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

Date of zero draft MoM sent to Chairman: 17/09/2021
Approval by Chairman: 21/09/2021
Uploading on PARIVESH: 21/09/2021

Summary record of the Forty Fourth (44th) meeting of Re-Constituted Expert Appraisal Committee (REAC) held on 13-14th September, 2021 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) Notification, 2006.

The forty fourth 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 **13-14th September, 2021** in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the ongoing Corona Virus Disease (Covid-19) pandemic. The list of EAC attendees is as follows:

S. No.	Name	Position	13/09/2021	14/09/2021
1.	Dr. Chhavi Nath Pandey	Chairman	Present	Present
2.	Dr. M.K. Gupta, Director, CPPRI.	Member	Present	Present
3.	Dr. Siddharth Singh,	Member	Present	Present
4.	Dr. Jagdish Kishwan	Member	Present	Present
5.	*Dr. Tejaswini Ananth Kumar*	*Member*	*Absent*	*Absent*
6.	Dr. G.V. Subramanyam	Member	Present	Present
7.	Shri. Ashok Upadhyaya	Member	Present	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present	Present
9.	*Dr. Sanjay Deshmukh*	*Member*	*Absent*	*Absent*
10.	Prof. S.K. Singh	Member	Present	Present
11.	Dr. R. Gopichandran	Member	Absent	Absent
12.	Shri Jagannadha Rao Avasarala	Member	Present	Present
13.	Shri. J.S. Kamyotra	Member	Present	Present
Officials from MoEF&CC				
14.	Shri. Sundar Ramanathan	Member Secretary	Present	Present
15.	Dr. Vipin Gupta	Scientist 'B'	Present	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 43rd meeting held during 26-27th August, 2021 were confirmed by the EAC as already uploaded on PARIVESH.

13th September, 2021

44.1 Proposed 6 MTPA Integrated Steel Plant along with captive power generation of 893MW by **M/s. Uttam Galva Ferrous Limited** at Villages Kuduthini, Veniveerapura,Yerangaligi and Kolagallu, Taluka & **District: Bellary, Karnataka** [Online Proposal No. IA/KA/IND/214105/2014, File No. J-11011/80/2014-IA-II(I)] – **Environment Clearance – regarding.**

44.1.1 M/s. Uttam Galva Ferrous Limited has made an online application vide proposal no. IA/KA/IND/214105/2014 dated 23/08/2021 along with copy of EIA/EMP report and Form-2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3 (a) Metallurgical industries (Ferrous & non-ferrous), 2 (b) Minerals Beneficiation, 4 (b) Coke Oven & 1(d) Thermal power plants under Category "A" of the schedule of the EIA notification, 2006 and appraised at the Central level.

Details submitted by Project proponent

44.1.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
07/05/2014	19th Reconstituted EAC meeting held on 28/05/2014	Terms of Reference	17/07/2014

44.1.3 The project of M/s. Uttam Galva Ferrous Limited located at Villages Kuduthini, Veniveerapura, Yerangaligi and Kolagallu, Taluka & District: Bellary, Karnataka is for setting up of 6 MTPA Integrated Steel Plant along with captive power generation of 893 MW.

44.1.4 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>2015.4 ha(Private land)
Agriculture land: 200 ha;
Grazing land: 123 ha; and
Barren land: 1692.4 ha.</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. Dated 07.10.2014.</td><td>The land has been acquired by KIADB and handed over to UGFL. Presently, the entire land is under the possession of M/s. UGFL.</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Nil.</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of project site</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>1</td><td>15° 11'04.61" N</td><td>76° 49'29.66" E</td></tr><tr><td>2</td><td>15° 11'39.04" N</td><td>76° 50'46.06" E</td></tr><tr><td>3</td><td>15° 14'06.37" N</td><td>76° 46'33.65" E</td></tr><tr><td>4</td><td>15° 13'24.88" N</td><td>76° 46'18.38" E</td></tr></table></td></tr>
<tr><td>v.</td><td>Elevation of project site</td><td>460-475 m Above Means Sea Level (AMSL)</td></tr>
<tr><td>vi</td><td>Involvement of forest land if any.</td><td>Nil.</td></tr>
<tr><td>vii.</td><td>Water bodies exists within the</td><td><u>Project site: Yes</u></td></tr>
</table>

S No	Particulars	Details
	project site as well as study area	Three streams (Urumandranalla) are crossing the site which will not be disturbed and strengthened by providing 25m buffer on either side of the streams. **Study area:** Tungbhadra High Level Canal (Adjacent to project boundary in North and NE direction) Allipura Reservoir (South; 3.0 km) Daroji Reservoir (West; 9.4 km)
viii.	Existence of ESZ/ESA/National park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area	Nil

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

S No	Name of unit	Configuration & Capacity of each Unit	Production Capacity as per TOR
1	Coke oven and By-product plant	2x 60 ovens & 2 x 60 ovens	2.74 MTPA
2	Beneficiation & Pellet plant	1 x 420 m^2	4.00 MTPA
3	Sinter plant	2 x 460 m^2	8.532 MTPA
4	Blast Furnace	2 x 4200 m^3	6.464 MTPA
5	Basic Oxygen Furnace (BOF)	SMS-I 2 x 160 T SMS-II 2 x 160 T LRF -I 2 x 160 T LRF -II 2 x 160 T VD - 2 x 160 T	6.0 MTPA
6	Continuous Casting Machine (CCM)	2x 2.940 MTPA	5.88 MTPA
7	Rolling Mill (RM)	2 x 2.809 MTPA	5.615 MTPA
8	Captive Power Plant (WHR /coal based)	2 x 200 MW 1 x 200 MW GBPP: 110 MW & 153 MW, TRT: 2x 15 MW	893 MW
9	Oxygen Plant	4 x 1000 TPD	4000 TPD
10	Lime Plant	4 x 450 TPD	0.524 MTPA
11	Dolo Plant	2 x 125 TPD	0.150 MTPA
12	CDQ Process (Additional power)	-	40 MW

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

Raw material	Total (TPA)	Source
Lump ore for SMS	72,000	Iron ore mines in Karnataka and Goa
Sinter plant	79,70,000	Indigenous
Beneficiation	66,30,000	Indigenous
Prime coking coal	28,40,000	Coking coal will be imported from Australia/ USA
Semi coking coal	12,16,500	Non coking coal will be imported from Australia, Indonesia, Canada, China and Venezuela
Coal for PCI	11,62,000	Australia/ Indonesia
Coal for CPP (Full power generation)	39,70,000	Indigenous/ Indonesia
Anthracite for Sinter Plant	1,16,500	Will be imported from Vietnam and/or South Africa
Lime stone		High grade low silica limestone will be imported from Japan, Thailand, Vietnam, Middle east etc.
SP	7,11,000	Indigenous
SMS (HG)	11,54,000	Indigenous/ imported
Pellet plant	85,500	JSW
Dolomite		Indigenous source / Bhutan is considered as supplementary source.
SP	7,92,000	Indigenous
SMS (HG)	3,28,000	Indigenous
Quartzite for BF	34,000	Indigenous
Sand for Sinter Plant	1,40,000	Indigenous
Bentonite for Pellet plant	35,500	Indigenous

44.1.7 The water requirement for the project is estimated to be about 6045 m^3/hr of water which will be obtained from the surface water from river Tungabhadra. Government of Karnataka (GoK) has granted permission to draw 4 TMC (12930 m^3/hr) of surface water from downstream of river Tungabhadra, vide their letter No. 2013-14/751 dated 23/12/2013 and Govt. order No CI 122 SPI 2010 Bengaluru, dated 20.10.2016. The validity of the water permission was up to 08/06/2019.

44.1.8 The power requirement of the project estimated to be 893 MW and shall be met from total power generation of 893 MW from the plant operations. The captive power plant generation is about 600 MW from coal based and TRT, GBPP will generate about 293 MW. 40 MW additional power will be produced from the CDQ process. In case of power evacuation/drawing will be from KPTCL substation 400kV/220kV grid near Kuduthini which is about 5 km from the project site.

44.1.9 Baseline Environmental Studies:

Period	Winter Season (December, 2014 to February, 2015)	Additional one-month data January 2021
AAQ parameters at 8 locations	$PM_{2.5}$ = 16.59 to 42.84 μg/m^3 PM_{10} = 33.12 to 73.81 μg/m^3	$PM_{2.5}$ = 26.05 to 57.93 μg/m^3 PM_{10} = 50.83 to 84.73 μg/m^3

Period	Winter Season (December, 2014 to February, 2015)	Additional one-month data January 2021
	SO_2 = 1.68 to 11.49 µg/m^3 NO_x = 3.29 to 26.12 µg/m^3	SO_2 = 4.35 to 28.02 µg/m^3 NO_x = 6.22 to 43.89 µg/m^3
AAQ modelling (Incremental GLCs)	$PM_{2.5}$ = 5.93 µg/m^3 PM_{10} = 9.16 µg/m^3 SO_2 = 22.51 µg/m^3 NOx = 21.86 µg/m^3	$PM_{2.5}$ = 5.92 µg/m^3 PM_{10} = 7.71 µg/m^3 SO_2 = 15.92 µg/m^3 NOx =18.4 µg/m^3
Ground water quality at 8 locations	pH: 7.45 to 7.98, Total Hardness: 480 to 925 mg/l, Chlorides: 57 to 233 mg/l, Fluoride: 0.48 to 0.91 mg/l. Heavy metals are within the limits.	pH: 7.60 to 8.02, Total Hardness: 85 to 1982 mg/l, Chlorides: 248 to 2250 mg/l, Fluoride: 0.14 to 1.37 mg/l. Heavy metals are within the limits
Surface water quality at 8 locations	pH: 7.13 to 8.06; DO: 5.3 to 6.7 mg/l and BOD: 2 to 2.8 mg/l; total coliform: 84 to 278 MPN/100 ml	pH: 7.21 to 8.56; DO: 5.9 to 7.0 mg/l and BOD: 2.2 to 3.4 mg/l; total coliform: 140 to 540 MPN/100 ml
Noise levels	51.5 to 72.3 dB(A)for the day time and 50.3 to 69.2dB(A) for the Night time.	49.7 to 73.8dB(A)for the day time and 46.1 to 69.1 dB(A) for the Night time
Traffic assessment study findings	Traffic study conducted on Kudatini – Siddamanahalli Road. The observed traffic is moderate since, the proposed plant area is green field area and there is no traffic pertaining to the proposed plant.	**Not conducted**
Flora and fauna	Schedule I fauna (Indian Peafowl) present in Study Area. Conservation Plan has been prepared by the proponent.	**Not conducted**

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

Sl. No.	Unit	Nature of solid waste	Quantity at 3 MTPA (TPA)	Quantity at 6 MTPA (TPA)	Probable reuse
1	**Beneficiation plant**	Tailing	1,699,200	-	For land fill/Brick making
2	**Blast furnace**				
		Dust from waste gas and DE systems	66	130	Feed for SP
		BF slag	1,455,300	2,910,600	Sold to cement plant
3	**Sinter plant**				
	Sinter BF return	Sinter fines	829,857	1,659,714	Sinter plant
4	**Steel melting shop**				

Sl. No.	Unit	Nature of solid waste	Quantity at 3 MTPA (TPA)	Quantity at 6 MTPA (TPA)	Probable reuse
		BoF Slag	450,000	900,000	SP, and road making and land fill 70 kg/tone of crude steel will be used for sinter cooling
		BoF sludge	42,000	84,000	Sintering plant feed
		dolo and fines	12,375	24,750	Sinter feed
5	**Continuous casting machine**				
		Mill scales	30	60	Sintering plant
		Refractory's debris	15	31	Clay making for BF
6	**Rolling mills**				
	Scrap	Scrap	65,400	213,100	Within the steel plant
	Re-heating furnace	Broken refractory's	-	(Lump sum 300 T)	During revamping of Reheating furnace once in 10 years for landfilling.
7	**Coke oven plant**				
	Coke breeze	Dust	176,471	352,942	Sinter plant
8	**Captive power plant**				
	Fly ash	Dust	524,000	794,000	Cement and brick manufacturing
	Bottom ash		131,000	198,500	Ash pond

