Enhancement of cement production by 20 % by process optimization

29.3.16 Pollution load assessment

Particulars	As per EC dated 03/06/2009 / 01/10/2018	After proposed change under para 7(ii)	% increase
Air (Kg/day)			
Particulate Matter	743	833	Increase by 12 %
	Ground Level Concentrations (µg/m^3)	Baseline	53.6
		Incremental	<1.00
		Overall Scenario	**54.60 NAAQ Standard - 100**
Sulphur Dioxide	7029	7177	Increase by 2.0 %
	Ground Level Concentrations (µg/m^3)	Baseline	12.1
		Incremental	<1.0
		Overall Scenario	**13.1 NAAQ Standard – 80**

Particulars	As per EC dated 03/06/2009 / 01/10/2018	After proposed change under para 7(ii)	% increase
Oxides of Nitrogen	8815	10004	Increase by 14 %
	Ground Level Concentrations ($\mu g/m^3$)	Baseline	17.7
		Incremental	7.8
		Overall Scenario	**25.5 NAAQ Standard – 80**
Water	2500 m^3/day	2500 m^3/day	No Change
Solid and Hazardous Waste	Used Oil - 3 KL	Used Oil - 3 KL	No Change
	Ash - 81760 TPA	Ash - 81760 TPA	
Traffic load	28 trucks per hour	34 trucks per hour	No Change

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

29.3.18 EIA consultant - M/s. B.S.Envi Tech Pvt.Ltd [S.No.137, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021].

Certified Compliance report from Regional Office

29.3.19 ICL has obtained Certified Compliance of the EC conditions by Integrated Regional Office, MoEFCC, Lucknow vide letter No: IV/ENV/R/IND-123/787/2010/1127 dated 16/12/2020. As per the RO report, all the EC conditions have been complied.

Observations of the Committee

29.3.20 The Committee noted the following:

i. Production shall be increased by increasing the Revolutions Per Minute (PRM) of Kiln from 4.6 to 5.2 and by increasing clinker cooler area and increase in operating hours of the machineries. Operating hours of Raw Mill shall be increased from 13 to 16 hours, coal mill from 16 hrs to 20 hrs per day. Cement mill has enough capacity to cope up with increased load.
ii. No additional water is required.
iii. No additional land is required.
iv. All stacks in the plant are designed to release PM less than 30 mg/Nm^3.
v. After expansion the pollution load shall increase as under;
    a. PM- 743 kg/day to 8.33 kg/day – 12.1 % increase.
    b. SO2- 7029 kg/day to 7177 kg/day- 2.1% increase.
    c. NOx- 8815 kg/day to 10004 kg/day- 13.5 %.increse
vi. Ground level Concentration of PM shall increase from 53.6 $\mu g/m^3$ to 54.8 $\mu g/m^3$, $PM_{2.5}$ shall increase from 36.1 to 36.9 $\mu g/m^3$. SO_2 shall increase from 12.1 to 12.6 $\mu g/m^3$ and NOx shall go up from 17.7 $\mu g/m^3$ to 25.5 $\mu g/m^3$.
vii. Pollution Control Devices have not been upgraded to reduce absolute emission due to expansion.

viii. Proposed increase would increase traffic load by 6 trucks per hour only.

Recommendations of the Committee

29.3.21 In view of the foregoing and after detailed deliberations, the committee was of the opinion that the proposed plant does not qualify under para 7 (ii) due to increase in absolute quantity of pollution and increased incremental concentration of pollutants in the atmosphere significantly. In view of this, the Committee recommended to return the proposal in present form.

29.4 Establishment of 1.2 MTPA Iron ore beneficiation and 0.6 MTPA pellet plant by **M/s Kashvi International Pvt. Ltd.** located at Champadihi, **District - Keonjhar, Odisha** [Online Proposal No. IA/OR/IND/193810/2021; File No. J-11011/27/2021-IA.II(I)] **– Prescribing of Terms of Reference** – regarding.

29.4.1 M/s Kashvi International Pvt. Ltd has made an application online vide proposal no IA/OR/IND/193810/2021dated 19/01/2021 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 appraised at Central Level.

Details submitted by Project proponent

29.4.2 The project of M/s Kashvi International Pvt. Ltd is a green field project located at Champadihi Village, Jhumpura-Tehsil, Keonjhar District, Odisha is for setting up of a new Beneficiation plant for production of 1.2 MTPA Iron Ore and 0.6 MTPA Pellet plant.