44.1.11 Public Consultation:

Details of Advertisement given	01/07/2016
Date of Public Consultation	04/08/2016
Venue	Shri. KampliAllumThimmappaKalyanaMandapa, Kudatini, Bellary Taluk & District
Presiding Officer	Additional Deputy Commissioner, Bellary
Major Issues Raised	(i) Industrial air pollution and dust problem (ii) Discrepancy of land compensation (iii) Job/employment opportunities for locals

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

S.No.	Issue raised	Physical activity and action plan	Tentative Budget, Rs Crore	Target date for Implementation of action plan
1.	Health Centre/Medical camps	In Eight villages.	6.00	Jan 2026
2.	Infra-structure development like	8 nos. in Eight villages	6.00	Jan 2026

S.No.	Issue raised	Physical activity and action plan	Tentative Budget, Rs Crore	Target date for Implementation of action plan
	drinking water facilities/RO water unit			
3.	Infrastructure development in nearby villages like LED street lighting and black topping of roads	800 lights with 50km roads in Eight villages	22.00	Jan 2027
4.	Sanitation programme in villages	1200 toilets in the surrounding 8 villages	6.00	Jan 2027
5.	Skill development centre and program	1 training centre three courses for 180 peoples per year	10.00	Jan 2026
6.	Avenue plantation and plantation in community areas @ 1000 nos. per village	In the surrounding villages of 30 km radius	49.00	Jan 2028
7.	Rainwater harvesting/desilting of existing village ponds in 15 villages	In the surrounding villages of 10 km radius	49.00	Jan 2028
Total			**148.00**	-

44.1.12 The capital cost of the project is Rs. 36,000 Crores and the capital cost for environmental protection measures is proposed as Rs. 5625 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 563 Crores. The employment generation from the proposed project is about 6427. The details of cost for environmental protection measures is as follows:

Item	Capital cost (Rs. In Crores)	Recurring cost per annum (Rs. In Crores)
Environmental pollution control		
Air pollution control including CDQ for coke oven	1500	150
Dust separation system (dry fog for raw material handling, sinter plant, junction towers)	650	65
Primary and secondary de-dusting system at coke oven, BF, SMS and calcination plant	1490	149
Water pollution control (ETP-Coke oven and	600	60

Item	Capital cost (Rs. In Crores)	Recurring cost per annum (Rs. In Crores)
STP)		
Fume extraction at rolling mill complex	200	20
Solid waste management includes tailing disposal, ash pond etc.	630	63
Noise pollution	20	2
Occupational health	50	5
Environmental and pollution monitoring		
Environmental survey and sampling	25	3
Green belt development	100	10
Rainwater harvesting	150	15
Continuous monitoring	30	3
CER fund for PH issues	180	18
Total	**5625**	**563**

44.1.13 Greenbelt will be developed in 664 ha which is about 33% of the total acquired area. A 20m wide greenbelt, consisting of 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. Since it is a green field project saplings are yet to be started. About 16.6 lakhs saplings will be planned in an area of 664 ha.

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

44.1.15 Name of the EIA consultant: Initially, the EIA report was prepared by M/s. Mecon Limited. Thereafter, the proponent has changed the EIA consultant namely M/s. Ampl Environ Private Limited. Presently, the EIA report has been submitted by M/s. Ampl Environ Private Limited [S. No.128, List of ACOs with their Certificate no. NABET/EIA/2023/IA0061 valid up to 13.08.2023; Rev. 13, August 09, 2021].

Observations of the Committee

44.1.16 The Committee observed the following:

i. Brief Chronology of the proposal

ToR issued	:	17th July, 2014
Baseline date	:	December, 2014 to February, 2015
Public Hearing	:	04th August, 2016
EC Application date	:	20th January, 2017
EAC Meeting dates	:	6-7 March & 3-5 May, 2017 (PP did not attend admittedly due to financial crisis)
EAC Meeting	:	10-12th December, 2018 (EAC rejected the proposal)

ii. EAC in its meeting dated 10-12th December, 2018 opined that the validity of ToR and baseline data has been expired and advised the PP to obtain fresh 'ToR' as per the provisions laid down in the EIA Notification, 2006. Subsequently, the PP submitted

several representations to the Ministry requesting to revisit the matter. In this regard, personal hearing in the Ministry on 15/04/2020 wherein Ministry has issued a letter to the PP that to submit the EIA report based on the secondary data collected through authentic resources.

iii. In pursuance to the MoEF&CC letter, M/s. Uttam Galva Ferrous Limited has made an online application vide proposal no. IA/KA/IND/180641/2014 dated 27/10/2020 along with Form 1 &2, and feasibility report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposal was listed for consideration during the 25th meeting of the Re-constituted EAC (Industry-I) held during 25-27thNovember, 2020 wherein the project proponent did not attend the meeting.

iv. The proposal was placed before the EAC in its meeting held on 16-17th December, 2020 wherein EAC recommended to return the proposal in present form as the AAQ data as desired by MOEF&CC have not been validated. EAC advised the PP to collect one-month data from same locations as that of 2014-15 monitoring and submit the revised EIA report by end of Feb 2021.

v. Accordingly, PP submitted the report to the Ministry on 25/02/2021. The proposal was considered in 32nd Re-EAC (Industry -1) held on 15-17th March, 2021 wherein EAC opined that PP has changed the unit configurations as well as production capacities of coke oven, sinter plant and pellet plant etc., for which ToR was accorded on 17/07/2014 and public hearing held on 04/08/2016. Further, data collected during Jan 2021 show significant deterioration in the baseline environment and validation could not be established as desired in the EAC meeting held on 16-17th December, 2020. Thus, the validation process has failed. In view of this EAC recommended for rejection of the instant proposal and asked PP to obtain a fresh ToR.

vi. Meanwhile, the project proponent changed the EIA consultant from M/s. Mecon Limited to M/s. Ampl Environ Private Limited.

vii. Thereafter, PP made a representation to the Ministry on 06/04/2021 seeking one more opportunity for appearing before the Expert Appraisal Committee of Industry 1 sector for considering the proposal for grant of Environment Clearance. In response to this, MoEF&CC vide letter dated 20/05/2021 asked the proponent to submit the EC application in line with the ToR dated 17/07/2014 within fifteen days i.e., by 05/06/2021. However, PP submitted the incomplete application on 05/06/2021. Thereafter, Ministry raised EDS on 7/06/2021, 07/07/2021 and 02/08/2021. PP finally submitted the complete application on 23/08/2021 and placed before the EAC for consideration.

viii. Shortfalls in the EIA report:
   a. EIA does not give interpretation of baseline data in Chapter 3 and quantification of impacts in Chapter 4.
   b. Performance testing of Pollution Control Devices (PCDs) has not been included in Chapter 6 of EIA.

c. Action plan to address the issues raised during public hearing with physical targets as prescribed in the MoEF&CC O.M. dated 30/09/2020 has not been submitted.
d. The water withdrawal permission got expired on 08/06/2019. Updated status on water withdrawal permission has not been made available by the proponent.
e. Basic Oxygen Furnace (BOF) gas cleaning details (dry or wet) have not been furnished. Secondary Fume extraction system for Converter with Dog House has not been proposed to control the fugitive emissions.
f. MEROS technology has not been included in the Sinter Plant.
g. 1643 Acre land is allocated for green belt. Only 50000 trees have been proposed to be planted which is not in conformity to the CPCB guidelines i.e., 1000 saplings per acre.
h. Action plan for rain water harvesting has not been submitted.
i. In coke oven plant, Visual control of Percentage Leaking Lids (PLL), Percentage leaking Doors (PLD) and Percentage Leaking Off (PLO) is not included.
j. Sinter Cooler waste heat recovery to generate steam is proposed. Power generation is not proposed. In EIA report, however it is mentioned that the hot gases from Sinter Cooler shall be sent to ignition furnace.
k. There is no proposal for hot charging of slabs/billets.
l. Tailing Pond has been proposed for Iron Ore Beneficiation plant tailings. Cake from Filter press @ 5851 TPD shall be stored in the pond. No proposal has been given to utilize the tailings.
m. Updated status of MOUs made for coal linkage and iron ore linkage has not been submitted by PP.
n. Traffic study was collected with the baseline data collection during December, 2014 to February, 2015, after that PP has not carried out the traffic study. Since traffic study conducted about 6-7 years passed, during these 7 years significant traffic scenario may be change.
o. EIA report is neither technically adequate nor it is in compliance to Appendix III of EIA notification. The purpose of Chapter 9 pertaining to Corporate Environment Policy is not even understood by Accredited Consultant Organization.

ix. The instant proposal has been deliberated upon by the EAC during 10-12th December 2018, 16-17th December, 2020, 15-17th March, 2021 wherein the proposal was recommended for rejection twice by the EAC on account of non-addressal of key environment concerns in the EIA report. In this regard, PP made several representations to the Ministry from time to time. Ministry took cognizance of the said representations and referred back the proposal to EAC for consideration. However, the project proponent repeatedly fails to submit the requisite information and unable to address the technical deficiencies in the EIA report since December, 2018. Besides, considerable time period has been taken by the proponent to furnish the reply to the EDS points and information sought by the EAC from time to time which resulted in inordinate delay in appraisal of the proposal.

x. The preliminary baseline data collected by the proponent during Dec 2014 – Feb, 2015 is more than six years old and the data collected during Jan 2021 show significant

deterioration in the baseline environment and validation could not be established by the PP as desired in the EAC meeting held on 16-17th December, 2020. During revalidation, PP failed to revalidate the traffic assessment and ecological study. The public consultation held on 4/08/2016 is almost five years old and the public needs to be apprised about the significant changes occurred in the baseline environment.

Recommendations of the Committee

44.1.17 In view of the foregoing and after deliberations, the Committee reiterated its recommendation for rejection of the proposal. Further, the Committee opined that project proponent is free to apply for seeking fresh Terms of Reference under the provisions of the EIA Notification, 2006.

44.2 Modification-cum-Expansion in existing Ferro Alloys Plant by **M/s. Bihar Foundry & Casting Limited** located at Ramgarh Industrial Area, Survey Plot No 1405(P), Village – Marar, **Ramgarh District, Jharkhand**. [Online Proposal No. IA/JH/IND/223909/2020; File No.: J-11011/384/2010-IAII(I)] **– Environment Clearance–** regarding.

44.2.1 M/s. Bihar Foundry & Casting Limited has made an online application vide proposal no. IA/JH/IND/223909/2020 dated 23/08/2021 along with copy of EIA/EMP report and Form-2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3 (a) Metallurgical industries (Ferrous & non-ferrous) under Category "A" of the schedule of the EIA notification, 2006 and appraised at Central level.

Details submitted by Project proponent

44.2.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
12/09/2020	24th Re-EAC (Industry- 1) meeting held during 27-29th October, 2020	Terms of Reference	24/11/2020

44.2.3 The project of M/s. Bihar Foundry & Casting Limited located at Ramgarh Industrial Area, Survey Plot No 1405(P), Village – Marar, Ramgarh District, Jharkhand is for Modification-cum-Expansion in existing Ferro Alloys Plant.

44.2.4 Environmental Site Settings:

SNo	Particulars	Details	Remarks
i.	Total land	3.14 ha [Private:3.14ha; Govt 0ha; Agriculture:0ha; and Grazing land: 0 ha]	Land use: Industrial
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Acquired land: 3.14 ha (7.76 Acres) Plot no. - 1405(P). Land is already under possession of proponent	
iii.	Existence of habitation & involvement R&R, if any.	NA	
iv.	Latitude & Longitude of project site	Latitude: 23°39' 33.79" N Longitude: 85° 30' 20.85" E	

SNo	Particulars	Details	Remarks
v.	Elevation of the Project site	320 m AMSL	
vi.	Involvement of Forest land if any.	NA	
vii.	Water body exists within the project site as well as study area	**Project site:** Name : NA **Study area** Damodar River, at 1.4 km S	
viii.	Existence of ESZ/ ESA/ National park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil	

44.2.5 The existing project was accorded environmental clearance vide lr. no. J-11011/384/2010-IA.II(I) dated 31/10/2011. Consent to Operate renewal for the existing unit was accorded by Jharkhand State Pollution Control Board in the name of M/s. Gautam Ferro Alloys (Unit of BFCL) vide lr. no. Ref no JSPCB/HO/RNC/CTO/4412165/2020/1819 dated 10/11/2020.The validity of CTO is up to 31/12/2025.

44.2.6 Implementation status of the existing EC.

S No	Facilities As per EC dated 31/10/2011	Implementation Status as on 24/11/2020	Production as per CTO
1	Ferro Alloys Plant of 96 TPD (2x5 MVA SAF's and 1x7.5+1x9 MVA SAF's with Jigging unit and Micro Pelletizing facility	Ferro Alloy Plant of 96 TPD	96 TPD

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

S No	Name	Existing Units		Proposed Units (Modification-Cum-expansion)		Total (Existing + Proposed)	
		Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
1	Ferro Alloy unit	2x5+1x7.5 +1x9 MVA SAF	34,080	Modification of existing 2x5 MVA SAF's to 2x6 MVA SAF Modification of existing 1x7.5 MVA SAF to 1x9 MVA SAF capacity New 1x9 MVA SAF New 12MT per batch CLU Converter for refining liquid HC FeMn to MC/LC FeMn	SiMn-24,495 FeMn-59,995	2x6+3x9 MVA SAF + 12MT CLU	SiMn-58,575 or FeMn-94,075

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

SNo	Raw Material	Quantity required per annum	Source	Distance from site (Km)	Mode of Transportation
Ferro Manganese					
1	Manganese ore	235187.5TPA	Imported (Zambia)	5 km	Rail/Road
2.	Coke	70556.25TPA	Imported	5 Km	Rail/Road
3.	Carbon paste	1411.125TPA	Local market	5 Km	Road
4.	Quartz	28222.5TPA	Local market	2 Km	Road
5.	Dolomite	23518.75TPA	Imported (Bhutan)	1000 Km	Road
Silico Manganese					
1.	Manganese Ore	146,437.5 TPA	Imported	5 km	Rail/Road
2.	Coke	43,931.25 TPA	Imported	5 km	Rail/Road
3	Carbon paste	878.625 TPA	Local market	5 Km	Road
4.	Dolomite	14,643.75 TPA	Imported (Bhutan)	1000 Km	Road
5.	FeMn Slag	29,287.5 TPA	In house	0	NA

44.2.9 The water requirement for the project is estimated as 50m^3/day, out of which 45m^3/day of fresh water requirement will be obtained from the DVC and the remaining requirement of 5m^3/day will be met from the Rain water Harvesting. The permission for drawl of surface water of 0.36 MGD is obtained from office of Executive Engineer, Tenughat Dam Division vide Lr. No. 243 dated 19/02/2020.

44.2.10 The power requirement for the project is estimated as 22 MVA, out of which 5(existing)+ 19 MVA (Permitted) will be obtained from the DVC.

44.2.11 Baseline Environmental Studies:

Period	1st December 2019 to 29th February, 2020
AAQ parameters at site locations (Avg)	$PM_{2.5}$= 31.50 to 36.43 µg/m^3 PM_{10}= 61.50 to 80.66 µg/m^3 SO_2= 6.42 to 11.92 µg/m^3 NO_x= 14.50 to 22.31µg/m^3 CO = 0.35 to 0.60 mg/m^3
AAQ modelling (Incremental GLC)	PM_{10}= 0.6 µg/m^3 SO_2= 0.4 µg/m^3 NO_x= 0.03 µg/m^3
Groundwater quality at Eight different locations	pH:7.5 to 7.92; TotalHardness:238 to346 mg/l,Chlorides:84.36to150.4mg/l, Fluoride: 0.94 to1.26 mg/l; Heavy metals are within the limits.
Surface water quality at five different locations	pH:7.54 to7.86.;DO:5.38 to7.8mg/land BOD:<5 mg/l. COD from 30.6 to 98.6 mg/l.
Noise levels	52.1 to 68.4 dBA for the day time and 42.7 to55.3 dBA for the Night time.
Traffic assessment study findings	There is no significant increment in traffic density.

Flora and fauna	Presence of schedule I fauna is not recorded in study area.

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

S. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment /Disposal
1.	Slag(Solid)	SAF's	42,600	Used in Filling low lying area and road construction
2.	Used Oil	Process	240 L /Annum	Will be sent to authorized recyclers

44.2.13 Public Consultation:

Details of advertisement given	10th February, 2021
Date of public consultation	15thMarch, 2021
Venue	Gym Khana Club Ranchi road, Ramgarh
Presiding Officer	Additional Collector, Ramgarh
Major issues raised	i. Employment ii. Pollution Control iii. Plantation

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

S No	Concerns raised during the Public Hearing	Physical activity and action plan	Tentative Budget, Rs Lacs	Target date for Implementation of action plan
1.	Employment for Local people	80% of the worker will be hired from Local villages.	53 Lakhs	31st July 2022
2.	Pollution Control	Design and Procurement of Bag Filter, ID Fan, Heat exchanger, stack, Online Monitoring System.	25 Lakhs	31st July 2022
3.	Plantation	Procurement of 2116 plant species suitable for plantation and development of green belt	15 lakhs	September 2022

44.2.14 The capital cost of the project is Rs 50 Crores and the capital cost for environmental protection measures is proposed as Rs 2.50 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 0.53 Crores. The employment generation from the proposed project / expansion is 705(Regular/Contract) The details of cost for environmental protection measures is as follows:

S No	Description of Item	Existing(Rs. lakhs)	
		Capital Cost	Recurring Cost
i.	Air Pollution Control/Noise	100	25
ii.	Water Pollution Control	50	05

S No	Description of Item	Existing(Rs. lakhs)	
		Capital Cost	**Recurring Cost**
iii.	Cost of noise pollution control	50	01
iv.	EnvironmentalMonitoring and Management	15	09
v.	Green Belt Development	15	05
	Cost of Environment Management Cell	00	05
vi.	Cost of Occupational Health Management	20	03
	Total	**250**	**53**
	Addressed of Public Consultation concerns	71	22

44.2.15 Green belt will be developed in 1.03 ha which is about 33% of the total project area. A10-20m 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 2575 saplings will be planted and nurtured in 1.03 hectares in 2 years.

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

44.2.17 Name of the EIA consultant: M/s. Ampl Environ Private Limited [S. No.128, List of ACOs with their Certificate no. NABET/EIA/2023/IA0061 valid up to 13.08.2023; Rev. 13, August 09, 2021].

Certified Compliance report from the regional Office

44.2.18 The Status of compliance of earlier EC was obtained from Regional Office, MOEF&CC vide letter no.103-325/11/EPE/4275, dated 09/10/2020 in the name of M/s. BFCL (Ferro Alloy Unit). The Action taken report regarding the partially/ non-complied condition was submitted to Regional officer MoEF&CC, vide letter no. BFCL/Env/2020-21/13 dated 10/11/2020MoEF&CC(RO), Ranchi evaluated the same. The conditions which are not complied yet as per RO compliance report and action taken by PP are as given below:

S No	Conditioned not complied yet	Action taken by PP
A.	**Specific conditions- Not complied**	
1	**condition no. vii):** The project proponent has been using ground water without obtaining the approval from competent authority as on date and it was informed that their application (no.2l4l590/JH/lND/2019 dated 01.10.2019) still under process. The water flow meters along with running hours meters have not been installed in 4 nos. of bore well point and the daily water consumption has not been monitored. At present project proponent is being using river water from Damodar River without obtaining the approval from the competent authority despite lapse of 9 years of grant of EC in 2011. Such in ordinate pendency of this matter is objectionable. It was observed that surface drainage system was	Proponent submitted that Application for seeking permission to abstract ground water for industrial use has been submitted vide letter No.- 21-4/590/JH/IND/2019 Dated 01.10.2019 which is under process. Recommendation for the same has been sent by the Executive Engineer, Tenughat Dam to the Chief Engineer, Water Resource Depart. Hazaribagh vide letter No.-243 dated 19.02.2020. The same will be submitted to MoEF&CC once the permission is obtained. PP also stated that they have filed application to DVRRC for obtaining permission for withdrawal of surface water vide letter No.- no. 2019-20/232 Dated30.12.2019 which is also awaited and in the meantime proponent is using water from local canal. Construction of water drainage system is also under process. Regarding Industrial waste water contained proponent submitted that there is no discharge of industrial waste

S No	Conditioned not complied yet	Action taken by PP
	not yet constructed. (photo7). Industrial waste water contained in the surface water where zero discharge process has not been strictly followed by project proponent.	water from the plant as post treatment industrial water is recycled back into the process to achieve the zero liquid discharge.
	condition no. x): The Risk and Disaster management plan along with the mitigation measure is not approved by concerned Government authority.	Risk and Disaster management plan along with the mitigation measure has been prepared and is being submitted to the concerned authority Chief inspector of factory. The same will be submitted to MoEF&CC on approval.
	condition no. xiv): During the site visit discussion with project officials stated that corporate Environment Responsibility (CER) plant is yet to be prepared which they have not been doing despite being pointed out in the previous monitoring report on 14.02.2011.	Corporate Social Responsibility (CSR) is an ethical and sustainable way to mitigate environmental and social impacts under which proponent is arranging medical health camp, providing drinking water, books and stationary distribution in few local schools and bearing educational fee for poor students and sports development in the area providing sports kits and event expenses. During covid-19, proponent also distributed food items, drinking water to the extent of Rs. 31.16 Lakhs to the poor people. Corporate Environment Responsibility (CER) is under preparation and will be made available to MoEF&CC on finalisation.
	Specific Condition- Partially Complied	
	Condition no. ii): Project authorities have been using pearl coke instead of pet coke. At the project site huge amount of charcoal dumps and dry wood was observed which are also being used as fuel;(photo- 5&6)	The Supreme Court has banned the use of petroleum coke or pet coke — solid-carbon, coal-like material which results from oil refining — and furnace oil in the National Capital Region (NCR) and suggested that similar steps be taken in other States. NGT has also directed CPCB to ensure ban on pet coke and furnace oil. The wood lot seen in the photos no. 6 was used for furnace pre heating after relining. Proponent declared that they are not using charcoal/wood as fuel in the process. Further proponent will ensure not to use charcoal dumps and dry wood as fuel.
	condition no. iii): on the date of project site visit it was observed that there are two stacks installed in the project stack no.-2 online stack monitoring and stack no.-1 is still not connected with online monitoring system. Both stacks data are yet to be connected with JSPCB server despite lapse of 09 years of EC in 2011.Recently on 17.10.2020 project proponent has submitted some online emission monitoring data sheet generated to JSPCB and CPCB. Project proponent should give an explanation on this regard	There are two stacks in the unit. Stack -I is attached with furnace 3 & 4 and stack -2 is attached with furnace 1 & 2. Online stack emission monitoring system is already installed on stack I and is well connected to JSPCB & CPCB server. Online system in stack-2 has also been installed and connected with CPCB server but connectivity with JSPCB server was in process at the time of inspection, however, since 29.09.2020 data is transmitted with CPCB server and from 08.10.2020 data has also started for transmission to JSPCB server.
	Condition no.- iv It was observed that project proponent has not installed any kind of device to detect if any variation in parameter beyond the limit immediately received notification from server through SMS or Email.	The online stack emission monitoring system and PM 10 analyzer are installed and connected to JSPCB server. The data is also visible in JSPCB website in public domain. Whenever parameter exceeds the limit during power failure or data transmission is interrupted during repair it is immediately intimated to JSPCB vide email. As soon as it is restored the same is intimated through email and also visible on