29.4.3 Environmental site settings

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>i.</td><td>Total land</td><td>24.281ha [Private:10.653 ha; Govt 13.63791ha]</td></tr>
<tr><td>ii.</td><td>Existence habitation of & involvement of R&R, if any.</td><td>No R&R is anticipated</td></tr>
<tr><td>iii.</td><td>Latitude and Longitude of the project site</td><td>Latitude: 210 53' 23.76" N
Longitude : 850 28' 47.84"E</td></tr>
<tr><td>iv.</td><td>Elevation of the project site</td><td>476m from the MSL.</td></tr>
<tr><td>v.</td><td>Involvement of Forest land if any.</td><td>13.638 ha of land comes under forest category and will be applied for forest clearance</td></tr>
<tr><td>vi.</td><td>Water body exists within the project site as well as study area</td><td>Study area
<table><tr><th>Water body</th><th>Distance</th></tr><tr><td>Baitarani River</td><td>0.5 km</td></tr></table></td></tr>
</table>

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

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

A. Beneficiation Plant -1.2 MPTA

Material Input in TPA		Material Output in TPA	
Iron ore fines 56-57 % Fe	12,00,000	Iron ore fines 65 % Fe	7,20,000
		Tailings 43% Fe	4,80,000
Total	12,00,000	Total	12,00,000

B. Pellet Plant – 0.6 MTPA

INPUT IN TPA		OUTPUT IN TPA	
Beneficiated Iron ore	7,20,000	Iron ore pellet	6,00,000
Bentonite	5,760	LOI & Flue gas	1,44,080
Coke breeze/coal dust	14,000	-	-
Lime Stone	4,320	-	-
Total Input	**7,44,080**	**Total Output**	**7,44,080**

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

Sl. No.	Description	Quantity (in TPA)	Source	Mode of Transport
A. Beneficiation plant				
	Iron Ore Fines	12,00,000	Own captive iron ore mines, Jaribahal, Keonjhar	Road
B. Pellet Plant				
1.	Beneficiated Iron Ore Fines	7,20,000	Integrated Beneficiation plant	conveyor
2.	Bentonite	5,800	Rajasthan/Gujarat	Road/Rail
3.	Coke	14,000	Rourkela Steel Plant, Rourkela	Road/Rail
4.	Limestone	4,500	Sundergarh, Odisha	Road/Rail
C. Producer Gas Plant				
1.	Steam Coal	50,400	MCL, Odisha & ECL, Jharkhand	Road/Rail

Sl. No.	Description	Quantity (in TPA)	Source	Mode of Transport
D. Furnace Oil				
1.	Furnace oil	6,000 KL	Local Supplier	Road

29.4.6 The water requirement for the project is 1248 m^3/day, Out of which 1080 m^3/day of fresh Water will be obtained from the River Baitarani and the remaining requirement of 168m^3/day will be met from recycled water. The permission for withdrawal of 45KL/hr has been obtained from Department of water resource, Bhubaneswar Odisha on 13.05.2020. 2 KLD of drinking water will be sourced from bore well and Rain water harvesting ponds shall also be developed for enhancing water conservation majors.

29.4.7 The power requirement for the project is estimated as 9.0MW. The power will be drawn from the State Electricity Board (NESCO),132/33 KV Grid substation situated at Palaspanga. 2x500 KVA DG sets will be installed to meet the emergency power requirement.

29.4.8 The quantity of wastes to be generated (liquid and solid) and scheme for their management/disposal is as follows:

SL. NO.	UNITS	SOLID WASTES	QTY IN TPA	DISPOSAL PRACTICE
1.	Beneficiation Plant	Tailing cake	4,80,000	Will be used in own mines refilling and filling low lying areas.
2.	Pellet plant	Dust from APC devices	350	Reused in pellet making
		Broken Pellet	660	
3.	Raw water treatment plant	Sludge	6	Will be used for landscaping
4.	Producer Gas Plant	Bottom Ash	20,000	Will be used in filling low lying areas.

29.4.9 The capital cost of the project is Rs.208 Crores and the capital cost for Environmental protection measures is proposed as Rs.8.5 crores. The employment generation from the proposed project is 363.