<table>
<tr><th>S No</th><th>Conditioned not complied yet</th><th>Action taken by PP</th></tr>
<tr><td></td><td></td><td>JSPCB website.</td></tr>
<tr><td></td><td>Condition No.-v):
The secondary fugitive emission data was monitored by Institute for Environmental Management, Eco Enviro Lab recognized by NABL and JSPCB. Project proponent should have been submitted a copy of letter certifying that Institute for Environmental management, Eco Enviro Lab is NABL accredited. At the project site it was observed that installed Fume Extraction System was inadequate to control fume and dust. Profise smog was observed inside the industry premises, (photos- I &2). Inside the industrial premises most of the pathways are neither black topped nor properly paved / concocted creating muddy condition in wet season and dusty in dry season. This location needs fixed water sprinklers, dust extractors system and sweep vacuums Vehicular movement through this area is additional cause for spread of dust pollution. The industry wastage was haphazardly placed, in the project sites indicative of poor housekeeping (phote-8). A copy of water tankers log book signed by authorized signatory must be submitted to this IRO, Ranchi</td><td>The secondary fugitive emission data is monitored by Laboratories which are NABET accredited and registered in JSPCB. The whole system is online. PP has applied for the monitoring online through single window site of the State Government. It is allocated to Laboratory who are registered in JSPCB randomly. There is no option of pick & choose. Pathways inside the premises have been made concrete. The Fume Extraction System has been repaired. Installed Fume Extraction System (Thermax Make & Botliboi Engineers Make) is very efficiently working and adequate to control the fume generating during process (Photos-1&2). Little fugitive emission will be observed occasionally during tapping time which PP is planning to avoid by enhancing the capacity of section earliest. PP has also planned to fix water sprinklers around the yard and at the side of the road. Procurement of Dust extractors system and sweep vacuums is under process. In the premises regarding haphazardly placed industrial waste PP has submitted that the designated area is actually metal contaminated slag processing area which are cleared by evening after completion of the processing activities during the day time (Photos-8). Now this area has been cleaned and they have started slag processing in organized way. All the industrial wastes have been removed and a permanent water tanker has been deputed for regular spraying of water. Fugitive emission is being controlled by spraying water through tanker. Materials are being transported in vehicles duly covered to avoid fugitive emission. Pavement/construction of concrete road is still continuing and will be completed at the earliest. PP submitted water tanker log book duly signed by authorized signatory, also submitted to MoEF Regional office Ranchi. Currently water sprinkling is carried out by mobile sprinkler for mitigating ambient dust generated due to plying of vehicles. There are water tankers of 12 KL used to sprinkle water on transport road, coal and raw material dump area, etc. PP submitted the duly signed copy of Log book of usage of water through water tanker.</td></tr>
<tr><td></td><td>Condition No.- viii)
The Rain water harvesting plan is not a Government approved one. Project proponent should not allow oil / grease or ore/mineral water to percolate inside the water harvesting structure.</td><td>The rain water harvesting plan has been prepared by Govt. approved agency and the same has been implemented. The range of oil & grease/ ore/ mineral in rain water is very less. For removal of oil from the Rainwater harvesting Systems through simple holding ponds by Gravity Separation. For removal of ore/ mineral, rain water passes through a filter and then it is allowed to recharge the ground water.
<table>
<tr><th>S No</th><th>Location</th><th>Specification Approx</th><th>Total Capacity Approx</th></tr>
<tr><td>1</td><td>Rainwater Harvesting Pit</td><td>5x5x12 meters</td><td>300 KL</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S No</th><th>Conditioned not complied yet</th><th>Action taken by PP</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td></td><td>(Near Work shop)</td><td></td><td></td></tr>
<tr><td>2</td><td>Rainwater Harvesting Pit (Near Store)</td><td>5x5x12 meters</td><td>300 KL</td></tr>
<tr><td>3</td><td>Rain water Harvesting Pit (Near Raw materials Yard)</td><td>5x5x12 meters</td><td>300 KL</td></tr>
</table>
</td></tr>
<tr><td></td><td>Condition No.-ix)
Project proponent should have submitted the year wise slag production data, quantity of recycled in the furnace arid non ferrous particles used in the preparation of building materials to this IRO, Ranchi at the earliest</td><td>PP submitted the year wise slag production data details. The slag is crushed in the crusher, magnetic particles are removed and recycled in the furnace. Nonferrous particles are used in the filling of low lying area.
<table>
<tr><th>Period</th><th>Slag production in MT</th><th>Quantity recycled in the furnace in MT</th><th>Nonferrous particulars used in the building in MT/Sold to recycler</th></tr>
<tr><td>2014-15</td><td>16357</td><td>9814</td><td>6543</td></tr>
<tr><td>2015-16</td><td>20965</td><td>12579</td><td>8386</td></tr>
<tr><td>2016-17</td><td>12500</td><td>7852</td><td>4648</td></tr>
<tr><td>2017-18</td><td>9496.450</td><td>0.00</td><td>9496.450</td></tr>
<tr><td>2018-19</td><td>23172</td><td>11172</td><td>12000</td></tr>
<tr><td>2019-20</td><td>16302.850</td><td>0.00</td><td>16302.850</td></tr>
</table>
</td></tr>
<tr><td></td><td>Condition no. xi):
At the project site it was observed that as requisite, the Cireer Belt plantation (33%) has not yet been completely developed along the periphery of the campus. Some tree plantation has been done surrounding the project site, (photo- 7) which is inadequate as per the stipulation. There is scope for development of green belt in most of the areas of the project which should be undertaken at the earliest. To reduce air pollution in the project areas, some high value index air pollution tolerant species /i.e., Ficus bengalensis, Cassia siactea, Mangifera indica, Alstonia scholaris, Toona ciliate etc.) Should also be planted in the periphery or the campus and other available areas in project to prevent and reduce the dust pollution.</td><td>Plantation over an area of 49274 sq. feet has been done. Development of green belt in the boundary side is completed. 265 no of trees have been planted on 5thJune, 2020 so far. (Photo-7) Plantation programme is regularly done to increase plantations in areas. Plant species are selected as per CPCB guidelines. PP is planning to plant more trees especially suggested species and plantation shall be completed by the next monsoon. PP stated that flora and fauna management plan as mentioned in EIA/EMP report will be followed.</td></tr>
<tr><td></td><td>Condition no. xii):
Project proponent has not shown the activities carried out on Enterprise Social Commitment programme during the time of site visit. The detail of the approved Enterprise Social Commitment (ESC) plan was not yet uploaded on the company website and also not yet submitted to IRO Ranchi. Third party evaluation of ESC activity should also be submitted.</td><td>PP reported that the company has well developed Social Commitment programme. Social commitment is implemented via a cross-functional approach. Company’s overall social commitment is focused around three visions: - Education Population stabilization, health and nutrition Clean India / Green India. A cross-functional working group will be formed. The company’s Vision Group will include Function Heads of Corporate Communications, Sales & Marketing, Power Projects, Environment</td></tr>
</table>

<table>
<tr><th>S No</th><th>Conditioned not complied yet</th><th>Action taken by PP</th></tr>
<tr><td></td><td></td><td>Management, CSR, OHS, Finance & Accounts and Sustainability departments. Together the group will shape and implement the priorities of company's social commitment within their departments and across the group of companies.</td></tr>
<tr><td></td><td>B).General Condition:</td><td></td></tr>
<tr><td></td><td>Condition No.-. i):
It was observed that some condition given in the CTO have not complied as yet.</td><td>The condition stipulated in CTO has been complied and submitted to JSPCB on the basis of which Unit’s CTO has been granted which is valid up to 31.12.2020.</td></tr>
<tr><td></td><td>Condition no. ii):
Production record register has not maintained and shown at the project site. Project proponent stated that production data recorded in the Ranchi Office which is about 70km far away from the project site.</td><td>Updated Production record register has been kept at the project site.</td></tr>
<tr><td></td><td>Condition no. iii):
It was observed that the industry does not have effective mechanism to prevent and arrest fugitive dust generated due to movement of traffic and materials. The materials are dumped without cover and spread here and there in the project Site a$ source of dust pollution in the neighbouring locality during windy periods</td><td>All the industrial wastes have been removed and a permanent water tanker has been deputed for regular spraying of water. Currently water sprinkling is carried out by mobile sprinkler for mitigating ambient dust generated due to plying of vehicles. There are water tankers of 12 KL used to sprinkle water on transport road, coal and raw material dump area, etc.</td></tr>
<tr><td></td><td>Condition no. iv):
The project proponent has not yet installed online continuous Ambient Air Quality Monitoring system in the project site.</td><td>PM_{10} analyzer has been installed as directed by JSPCB and connectivity has been given to JSPCB server. The CAAQMS is very costly and it is not feasible for this type of industry. Therefore, it is requested to waive off the condition of CAAQMS keeping in view the financial condition of the project.</td></tr>
<tr><td></td><td>Condition no. vii):
There was not maintaining patient record register in the project site.</td><td>Pre Project health status was carried out as part of baseline study EIA/EMP report of unit. Health Camps are conducted regularly in the nearby villages. Total beneficiaries in the last 3 years are as follows:
<table>
<tr><th>Year</th><th>Village Health Camps</th><th>Benefi-ciaries</th><th>School Health Camps</th><th>Benefi-ciaries</th></tr>
<tr><td>2017-18</td><td>Marar Village</td><td>90</td><td>Rajkiya medium school Ranchi Road</td><td>55</td></tr>
<tr><td>2018-19</td><td>Mahto Tola</td><td>78</td><td>Shri Gurunanak Public School</td><td>72</td></tr>
<tr><td>2019-20</td><td>Hesla & Marar</td><td>102</td><td>DAV School</td><td>64</td></tr>
</table></td></tr>
<tr><td></td><td>Condition no. ix):
Socio-economic development activity in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc. was not able to shown by project proponent on the date of site visit. Copy of EIA/EMP report has not yet</td><td>
<table>
<tr><th>Year</th><th>Comm-unity develop-ment program</th><th>Benefi-ciaries</th><th>Education program</th><th>Drinking water supply</th></tr>
<tr><td>2017-18</td><td>Woman’s day</td><td>50</td><td>45</td><td>70</td></tr>
</table></td></tr>
</table>

S No	Conditioned not complied yet	Action taken by PP
	submitted to IRO, Ranchi.	<table><tr><td>2018-19</td><td>Bharat vikash Parishad Marriage</td><td>25</td><td>35</td><td>140</td></tr><tr><td>2019-20</td><td>Woman's Day</td><td>40</td><td>75</td><td>130</td></tr></table>
	Condition no. x): No separate account has been maintained by project proponent on environmental protection measures. The year wise and activity wise expenditure incurred for environmental protection measures have not been recorded and furnished to IRO, Ranchi. Project proponent should submit the details of personnel along with their qualification associated with the environment management cell (separate lists for personnel exclusive and others)	For the protection of environment, expenditure incurred in dust suppression in unit's premises, roads, etc. cleaning of oil & grease trap tank, cleaning washing platform, cleaning of garland drains, etc. in last 4 year is approx. 30.69 lakh. Expenditure incurred on infrastructural development such as school building community centre, marketing centre, dispensary, road, etc. in nearby areas is approximately 527 lakh in last 4 year. Cumulative Cost as per different head as per EIA/EMP is submitted. Other cost incurred are i) Monitoring of Ambient Air, Noise, plantation, ii) Cost under APCD etc.
	Condition no. xii): It was observed that only one half yearly compliance report dated 9 has been found uploaded in project's website. Project proponent should upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically. It was also observed that the pollutant levels AAQ (ambient air quality) data has not been shown / installed in the digital display board or other manual board at a convenient location near the main gate and in the public domain in the project site.	PP has reported that six monthly compliance reports along with monitoring data has been uploaded on company website "www.bfcl.in." PP ensures to give status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically. PP has further reported that the display board is under construction and pollutant levels AAQ (ambient air quality) data are displayed in manual board near the main gate and also in the public domain at the project site.
	Condition no. xiv): The environmental statement 31st March in "From- V" is not yet uploaded on the website	Complied.
	Condition no. xvi): As per document produced by project proponent which has certified and signed by Chartered Accountant CA, Nikesh Kumar on behalf of Mr. Vinish Kumar & CO (Chartered Accountant, FCA) on 5.10.2020 stated that the date of commencement for Ferro Alloys Division (Silico Manganese / Ferro Manganese) is 21 " February, 2008 and date of financial closer for Silico Manganese / Ferro Manganese is 1stJune 2014. However, as per vide email dated 10.03.2017. the project proponent mentioned that the date of commencement of the project is on 07.07 2014, and same as mentioned in the previous monitored report (letter dated 29.03.2017) and also same has mentioned in the recent submitted industry	The anomaly has been corrected and is submitted to Ministry. The date of commencement is 21/02/2008 and date of completion of the project is 07/07/2014.

S No	Conditioned not complied yet	Action taken by PP
	information Performa by project proponent on dated 05.10.20. Project proponent should give an explanation on this anomaly.	

Observations of the Committee

44.2.19 The Committee observed the following:

i. Proposed expansion project site is located in a Severely Polluted Area. Additional safeguards such as 40% green belt development and provision of Continuous Ambient Air Quality station etc. have not been proposed by the proponent.

ii. Existing EC as well as instant EC application is in the name of M/s. Bihar Foundry and Castings Limited whereas the Consents obtained from JSPCB is in the name M/s. Gautam Ferro Alloys (Unit of BFCL). PP informed that M/s. Gautam Ferro Alloys is a common name and no such legal entity exist. This needs to be revisited by the PP to ensure that the name in the EC as well as the Consents are in the same name.

iii. There are serious non-compliances have been reported by RO including use of GW (4 bore wells) without permission; approval of Disaster Management Plan (DMP) by Factory Inspectorate; non-implementation of CER, Continuous Ambient Air Quality Monitoring station (CAAQMS) at project site has not been installed so far; medical examination records of workers are not available; CSR activities have not been taken up and six monthly reports have not been furnished etc. No tangible efforts have been taken by the proponent to comply with the said non-compliances as reported at para no. 44.2.18.

iv. Revised action plan for green belt development covering 40% of the project area with a density of 2500 sapling per ha will be required as the site is located in a severely polluted area.

v. Jigging and micro pelletizing facility is available. It is not clear if any up-gradation is planned for these facilities under expansion.

vi. Sewage treatment plant details has not been made available.

vii. EIA report has following shortcomings;

a. There are three EIA coordinators, the roles and responsibilities of the coordinators are not clear. Signatures of all Team Members are scanned.

b. Specific TOR points (i) and (iii) pertaining to use of surface water and emission levels less than 30 mg/Nm^3 have not been complied. TOR Point 9 compliance has been given at three places in pieces in Annexure 5, Chapter 6 and Annexure 8. Accredited Consultant Organization (ACO) does not understand where this point should be addressed in EIA report.

c. Interpretation of physical data, EB data has not been addressed in Chapter 3.

d. Socio-economic data have not been given in Chapter 3 and not interpreted.

e. In section 4.5.7.2 of Chapter 4, impact on Social Environment has been given. It is not clear as to how impact has been predicted without determining the base line in Chapter 3?

f. Rain water harvesting program has been addressed only for water requirement added for expansion project.

g. In EIA report, at one place the designation of environment head is given as GM and at another place it is ADM. On page 170 of the report, it is mentioned that

Electrical, Mechanical maintenance engineers and Security officer shall report to Environment Department.

h. Performance testing of pollution control equipment and systems has not been included in EIA report.
i. Project cost and EMP cost given in Table 6.4 is in variance from the data given in the presentation.
j. SIA has been presented in section 7.6. Only census data have been presented in the report. There is no evidence of systematic data collection and surveys conducted by ACO for carrying out SIA study. Interpretation of data has not been presented.
k. In Chapter 8 CER (EMP) activities given are not as per OM of 30th Sept 2020. At one place the completion period is shown as 7 years and at another place it is 5 years. Year wise activity with physical targets have not been given as per O.M. of 30th Sept 2020.
l. Chapter 10 description does not follow the requirement of Appendix III of EIA notification 2006.

Recommendations of the Committee

42.2.21 In view of foregoing and after deliberations, the Committee recommended to return the proposal in its present form. Further, the Committee also recommended to issue a Show Cause Notice to the EIA consultant for the shortcomings in the EIA report enumerated at para no. 42.2.20.

44.3 Proposed Integrated Steel Plant with Beneficiation cum Palletization -1.6 MTPA capacity, Sponge iron - 7,60,000 TPA; Hot Metal/ M.S Billets/ M.S. ingots 7,50,000 TPA; Rolled Products/TMT Bars/ Structural Steel — 7,00,000 TPA & Producer Gas plant - 80,000 Nm/hr; Ferro Alloy unit of 2x9 MVA to Produce Fe-Si (OR) Fe-Mn (OR) Si-Mn (OR) Pig Iron, Power Generation 106 MW (CFBC - 40 MW, WHRB - 66 MW) by **M/s. Real Ispat & Power Limited** located at Villages Bakulahi & Dhourabhata, Tehsil Bhatapara, **District Baloda Bazar Bhatpara, Chhattisgarh**. [Online Proposal No. IA/CG/IND/127880/2019; File No.: J-11011/411/2019- IA.II(I)] **– Environment Clearance**– regarding.

44.3.1 M/s. Real Ispat & Power Limited has made an online application vide proposal no. IA/CG/IND/127880/2019 dated 26/08/2021 along with copy of EIA/EMP report and Form-2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3 (a) Metallurgical industries (Ferrous & non-ferrous) under Category "A" of the schedule of the EIA notification, 2006 and appraised at the Central level.

Details submitted by Project proponent

44.3.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
27th November 2019	14th EAC 23 – 24 December 2019	TOR	20th January 2020

44.3.3 The project of M/s. Real Ispat & Power Limited located at Villages Bakulahi & Dhourabhata, Tehsil Bhatapara, District Baloda Bazar Bhatpara, Chhattisgarhis for Proposed Integrated Steel Plant with Beneficiation cum Palletization -1.6 MTPA capacity,

Sponge iron - 7,60,000 TPA; Hot Metal/ M.S Billets/ M.S. ingots 7,50,000 TPA; Rolled Products/TMT Bars/ Structural Steel — 7,00,000 TPA & Producer Gas plant - 80,000 Nm/hr; Ferro Alloy unit of 2x9 MVA to Produce Fe-Si (OR) Fe-Mn (OR) Si-Mn (OR) Pig Iron, Power Generation 106 MW (CFBC - 40 MW, WHRB - 66 MW).

44.3.4 Environmental Site Settings:

SNo	Particulars	Details	Remarks
i.	Total land	63.52 ha. (156.9 Acres) & same is in possession of management	Land Use: Out of total land, 43.969 Ha. (108.65 Acres) of land is already converted for Industrial Purpose and remaining, the land conversion is under process.
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Total land is in possession of management	--
iii.	Existence of habitation &involvement of R&R, if any.	No habitation exists in the project site	--
iv.	Latitude and Longitude of the project site	21°47'47.51"N to 21°48'20.47"N 82°02'26.44"E to 82°02'49.10"E	--
v.	Elevation of the project site	267 to 275 m AMSL	--
vi.	Involvement of Forest Land, if any	Nil	--
vii.	Water body exists within the project site as well as study area.	**Project Site** : Nil **Study area:** Shivnath River (5.9 Km/NW), Jamuniya Nadi (5.8 Km/SSE), Bhatapara Branch of Mahanadi Canal (0.18 Km/SSE)	---
viii.	Existence of ESZ / ESA / National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. if any within the study area	Nil	---

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

SNo	Unit (Products)		Unit Configuration	Production Capacities
1.	Iron ore Beneficiation (Beneficiated ore)		2.0 MTPA	2.0 MTPA
2.	Pellet Plant (Pellet)		2x0.8 MTPA	1.6 MTPA
3.	Coal Gasifier + PCI For Pellet Plant & Rolling Mill		10x8000 Nm^3/hr	80,000 Nm^3/hr
4.	DRI Kilns (Sponge Iron)		2 x 650 TPD + 2 x 350 TPD + 1 x 200 TPD *****	7,60,000 TPA
5.	Steel Melt Shop with CCM (Billets / Ingots / Hot Billets)		5 x 30 T + 5 x 20 T + twin Caster	7,50,000 TPA
6.	Ladle Refining Furnace (LRF) (Billets / Ingots / Hot Billets)		2x25 T & 1x35T	7,50,000 TPA
7.	Rolling Mill with Standby Reheating Furnace 50 TPH (Rolled products / TMT Bars / Structural Steel)		2x3,50,000 TPA	7,00,000 TPA
8.	Ferro Alloys Unit (FeSi / FeMn / SiMn / Pig Iron)		2x9 MVA	FeSi- 18,000 TPA / FeMn- 66,000 TPA / SiMn- 36,000 TPA / Pig Iron-72,000 TPA
9.	Power Plant	WHRB	66 MW	66 MW
		CFBC	40 MW	40 MW

MTPA: Million Tons per Annum
WHRB: Waste Heat Recovery Boiler
CFBC: Circulating Fluidized Bed Combustion

It is proposed to install briquetting plant of capacity 200 Kg/hr.

Note:

*** as per Specific ToR (xi),** instead of 2 x 100 TPD DRI Kilns it is proposed to install only 1 x 200 TPD Kiln to reduce no. of Kilns in the proposal.

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

S No	Raw Material / Fuel	Quantity (TPA)	Sources	Distance (in Kms.)	Mode of Transport
1. For Iron Ore beneficiation plant (2.0 MTPA – throughput capacity)					
a)	Iron ore fines	20,00,000	Chhattisgarh/ Orissa	~ 600 Kms.	By Rail & Road (through covered trucks)
2. For Pellet Plant (Pellets) - 1.6 MTPA					
a)	Iron ore Concentrate	17,00,000	Own generation	---	Covered Conveyor
b)	Bentonite	21,000	Gujarat	~ 600 Kms.	By Rail & Road (through covered trucks)

S No	Raw Material / Fuel		Quantity (TPA)	Sources	Distance (in Kms.)	Mode of Transport
c)	Lime Powder		22,500	Chhattisgarh/ MP	~ 100 Kms.	By Rail & Road (through covered trucks)
d)	Coke breeze		54,000	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag port)	By Sea, Rail & Road (Covered trucks)
e)	Coal (Gasifier) 40,000 NM^3) + PCI	Indian	1,67,200	SECL/ Orissa	~ 500 Kms.	By Rail & Road (through covered trucks)
		Imported	97,280	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag port)	By Sea, Rail & Road (Covered trucks)
f)	LDO		30,300 KL	Chhattisgarh	~ 100 Kms.	By Road through tanker
3. For DRI Kilns (Sponge Iron) – 7,60,000 TPA						
a)	Iron Ore Pellets		11,40,000	Own generation	---	Covered Conveyor
b)	Dolomite		38,000	Chhattisgarh	~ 100 Kms.	By Road (through covered trucks)
c)	Coal	Indian	9,88,000	SECL/ Orissa	~ 500 Kms.	By Rail & Road (through covered trucks)
		Imported	6,32,350	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag port)	By Sea, Rail & Road (Covered trucks)
4. For Steel Melting Shop (MS Billets/ Ingots/Hot Billets) – 7,50,000 TPA						
a)	Sponge Iron		7,60,000	Own generation	---	Covered Conveyor
b)	Pig Iron		72,000	Own generation	---	Covered Conveyor
c)	Scrap		38,000	Chhattisgarh	~ 100 Kms.	By Road (through covered trucks)
d)	Ferro Alloys		37,500	Own generation	---	Covered Conveyor
5. For Rolling Mill through Hot charging (Rolled Products / TMT bars / Structural Steel) – 7,00,000 TPA						
a)	Billets / Ingots		7,50,000	Own generation	---	Covered Conveyor
b)	Coal for Gasifier (40000 Nm^3)+ PCI	Indian	1,29,600	Chhattisgarh/ Orissa	~ 100 Kms.	By Rail & Road (through covered trucks)
		Imported	83,000	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag port)	By Sea, Rail & Road (Covered trucks)
c)	LDO		35,100 KL	Chhattisgarh	~ 100 Kms.	By Road through tanker
6. For Ferro Alloys : 2 x 9 MVA (FeSi / SiMn / FeMn / Pig Iron)						
6. (i) For manufacturing Ferro Silicon – 18,000 TPA						
a)	Quartz		27,360	Chhattisgarh/ Andra Pradesh	~ 100 Kms.	By Rail & Road (through covered trucks)
b)	Mill Scale		14,040	Own generation	---	Covered Conveyor

S No	Raw Material / Fuel		Quantity (TPA)	Sources	Distance (in Kms.)	Mode of Transport
c)	M.S. Scrap		630	Chhattisgarh	~ 100 Kms.	By Road (through covered trucks)
d)	LAM Coke		10080	Chhattisgarh	~ 100 Kms.	By Road (through covered trucks)
e)	Bag filter dust		1080	Own generation	---	Pipeline
6. (ii) For manufacturing Silico Manganese - 36,000 TPA						
a)	Manganese Ore		58680	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	FeMn Slag		22248	Own generation	---	Covered Conveyor
c)	LAM Coke		13860	Chhattisgarh	~ 100 Kms.	By Road (through covered trucks)
d)	Quartz		7200	Chhattisgarh/ Andra Pradesh	~ 100 Kms.	By Rail & Road (through covered trucks)
e)	Bag filter dust		3600	Own generation	---	Pipeline
6. (iii) For manufacturing Ferro Manganese – 66,000 TPA						
a)	Manganese Ore		170625	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	LAM Coke		27375	Chhattisgarh	~ 100 Kms.	By Road (through covered trucks)
c)	Quartz		2250	Chhattisgarh/ Andra Pradesh	~ 100 Kms.	By Rail & Road (through covered trucks)
d)	Bag filter dust		12,750	Own generation	---	Pipeline
6. (iv) For manufacturing Pig Iron – 72,000 TPA						
a)	HG Iron ore		1,06,200	Chhattisgarh/ Orissa	~ 100 Kms.	By Rail & Road (through covered trucks)
b)	LAM Coke		35,280	Chhattisgarh	~ 100 Kms.	By Road (through covered trucks)
c)	Lime stone		29,520	Chhattisgarh/ MP	~ 100 Kms.	By Rail & Road (through covered trucks)
7. For FBC Boiler [Power Generation 1 x 40 MW]						
a)	Indian Coal (100%)		2,48,400	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By Rail & Road (through covered trucks)
			OR			
b)	Imported Coal (100 %)		1,58,980	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag port)	By Sea, Rail & Road (Covered trucks)
			OR			
c)	Dolochar +	Dolochar	1,52,000	Own Generation	---	By Conveyers