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

29.4.11 Name of the EIA consultant: M/s Global Tech Enviro Experts Pvt. Ltd [S.No. 91, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021]

29.4.12 Proposed Terms of Reference (Baseline data collection period: ***Dec2020 to Jan 2021***)

Attributes	Sampling		Remarks
	No. of stations	Frequency	
A. Air			

Attributes	Sampling		Remarks
	No. of stations	Frequency	
a. Meteorological parameters	8	Hourly	Temperature, Pressure, Relative Humidity, Rainfall
b. AAQ parameters	8	As per NAAQS, For Study Period Weekly Twice	Suspended particulate Matter (PM_{10}, $PM_{2.5}$), Sulphur Dioxide (SO_2), Oxides of Nitrogen (NOx) and Carbon Monoxide(CO) etc.
B. Noise	8	Once during baseline study period	Parameters Monitored: • Day equivalent • Night equivalent
C. Surface water/Ground water quality parameters	Surface water-8 Ground water-8	Once during baseline study period	(a)physical parameters (b)chemical parameters (c) Biological parameters
D. Land			
a. Soil quality b. Land use	8	Once during baseline study period	As per ISO
E. Biological a. Aquatic b. Terrestrial	8	Once during baseline study period	As per ISO
F. Socio-economic parameters		Once during baseline study period	

Observations of the Committee

29.4.13 The Committee noted the following:

i. Details sought in the Form 1 have not been quantified and filled in.

ii. Water requirement 1 m^3/hr for firefighting is grossly inadequate as shown in pre-feasibility report page number 38.

iii. Tailing pond for Iron ore beneficiation plant has not been permitted.

iv. Waste management from Producer gas plant not addressed in the pre-feasibility report.

Recommendations of the Committee

29.4.14 In view of the foregoing and after deliberations, the committee recommended to return the proposal in present form.

29.5 Expansion in existing CLZS Complex [Expansion in Hydro I & II Plants by adding 1 Induction Furnace & 1 Slab Casting Line in Hydro-II, Expansion of CPP in Hydro-I, Integration of RZO Plant in Hydro-II, Change in Product Mix in Pyro Plant, Installation of DG Sets at Hydro Plant & Pyro Plant and Recovery of Minor Metals] by **M/s. Hindustan Zinc Limited** located at villages: Putholi, Ajoliya Ka Khera & Biliya, Tehsil: Gangrar &

Chittorgarh, **District: Chittorgarh, Rajasthan** [Online Proposal No. IA/GJ/IND/190966/2021; File No. J-11011/279/2015-IA.II(I)] **– Prescribing of Terms of Reference** – regarding.

The project proponent vide email dated 23/01/2021 requested to withdraw their proposal. In view of this, the Committee recommended for accepting the withdrawal of the instant proposal.

29.6 Revised configuration of Modernization-cum-expansion (3.5 MTPA to 2.7 MTPA Gross Hot Metal) by **M/s. Steel Authority of India Limited (SAIL), Durgapur Steel Plant** located at **Durgapur, West Bengal** [Online Proposal No. IA/WB/IND/193306/2021; File No. J-11011/492/2007-IA-II(I)] **– Amendment in Terms of Reference** – regarding.

29.6.1 M/s. Steel Authority of India Limited (SAIL), Durgapur Steel Plant has made an online application vide proposal no. IA/CG/IND/190436/2020 dated 15/01/2021 along with Form 3 and sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. J-11011/492/2007-IA-II(I) dated 23/09/2020. The proposed project activity is listed at 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

29.6.2 The ToR was accorded to M/s. Steel Authority of India Limited (SAIL), Durgapur Steel Plant by MoEF&CC vide letter no. J-11011/492/2007-IA-II(I) dated 23/09/2020 for Revised configuration of Modernization-cum-expansion (3.5 MTPA to 2.7 MTPA Gross Hot Metal) located at Durgapur, West Bengal.