S No	Raw Material / Fuel		Quantity (TPA)	Sources	Distance (in Kms.)	Mode of Transport
	Indian Coal	Indian Coal	1,72,400	SECL Chhattisgarh / MCL Odisha	~ 100 Kms.	By Rail & Road (through covered trucks)
			OR			
d)	Dolochar + Imported Coal	Dolochar	1,52,000	Own Generation	---	By Conveyers
		Imported Coal	1,10,340	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag port)	By Sea, Rail & Road (Covered trucks)

44.3.7 Water requirement for proposed project is estimated as 5640 KLD and same will be sourced from Silva anicut of Shivnath River, which is at distance of 7.8 Km. Water allocation has been recommended by Water Resource Department, Govt. of Chhattisgarh, vide 50thmeeting of State Water Resource Utilization Committee, Chhattisgarh dated 13.07.2021 for 2.0 MCM during July to December and 1.0 MCM during January to June. No ground water is envisaged for the plant activities.

44.3.8 The power requirement for the proposed project is estimated as 136.2MW, out of which 106MW will be sourced from captive power plant and remaining 30 MW will be obtained from the state grid.

44.3.9 Baseline Environmental Studies:

Period	1st October, 2019 to 31st December, 2019
AAQ parameters at 9 locations	$PM_{2.5}$ = 20.2 to 32.1 µg/m^3 PM_{10} = 34.5 to 54.5 µg/m^3 SO_2 = 6.5 to 11.6 µg/m^3 NO_x = 6.4 to 15.2 µg/m^3 CO = 325 to 718 µg/m^3
AAQ modelling	Incremental GLCs due to the proposed project: PM_{10} =2.95 µg/m^3 SO_2= 8.4 µg/m^3 NO_x= 7.83 µg/m^3 CO = 6.16 µg/m^3
Ground water quality at 8 locations	pH: 7.1 to 8.1, Total Hardness: 194 to 367 mg/l, Chlorides:248 to 398mg/l,Fluoride:0.54 to 0.94. Heavy metals are within the limits.
Surface water quality at6locations	pH: 7.2 to 8.1, DO: 3.2 to 6.1mg/l, BOD: 0.72 to 4.3mg/l and COD from 3.8 to 16.2 mg/l
Noise levels	The equivalent day-night noise levels in the study zone are ranging from 41.26 dBA to 57.57 dBA during the study period.
Traffic assessment study findings	Traffic load (Baseline) :1432.0 PCU/day Additional Traffic load during operation of the proposed project : 1920.0 PCU/day Total Traffic load during operation of proposed project load : 3352.0 PCU/day Traffic Capacity as per the IRC 73: 1980 for 2 lane undivided road

	is 5000 PCU/day. Hence existing road can cater to this additional traffic due to the proposed project. Based on the Traffic Assessment Study and considering the Passenger Car Unit (PCU) per day of traffic, road (into & out of the plant) with 18 Million Standard Axle (MSA) load will be laid down as per specifications of IRC: 37.
Flora and fauna	No schedule-1 fauna within the study area

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

SNo	**Waste / By product**	**Quantity (in TPA)**	**Method of disposal**
1	Tailings from I/O Beneficiation	3,00,000	Tailing will be taken to filter press & recovered the water. Cake of tailing will be stored in tailing yard & it will be given to M/s. Ambuja Cement Ltd. for utilisation in their cement manufacturing unit.
2	Ash / Dust generated from Pellet plant	45,000	Will be given to nearby Fly ash Brick manufacturers.
3	Dolochar from DRI	1,52,000	Will be utilized as fuel in CFBC Power plant.
4	Kiln Accretion Slag from DRI	6,840	Will be given to Road Contractors for road laying (to M/s. M/s. Shreeji Infrastructure India Pvt. Ltd.)& to brick manufacturers.
5	Wet scrubber sludge from DRI	35,000	Will be given to Road Contractors for road laying& to brick manufacturers.
6	Ash / Dust generated from DRI kiln	1,36,800	Ash generated will be given to M/s. Ambuja Cement Ltd. for utilisation in their cement manufacturing unit.
7	Slag from SMS	70,000	Slag from SMS will be crushed and iron will be recovered & then remaining non -magnetic material being inert by nature will be used as sub base material in road construction. It is will be given to M/s. Shreeji Infrastructure India Private Limited
8	Mill Scales from Rolling Mill	14,000	Will be reused in proposed Ferro Alloy manufacturing & Pellet plant.
9	End Cuttings from Rolling Mill	21,000	Will be reused in proposed SMS.
10	Slag from FeSi Manufacturing Process	5,320	Will be given to cast iron foundries.
	Slag from SiMn Manufacturing Process	30,800	Will be given to Road Contractors for road laying (to M/s. M/s. Shreeji Infrastructure India Pvt. Ltd.)
	Slag from FeMn Manufacturing	42,600	Will be used in manufacture of Silico manganese as it contains high MnO_2.

SNo	Waste / By product	Quantity (in TPA)	Method of disposal
	Process		
11	Ash generated from Gasifier (Pellet plant & Rolling Mill)	4280	Will be given to nearby Fly ash Brick manufacturers.
12	Tar generation from Gasifiers	594	Will be used in Pellet plant.
13	Ash from Power Plant (with Indian Coal + dolochar)	1,68,780	Will be given to M/s. Ambuja Cement Ltd. for utilisation in their cement manufacturing unit.
14	Ash from Power Plant (with imported Coal + dolochar)	1,03,240	Will be given to M/s. Ambuja Cement Ltd. for utilisation in their cement manufacturing unit.

Hazardous waste Generation:

1) Used Oil &Waste Oil: 1.5 KL/Annum
   Disposal: will be given to CECB approved Recyclers/ re-processors.
2) Used batteries will be given back to the supplier under buyback arrangement

44.3.11 Public Consultation:

Details of advertisement given	3rd January2021
Date of Public Consultation	4th February 2021
Venue	At Project site, Bakulahi & Dhourabhata Villages, Bhatapara Tehsil, Baloda Bazar – Bhatapara District, Chhattisgarh
Presiding Officer	Additional District Magistrate
Major issues raised	The issues raised during Public Hearing are: • Employment generation • Drinking water requirement in the villages • Mini Stadium • Anganbaari • Hospitals • Proper place for burial

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

S.No	Concerned raised during the Public hearing	Physical activity and action plan	Tentative Budget (Rs. Lacs)	Target date for Implementation of action plan
1.	Opined that proper compensation for land was not given to them.	Land has been purchased from the farmers as per mutually agreed price.	---	---
2.	Company must	All required environmental protection	Capital Cost –	2021-23

S.No	Concerned raised during the Public hearing	Physical activity and action plan	Tentative Budget (Rs. Lacs)	Target date for Implementation of action plan
	comply with environment law and environment management.	measures like ESP, Bagfilters (PTFE type), dust suppression system, covered conveyers; mechanical dust sweepers will be provided to bring down the particulate emission to < 30mg/Nm3. All the APCS will be installed and operated duly complying with the emission norms. Interlocking system will also be provided to ensure that whenever ESP fails, the raw material feed to that unit will be stopped and will commence operation only after rectification of ESP. ZLD will be followed. Solid waste disposal will be accordance with the norms. Ash will be stored in silos only. Greenbelt will be developed 1/3rd of the plant area.	Rs. 65.23 Crores Recurring Cost – Rs.191.60 lakhs/annum	2023-25
3.	Employment should be given to the local people	Priority will be given to un-employed local villagers as per their eligibility and rules of Government. The proposed project will generate direct employment 1000 nos. which will be employed officials, staff, skilled, semi -skilled labour & 1000 nos. indirectly employed in contract works & transport.	---	---
4.	Company should constitute Panchayat Samiti and should carry out social and infrastructure development like construction of Mini Stadium, Angaanbari, Hospitals etc.	Management assured to constitute Panchayat Samiti and carry out Social & infrastructure development activities and a separate budget is allocated for these activities.	Capital Cost – Rs. 65.23 Crores Recurring Cost – Rs.191.60 lakhs/annum	2021-23 2023-25
5.	Drinking water facility to be provided	Management has assured to provide Drinking water facility in the Bakulahi, Bharatpur, Dhourabhatha villages under social & infrastructure development activities.	Rs. 12 Lakhs	2022-25
6.	Burial ground to be provided	Company assured to provide burial land by purchasing the land as suggested by village panchayat	Rs. 20 Lakhs	2022-24

S No	Physical activity and action plan		Year of implementation					Total Expenditure (Rs. In Crores)
			1st	2nd	3rd	4th	5th	
A	**Based on need based & SIA study**							
1	***Community & Infrastructure Development Programmes***							
	Construction of Public Toilets	Physical No. & Villages	2 nos. in Bakulahi Village 2 nos. in Dhaurabhata Village	2 nos. in Bharatpur Village 2 nos. in Kosmanda Village	2 nos. in Semradih Village 2 nos. in Nipaniya Village	2 nos. in Mopka Village 2 nos. in Bendri Village	2 nos. in Akaltara Village 2 nos. in Bhothidih Village	0.6
		Budget inRs. Crores	0.12	0.12	0.12	0.12	0.12	
	Providing LED Street light with solar panel	Physical No. & Villages	15 nos. in Bakulahi Village & 15 nos. Dhaurabhata Village	15 nos. in Bharatpur Village & 15 nos. in Kosmanda Village	15 nos. in Semradih Village & 15 nos. in Nipaniya Village	15 nos. in Mopka Village & 15 nos. in Bendri Village	15 nos. in Akaltara Village & 15 nos. in Bhothidih Village	0.33
		Budget in Rs. Crores	0.06	0.06	0.07	0.07	0.07	
	Providing proper drainage & sanitation facilities	Physical No. & Villages	--	--	2 nos. in Dhaurabhata Village	--	2 nos. in Bakulahi Village	0.2
		Budget in Rs. Crores	0	0	0.1	0	0.1	
	Providing Grabage collection van in villages	Physical No. & Villages	1 no. in Bakulahi Village	1 no. in Nipaniya Village	1 no. in Dhaurabhata Village	1 no. in Bharatpur Village	1 no. in Mopka Village	0.25
		Budget in Rs. Crores	0.05	0.05	0.05	0.05	0.05	
	Re-Laying of Road	Physical No. & Villages	1.0 Km. in Bakulahi Village	---	0.8 Kms. in Dhaurabhata Village	---	0.9 Km. in Mopka Village	0.5
		Budget in Rs. Crores	0.2	0	0.14	0	0.16	
	Deepning of wells in the villages	Physical No. & Villages	---	1 no. Nipaniya Village	---	1 no. Kosmanda Village	1 no. Akaltara Village	0.15
		Budget in Rs. Crores	0	0.05	0	0.05	0.05	