29.6.3 Following is the Configuration & capacity change granted in ToR vis-a-vis with the proposed changes in configuration & capacity of units:

SN	Unit	Configuration as per ToR dtd. 23/09/2020.	Proposed ToR Amendment	Final Configuration
1.	**Oxygen Plant**			
	• Captive	2 x 350 TPD	**Phasing out:** 1 x 350 TPD	1 x 350 TPD (Existing)
	• BOO Basis	1 x 700 TPD	**Phasing out:** 1 x 700 TPD New: 1 x 1250 TPD	1 x 1250 TPD (New)
2.	**Blast Furnace**			
	BF# 1	-	**No Change**	-
	BF# 2 & BF# 3	BF# 2 & BF# 3 (2x1400 m3, CDI & Oxygen Enrichment); GHM Production: 1.755 MTPA	**No Change**	BF# 2 & BF# 3 (2x1400 m3, CDI & Oxygen Enrichment); GHM Production 1.755 MTPA
	BF# 4	BF# 4 [1 x 1800 m3;	**Permission for**	BF# 4 [1 x 1800

SN	Unit	Configuration as per ToR dtd. 23/09/2020.	Proposed ToR Amendment	Final Configuration
		CDI & Oxygen Enrichment; 4 stoves (3W+1S)]; GHM Production: 0.945 MTPA. **Installation of new 4th Stove**	**Installation of 4th Stove of BF-4 accorded by WBPCB under "No Increase in Pollution Load Certificate" under Clause 7(ii)c of EIA Notification,2006.** **No Change** in overall capacity of BF#4 (GHM: 0.945 MTPA)	m3; CDI & Oxygen Enrichment; 4 stoves (3W+1S)]; GHM Production 0.945 MTPA.
	Gross Hot Metal Production (BF Complex)	**GHM: 2.7 MTPA.**	**No Change**	**GHM: 2.7 MTPA.**

29.6.4 The project proponent has also proposed the following other changes as per the granted ToR vis-à-vis proposed changes and reasons/justification:

S.N.	ToR Details	ToR Point	ToR Amendment requested	Reason / Justification
1.	**Sp. ToR Pt. No. iii.**	Action plan for CER shall be submitted as per the MoEF&CC O.M. dated 1/05/2018 and 31/10/2019.	Action plan to address the issues raised during public consultation as per the MoEF&CC O.M. No. 22-65/2017-IA.III dated 30/09/2020 shall be submitted.	In view of **MoEF&CC O.M. No. 22-65/2017-IA.III dated 30/09/2020.**
2.	**Sp. ToR Pt. No. iv.**	PM emissions shall be less than 30 mg/Nm^3 for entire plant operations	PM emissions shall be less than 30mg/Nm^3 for entire plant operations except for Coke Ovens, Sinter Plant and Old Power Plant (Boiler -1,2,5 & 6).	Action Plan to achieve PM emissions less than 30mg/Nm^3 has been prepared - **installation of new Bag filters / up-gradation of ESPs**, etc. Coke Oven, Sinter Plant & Old Power Plant (Boiler -1,2,5 & 6) - will comply

S.N.	ToR Details	ToR Point	ToR Amendment requested	Reason / Justification
				latest CPCB emission norms. **Estimated reduction of total PM emission load by about 37% by 2025.**
3.	**Sp. ToR Pt. No. xi.**	Sinter cooler waste heat recovery system shall be incorporated.	Sinter cooler waste heat recovery system shall be incorporated in all new installations.	Installation of waste Heat recovery system in old plant is difficult due to technical and logistic issue.
4.	**Sp. ToR Pt. No. xii.**	Stove gas waste heat recovery system and TRT shall be provided in all working blast furnaces.	Stove gas waste heat recovery system and TRT shall be provided in all new blast furnaces.	Installation of waste heat recovery system and TRT in old plant is difficult due to technical and logistic constraints.

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

Observations and recommendations of the Committee

29.6.6 In view of the foregoing and after deliberations, the committee recommended for amendment in the ToR dated 23/09/2020 as given below:

i. Specific TOR (iii) - Action plan for CER shall be submitted as per the MoEF&CC O.M. dated 30/09/2020.

ii. Specific TOR (iv) - PM emissions from new units shall be 30mg/Nm^3. All older units shall be modified/retrofitted to achieve 30 mg/Nm^3 emissions by Dec 2023. Coke oven emissions shall be maintained at less than 50 mg/Nm^3.

iii. Specific TOR (xi) - Sinter cooler waste heat recovery system shall be incorporated in new units. In order to assess the feasibility of installation of sinter cooler waste heat recovery system in older units, a feasibility study shall be carried out by project proponent and details shall be furnished in the EIA report.

iv. Specific TOR (xii) – Stove gas waste heat recovery system and TRT shall be provided in all new Blast Furnace. For all old blast furnaces, in order to assess the feasibility of installation of Stove gas waste heat recovery system and TRT system, a feasibility study shall be carried out by project proponent and details shall be furnished in the EIA report.