S No	Physical activity and action plan		Year of implementation 1st	2nd	3rd	4th	5th	Total Expenditure (Rs. In Crores)
	□ Construction of RWH pits & Desiltation of Ponds	Physical No. & Villages	1 No. of Pond in Bakulahi Village	---	1 No. of Pond in Dhourabhata Village	---	1 No. of Pond in Semradih Village	0.3
		Budget in Rs. Crores	0.1	0	0.1	0	0.1	
2	□ Skill & Entrepreneur Development Program in accordance with guidelines issued by National Skill Development Corporation, Govt. of India (DISHA Centre) for imparting training to local villagers for skill development	Physical No. & Villages	Vocational training to unemployed youth 25 nos. from Bakulahi Village, 25 nos. from Dhaurabhata 25 nos. from Bharatpur, 25 nos. from Kosmanda Village, 25 nos. from Kosmanda	Vocational training to unemployed youth 25 nos. from Bakulahi Village, 25 nos. from Dhaurabhata 25 nos. from Bharatpur, 25 nos. from Kosmanda Village, 25 nos. from Kosmanda	Vocational training to unemployed youth 25 nos. from Bakulahi Village, 25 nos. from Dhaurabhata 25 nos. from Bharatpur, 25 nos. from Kosmanda Village, 25 nos. from Kosmanda	Vocational training to unemployed youth 25 nos. from Bakulahi Village, 25 nos. from Dhaurabhata 25 nos. from Bharatpur, 25 nos. from Kosmanda Village, 25 nos. from Kosmanda	Vocational training to unemployed youth 25 nos. from Bakulahi Village, 25 nos. from Dhaurabhata 25 nos. from Bharatpur, 25 nos. from Kosmanda Village, 25 nos. from Kosmanda	1.5
		Budget in Rs. Crores	0.3	0.3	0.3	0.3	0.3	
2	***Education & Sports programmes***							
	□ Providing infrastructure support facilities i.e. furniture, computers, library, sports equipment etc. along with Digital Class Room	@ Village	Bakulahi Village	---	Bharatpur Village	---	Mopka Village	0.15
	□	Budget in Rs. Crores	0.05	0	0.05	0	0.05	

S No	Physical activity and action plan		Year of implementation					Total Expenditure (Rs. In Crores)
			1st	2nd	3rd	4th	5th	
	Financial assistance to the Self Help Group (SHG) of women and elderly persons	Physical No. & Villages	20 nos. in Bakulahi & Dhaurabhata Village	---	20 nos. in Dhaurabhata & Senridhi Village	---	20 nos. in Kosmanda Village	1.0
		Budget in Rs. Crores	0.4	0	0.4	0	0.2	
	Renovation of school buildings	Physical No. & Villages	2 no.s of Schools in Nipaniya Village	---	1 No. of School in Dhourabhatha Village	---	2 no.s of Schools in Mopka Village	0.5
		Budget in Rs. Crores	0.2	0	0.1	0	0.2	
	Construction of multiple toilets for Boys and Girls in the schools	Physical No. & Villages	4 no.s in Nipaniya Village School	---	2 No.s in Dhourabhatha Village School	---	2 nos. in Mopka Village School	0.2
		Budget in Rs. Crores	0.1	0	0.05	0	0.05	
	Distribution of tricycles to handicapped students	Physical No. & Villages	5 nos. of tricycles in Bakulahi & 5 nos. of tricycles inDhourabhatha Village	5 nos. of tricycles in Semradhi & 5 nos. of tricycles in Nipaniya Village	5 nos. of tricycles in Bharatpur & 5 nos. of tricycles inKosmanda Village	---	---	0.03
		Budget in Rs. Crores	0.01	0.01	0.01	0	0	
4	***Agricultural related activities***							
	Financial support to farmers in Jogihalli & Devarahalli Village & Provide fertilizers to improve the soil supplement such as N,P,K	@ Village	Farmers of Bakulahi Village	Farmers of Dhourabhatha Village	Farmers of Kosmonda Village	Farmers of Bharatpur Village	Farmers of Mopka Village	0.75
		Budget in Rs. Crores	0.15	0.15	0.15	0.15	0.15	
B	**Based on Public Consultation / Hearing**							

S No	Physical activity and action plan		Year of implementation					Total Expenditure (Rs. In Crores)
			1st	2nd	3rd	4th	5th	
1	Providion of drinking water facility	Physical No. & Villages	Drinking water facility in Bakulahi Village	Drinking water facility in Bharatpur Village	Drinking water facility in Dhourabhatha Village	---	---	0.12
		Budget in Rs. Crores	0.04	0.04	0.04	0	0	
2	Providing Playing Ground with equipments	Physical No.	1 nos.	---	---	---	---	0.30
		Budget in Rs. Crores	0.30	0	0	0	0	
3	Primary Health Center (PHC) with Ambulance facility with emergency equipments	Physical No. & Villages	PHC with Ambulance facility in Bakulahi Village	---	---	PHC with Ambulance facility in Nipaniya Village	---	1.0
		Budget in Rs. Crores	0.5	0	0	0.5	0	
4	Providing Model Anganwadi Centre in consultations with State Women and Child Development Department	Physical No. & Villages	1 no. in Bakulahi Village	---	1 no. in Dhourabhatha Village	---	1 no. in Nipaniya Village	0.9
		Budget in Rs. Crores	0.3	0	0.3	0	0.3	
5	Providing proper place for graveyard	Physical No.	1 nos.	---	---	---	---	0.2
		Budget in Rs. Crores	0.2	0	0	0	0	
	Total (Crore)		**3.18**	**0.93**	**2.13**	**1.39**	**2.05**	**9.68**
C	**Recurring expenditure under CSR as per Companies Act 2014**							
1	**Health checkup & distribution of general medicines will be carried out periodically in surrounding villages @ Rs. 5.0 Lakhs every year**							

44.3.12 The capital cost of the project is Rs.930.68 Crores and the capital cost for environmental protection measures is proposed as Rs.65.23Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.1.91 Crores. The employment generation from the proposed project is 1000 nos. The details of cost for environmental protection measures is as follows:

SNo	Particulars	Capital Cost (Rs.in Crores)			Recurring Cost / Annum (Rs.in Lakhs)
		2022 - 2024	2024 - 2026	2026 - 2028	
1.	**Air Emission Management**				
	ESP	11.50	4.50	---	100.00
	4thHole (for SEAF) & Fume Extraction Systems with Bag filters (for SMS)	2.40	5.60	2.40	50.00
	Scrubber for Gasifier	0.04	0.10	---	1.00
	Other APCS (SOx & NOx control) & Conveyer's systems	6.00	2.00	---	1.00
	Stacks / Chimney (12 Nos)	2.32	2.16	1.24	2.00
	CEMS (21 sources)	0.55	0.45	0.15	1.00
	CAAQMS (4 nos.)	0.16	---	---	1.00
	Mechanical Dust Sweepers (3 nos.)	0.03	---	---	1.50
	Water Sprinklers	0.10	0.10	0.10	0.50
	Environment Monitoring	---	---	---	20.50
	Sub Total	**23.10**	**14.91**	**3.89**	**178.50**
2.	**Wastewater Management**				
	ETP & STP	1.00	1.00	---	4.00
	Garland drains	0.30	0.20	---	1.00
	Settling Ponds	0.15	0.15	---	0.50
	Sub Total	**1.45**	**1.35**		**5.50**
3.	**Solid waste Management**				
	Ash Handling & Disposal (Pneumatic conveyer system)	3.00	1.00	---	4.00
	Slag Handling & Disposal	0.20	0.10	---	1.00
	Hazardous waste storage & disposal	0.10	0.10	---	1.00
	Municipal Solid waste storage & Disposal	0.10	0.10	---	0.50
	Construction of Pucca platform for storage	0.50	0.50	---	0.50
	Sub Total	**3.90**	**1.80**		**7.00**
4	Greenbelt development	**0.50**	**0.50**		**0.20**
5	RWH Pits (Inside & Outside the plant)	**0.30**	**0.20**		**0.10**
6	Fire Safety Systems	**2.50**			**0.10**
7	**Occupational Health & Safety**				
	Primary Health Center (PHC)	0.70	---	---	**0.20**

SNo	Particulars	Capital Cost (Rs.in Crores)			Recurring Cost / Annum (Rs.in Lakhs)
		2022 - 2024	2024 - 2026	2026 - 2028	
	Personal Protective Equipment's	0.20	0.10	---	
	Ambulance	0.15	---	---	
	Sub Total	**1.05**	**0.10**		
8	Budget for Social & Infrastructure Development Activities	**4.23**	**3.21**	**2.24**	---
		37.03	**22.07**	**6.13**	
TOTAL		**65.23**			**191.60**
9	**Addressed to issues raised during public hearing**	**9.68 crores**			

44.3.13 Greenbelt will be maintained in 21.1 ha. (52.0 acres) of land. Total number of plants will be 53,000 @ 2500 no of plants per Hectare as per MoEF&CC norms.

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

44.3.15 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd [S. No.133, List of ACOs with their Certificate no. NABET/EIA/1922/RA0149 valid up to 22.03.2022; Rev. 13, August 09, 2021].

Observations of the Committee

44.3.16 The Committee observed the following:

i. Nearest village Bakulahi is 150 m SE and other village Daurabhata is 350 m from site NW. Additional measures to be taken by PP to reduce pollution impact on the villages have not been enumerated.
ii. BOD in surface water sample is shown as 0.85 and 0.72 mg/l which is not correct. In view of this, PP is required to carry out fresh monitoring of surface water quality.
iii. Soil analysis does not include Sodium Absorption Ratio (SAR) and Cation Exchange Capacity(CEC). Fresh analysis of soil samples is required.
iv. Performance monitoring of PCDs is not included in post project monitoring program.
v. Hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions need to be revised.

Recommendations of the Committee

44.3.17 In view of the foregoing and after deliberations, the Committee recommended to return the proposal in its present form to address the shortcomings enumerated at para no 44.3.16.

44.4 Greenfield project for production of Sponge Iron 231000 TPA; Mild Steel Billets232848 TPA; Rerolled Steel Products through Hot Charging and through Reheating Furnace 225863 TPA; Captive Power of 25MW (16 MW through WHRB and 9 MW through AFBC) and Fly Ash Bricks 36700 TPA by **M/s. VAP Ispat Private Limited** located at

Villages- Mudpar, Tenduwa & Rampura, Tehsil- Nawagarh, **District- Bemetara, Chhattisgarh [**Online Proposal No. IA/CG/IND/223688/2021;File No.: IA-J-11011/307/2021-IA-II(IND-I)] **– Prescribing for Terms of Reference–** regarding.

44.4.1 M/s. VAP Ispat Private Limited has made an online application vide proposal no. IA/CG/IND/223688/2021 dated 17/08/2021along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToR for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) and 1(d) Thermal Power Plant under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

Details submitted by Project proponent

44.4.2 The project of M/s. VAP Ispat Private Limited located at Villages- Mudpar, Tenduwa & Rampura, Tehsil- Nawagarh, District- Bemetara, Chhattisgarh is for Greenfield project for production of Sponge Iron 231000 TPA; Mild Steel Billets 232848 TPA; Rerolled Steel Products through Hot Charging and through Reheating Furnace 225863 TPA; Captive Power of 25MW (16 MW through WHRB and 9 MW through AFBC) and Fly Ash Bricks 36700 TPA.