In addition to the above, the Committee also recommended for oxygen plant capacity change from 2x350 TPD and 1x700 TPD to 1x350 TPD and 1x 1250 TPD and installation of 4th Stove in BF#4.

29.7 Expansion of Cement Plant with increase of Production of Clinker from 0.75 to 3.0 MTPA, Cement from 0.95 to 4.0 MTPA and captive Power plant from 25 MW to 40 MW (Installation of Waste Heat Recovery Boiler: 15 MW) by **M/s. Sagar Cements (R) Ltd.** located at Village Gudipadu, Tehsil Yadiki, **District Anantapur, Andhra Pradesh.** [Online Proposal No. IA/AP/IND/194047/2021; File No. J-11011/421/2017-IA.II(I)] **– Amendment in Terms of Reference** – regarding.

29.7.1 M/s. Sagar Cements (R) Ltd. has made an online application vide proposal no. IA/AP/IND/194047/2021 dated 20/01/2021 along with Form 3 and sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. J-11011/421/2017-IA.II(I) dated 22/04/2020.

Details submitted by the project proponent

29.7.2 The Standard ToR was accorded to M/s. Sagar Cements (R) Ltd. vide letter no. J-11011/421/2017-IA.II(I) dated 22/04/2020 for Expansion of Cement Plant.

29.7.3 The project proponent has applied for the following amendment in ToR:

Sl. No	Reference of Approved ToR	Description as per Approved ToR	Description as per Proposal.	Remarks
1	J-11011/421/2017-IA.II(I)	Expansion of Cement Plant	Clinker: 0.75-3.0MTPA; Cement:0.95-4.0MTPA; Power:	Request for inclusion of capacities in TOR letter

Thus, **amendment requested** is for Change in the title of the proposal from "Sagar Cements (R) Ltd - Expansion of Cement Plant" to **"M/s. Sagar Cements (R) Limited for expansion of Cement Plant with Clinker Production from 0.75 MTPA to 3.00 MTPA, Cement from 0.95 MTPA to 4.00 MTPA and captive Power plant from 25 MW to 40 MW (Installation of Waste Heat Recovery Boiler: 15 MW) at Gudipadu Village, Yadiki Mandal, Anantapur District, Andhra Pradesh".**

29.7.4 The project proponent has stated the reason that capacities of the expansion are not reflecting in the TOR letter issued.

29.7.5 PP has further submitted that there is no change in Configuration & capacity change granted in ToR dated 22/04/2020.

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

Observations and recommendations of the Committee

29.7.7 In view of the foregoing and after deliberations, the committee recommended for the amendment in the ToR dated 22/04/2020 as mentioned at paragraph number 29.7.3.

*****

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 PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

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

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

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

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

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

viii. Soil Characteristic as per CPCB guidelines.

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

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

xi. Socio-economic status of the study area.

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

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

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

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

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards.

vi. Measures for fugitive emission control

vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

xii. Action plan for post-project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. **Occupational health**

i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre-designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analysed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

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

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. To address the Public Hearing issues, provisions contained under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 30/09/2020 shall be complied.
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

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

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

4th August, 2009, which are available on the website of this Ministry shall also be followed.

viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCl)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.

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

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ANNEXURE-2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

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

ADDITIONAL ToRs FOR PELLET PLANT

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

ADDITIONAL ToRs FOR CEMENT INDUSTRY

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

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

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

ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY

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

ADDITIONAL ToRs FOR COKE OVEN PLANT

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

ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

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

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

Executive Summary

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

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

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Email **Sundar Ramanathan**

Re: DRAFT MOM OF 29 EAC MEETING HELD DURING 27 JAN 2021

From : cnpandey@iitgn.ac.in Tue, Feb 02, 2021 01:38 AM

Subject : Re: DRAFT MOM OF 29 EAC MEETING HELD DURING 27 JAN 2021 1 attachment

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

Cc : Aravind Kumar Agrawal <dirind-moefcc@gov.in>

Dear Mr. Sundar,
Thanks for sending the draft MoM for the 29th EAC meeting held on 27.01.2021. I have gone through the draft. The draft is in order and, as such, is hereby approved. I am attaching the approved draft. Please take further action for uploading this on PARIVESH.
Thanks a lot.
With warm regards,
C. N. Pandey, IFS (Rtd),
Chairman, EAC Industry I, MoEFCC, GoI.