44.4.3 Environmental site settings:

<table>
<tr><th>SNo</th><th>Particulars</th><th colspan="4">Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td colspan="4">29.11 ha. [Private:29.11 ha]</td><td>The company has entered into a Land agreement dated 02/01/2021 with the landowners. Total 33.56% area will be developed as Greenbelt area. After the registration land, will be permanently diverted to industrial purpose.</td></tr>
<tr><td>ii.</td><td>Existence of habitation &involvement of R&R, if any.</td><td colspan="4">No</td><td></td></tr>
<tr><td>iii.</td><td>Latitude and Longitude of project the site</td><td>Point</td><td>Latitude</td><td>Longitude</td><td></td><td></td></tr>
<tr><td></td><td></td><td>A</td><td>21°55'22.07"N</td><td>81°44'39.10"E</td><td></td><td></td></tr>
<tr><td></td><td></td><td>B</td><td>21°55'34.57"N</td><td>81°44'41.78"E</td><td></td><td></td></tr>
<tr><td></td><td></td><td>C</td><td>21°55'36.37"N</td><td>81°45'7.69"E</td><td></td><td></td></tr>
<tr><td></td><td></td><td>D</td><td>21°55'11.87"N</td><td>81°45'9.13"E</td><td></td><td></td></tr>
<tr><td></td><td></td><td>E</td><td>21°55'8.37"N</td><td>81°45'5.01"E</td><td></td><td></td></tr>
<tr><td></td><td></td><td>F</td><td>21°55'15.28"N</td><td>81°44'56.31"E</td><td></td><td></td></tr>
<tr><td></td><td></td><td>G</td><td>21°55'13.20"N</td><td>81°44'51.63"E</td><td></td><td></td></tr>
<tr><td></td><td></td><td>H</td><td>21°55'28.32"N</td><td>81°44'53.65"E</td><td></td><td></td></tr>
<tr><td></td><td></td><td>I</td><td>21°55'17.51"N</td><td>81°44'43.58"E</td><td></td><td></td></tr>
</table>

<table>
<tr><th>SNo</th><th>Particulars</th><th colspan="4">Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td colspan="4"><table><tr><td>J</td><td>21°55'37.92"N</td><td>81°44'57.73"E</td></tr><tr><td>K</td><td>21°55'29.40"N</td><td>81°44’46.10"E</td></tr></table></td><td></td></tr>
<tr><td>iv.</td><td>Elevation of the Project site</td><td colspan="4">285 m</td><td></td></tr>
<tr><td>v.</td><td>Involvement of Forest land if any.</td><td colspan="4">Nil</td><td></td></tr>
<tr><td>vi.</td><td>Water body exists within the project site as well as study area</td><td colspan="4">Project Site: Nil

Study area<table><tr><th>S No</th><th>Name of the Water Body</th><th>Distance (KM)</th><th>Direction</th></tr><tr><td>1.</td><td>Agar River</td><td>10.1</td><td>N</td></tr><tr><td>2.</td><td>Tesua Nadi</td><td>5.5</td><td>NE</td></tr><tr><td>3.</td><td>Sunari Nala</td><td>2.6</td><td>ENE</td></tr><tr><td>4.</td><td>Nakti canal</td><td>5.0</td><td>SW</td></tr><tr><td>5.</td><td>Nakti Nala</td><td>2.0</td><td>W</td></tr><tr><td>6.</td><td>Rampur Pond</td><td>1.0</td><td>W</td></tr></table></td><td></td></tr>
<tr><td>vii.</td><td>Existence of ESZ/ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. If any within the study area</td><td colspan="4">Nil</td><td></td></tr>
</table>

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

S No	Process plant	Proposed configuration of the plant	Product Name	Capacity (in TPA)
1	DRI Kiln (Coal Fired)	2x350TPD	Sponge Iron	231,000
2	Induction Furnace along with CCM and LRF	Induction Furnace (20 Tons x 4 Nos) and LRF (20ton x 1 No)	MS Billet	232,848
3	Hot Rolling Mill			225,863
	a. Hot Charging Rolling Mill	Electrical driven Rolling Mill about 388 TPD	Rerolled Steel product (Wire Rod, TMT bar, Structure Steel etc)	171,144
	b. Billet Reheating Furnace based on Hot Producer gas	Reheating Furnace based Rolling Mill about 124 TPD	Rerolled Steel products (Rerolled Structural Steel etc.)	54,719

S No	Process plant	Proposed configuration of the plant	Product Name	Capacity (in TPA)
	Plant[1]			
4	Captive Power Plant (Boiler and TG based)	WHRB	Captive Power	16 MW
		AFBC (Coal and Char Dolo Char Fired)		9 MW
5	Fly Ash Bricks/ Block making unit	Fly Ash Brick Making	Fly Ash Bricks/ Blocks	36700

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

For Sponge Iron Plant

S No	Raw Material	Quantity (TPA)	Source	Distance from site (Kms)	Mode of Transportation
1	Iron Ore	3,69,600	Odisha Iron Ore Mine and NMDC	500 Kilometers	By Road through covered vehicles
2	Coal	2,77,200	SECL Coal mines	200 KMs	By Road through covered vehicles
3	Limestone/ Dolomite	8,085	Open Market	50 KMs	By Road through covered vehicles
4	Refractory Material	347	Open Market	100 KMs	By Road through covered vehicles
	Total	6,55,232			

For Induction furnace

S No	Raw Material	Quantity (TPA)	Source	Distance from site (Kms)	Mode of Transportation
1	Sponge Iron	2,37,600.00	Captive production/ Local market	0.1 KMs	By Conveyor belts through covered vehicles
2	Pig Iron / CI Scrap	29,393.00	Local market	100 KMs	By Road through covered vehicles
3	Melting Scrap	4,900.00	Captive generation/ Local market	100 KMs	Internally available/ By Road through covered vehicles
4	Ferro Alloys	2,376.00	Local market	100 KMs	By Road through covered vehicles
5	Aluminum	237.60	Open Market/BALCO	150 KMs	By Road through covered vehicles
6	Ramming Mass	594.00	Open Market	100 KMs	By Road through covered vehicles
7	Steel Sheet Former	60.00	Open Market	100 KMs	By Road through covered vehicles

S No	Raw Material	Quantity (TPA)	Source	Distance from site (Kms)	Mode of Transportation
8	Furnace Oil for Laddle Preheating	460.94	Open Market	70 KMs	By Road through Tankers
9	Calcined Lime for Refining of Liquid Steel	11,880.00	Open Market	250 KMs	By Road through covered vehicles
10	Flurospar and other additives for de phos	2,376.00	Open Market	300 KMs	By Road through covered vehicles
11	Electrode for Laddle refining furnace	475.20	Open Market	500 KMs	By Road through covered vehicles
	Total	2,90,352.74			

For Hot Charging Rerolling Mill

S No	Raw Material	Quantity required per annum	Source	Distance from site (Kms)	Mode of Transportation
1	Hot Billets	174636.00	Captive Production in Steel Melting shop	-	Internal Transfer
	Total	**174636.00**			

For Reheating Furnace based Rerolling Mill

S No	Raw Material	Qty (in TPA)	Source	Distance from site (Km)	Mode of Transportation
1	Cold Billets	58,212.00	Captive production/ Local market as per requirement	Within 50 km	Internal Transfer/ By Road through covered vehicles
2	Coal	5,822.00	SECL Mines/ Local Market	Within 250 km	By Road through covered vehicles
	Total	**64034.00**			

Captive AFBC Power Plant (9MW)

S No	Raw Material	Qty (in TPA)	Source	Distance from site (Km)	Mode of Transportation
1	Char Dolochar	57,750.00	captive generation in SID	-	Internally available.
2	Coal	30,086.00	SECL Mines (200 KM)	Within 250 km	By Road through covered vehicles
3	Fluidizing Bed Media	150.00	Open Market; (100 KMs)	Within 50 km	By Road through covered vehicles
	Total	**87,986.00**			

Fly Ash Brick Plant

S No	Raw Material	Qty (in TPA)	Source	Distance from site (Km)	Mode of Transportation
1	Fly Ash/ Coal Ash etc	23,855.00	Internally available.	-	--
2	Gypsum and Cement	3,670.00	Local market	50 to 100 KM	Through road by covered vehicles.
3	Granulated slag from Induction Furnace	9,175.00	Internally available.	-	--
	Total :	**36,700.00**		-	

44.4.6 The water requirement for the project is estimated as 1431 m^3 /day (471654 KLA), the management has decided to implement a 50,000 KL Rain water collection Tank which will be enough to cater water requirement of 34 days and in rainy day of 75 days water requirement will be met through rain water collections in it. Therefore, it is considered that about 109 days (155979 KLA) water requirement will be met through rain water and rain water collection, and balance 221 days water (316251 KLA) will be sourced from Surface Water i.e. from Agar River.

44.4.7 The power requirement for the project is estimated as 30MW, out of which 25 MW will be obtained from captive power plant and 5 MW will be sourced through State Grid (CSPDCL). In addition, 2 Nos. of 3300 kVA DG sets are proposed for emergency backup.

44.4.8 The capital cost of the project is **Rs 28,000.00** Crores and the capital cost for environmental protection measures is proposed as Rs **300** Lakhs and Recurring cost of **50** Lakhs. The employment generation from the proposed project is **710**.

44.4.9 Proposed Terms of Reference (**Baseline data collection period: March to May, 2021**):

Attributes	**Parameters**	**Sampling**		**Remarks**
		No. of stations	**Frequency**	
A. Ambient Air Quality				
a. Meteorological parameters	Temperature, Relative Humidity, Rainfall, Wind direction &Wind speed.	1 (Project site)	Daily	
b. AAQ parameters	PM_{10}, $PM_{2.5}$, SO_2, NO_x, NH_3, Ozone, CO, Benzene and Benzo(a)pyrene & Heavy metals: Ni, Pb, As.	9	Weekly twice	
B. Noise Environment				
Noise	Leq (dB A) Day time and Night time with hourly measurement.	8	Once in Base line Period	
C. Water Quality				

Attributes	**Parameters**	**Sampling**		**Remarks**
		No. of stations	**Frequency**	
Surface water quality parameters	**Physical Parameters:** TDS, TSS, Conductivity, Turbidity **Chemical Parameters (Inorganic):** pH, Alkalinity, Total hardness, Calcium hardness, Chloride, Sulphate, Fluoride, Sodium, Potassium Heavy Metals: As, Cd, Cr, Cu, Pb, Fe, Mn, Zn, Ni, CO **Nutrient and Demand Parameters:** Total Nitrogen, Nitrate nitrogen, Total Phosphate, DO, BOD, COD **Organic Parameters:** Total hydrocarbon, oil & Grease **Note:** BOD & COD should be excluded for groundwater **Bacteriological Parameters:** Total Coliform & Faecal coliform and As per IS10500 : 2012(Drinking Water – Specification)	5	Grab Sample once in Base line Period	
Groundwater quality parameters				
D. Soil Quality				
Land use and Soil quality	**Physical Parameters:** Bulk Density, Texture, Particle Size distribution, water holding capacity and infiltration rate. **Chemical Characteristics (from water extract 1:5):** pH, conductivity, Calcium, Magnesium, Sodium, Potassium, Chloride, Sulphate. **Exchangeable Cations:** Calcium, Magnesium, Sodium, Potassium, CEC. Fertility Status: NPK, Organic Matter, Organic Carbon.	8	Once in Base line Period	

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
	Heavy Metals in Acid Extract: As, B, Cd, Cr, Cu, Pb, Ni, Co, Fe, Mn, Zn, and Se.			
E. Biological Environment				
a. Aquatic b. Terrestrial	Biodiversity i.e. Flora and fauna studies within the entire study area depending on Ecological receptors in the study area. Aquatic Ecological Study at Agar River and other River in study area.	3	Once in Base line Period	
F. Socio-economic environment				
Socio-economic parameters	Demographic study, Literacy rate, Occupational Health monitoring of employees, Employment pattern, Infrastructure and Awareness and opinion of the respondents	8	Once in Base line Period	

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

44.4.11 Name of the EIA Consultant: M/s. Anacon Laboratories Pvt. Ltd. [S. No. 65, List of ACOs with their Certificate no. NABET/EIA/1922/RA0150 and valid up to 30/09/2022; Rev. 13, August 09, 2021].

Observations of the Committee

44.4.12 The EAC noted the following:

i. The proposed plant site is located in an agriculture area. The pollution from the proposed plant is likely to have adverse impact on productivity of agriculture crop and livelihood of farmers.

ii. All the four corners of the site are surrounded by agriculture fields.

iii. Land for the plant is not contiguous and the layout is jig-jag and highly complicated. This kind of layout is not suitable for environment friendly steel plant. PP suggested to relook for alternative site.

iv. 4 sites have been studied and site selected one not seem to be the right one in light of the adverse impact on the ongoing agriculture activity.

Recommendations of the Committee

44.4.13 In view of the foregoing and after deliberations, the Committee not agreed with the site chosen for the proposed project site and recommended to return the proposal in its present form.

44.5 Establishment of Iron ore beneficiation plant (Beneficiated iron ore – 1.3 MTPA), Pellet plant (Pellets - 1.0 MTPA), DRI Kilns (Sponge iron - 3,30,000 TPA), Induction Furnace with LRF & CCM (Hot Billets / MS Billets / Ingots - 2,64,000 TPA), Rolling Mill (Rolled products - 2,97,000 TPA), Submerged Electric Arc Furnaces (FeSi – 17,`955 TPA / FeMn- 45,144 TPA / SiMn-23,940 TPA / FeCr- 26,600 TPA), WHRB based Power Plant – 22 MW, CFBC based Power Plant – 16 MW & Brick Manufacturing unit (56,000 Bricks/day) by **M/s. Sky Steel And Power Pvt. Ltd.** located at Kesda Village, Simga Tehsil, **Balodabazar District, Chhattisgarh [**Online Proposal No. IA/CG/IND/227543/2021; File No.: J-11011/339/2021-IA-II(IND-I)] **– Prescribing of Terms of Reference – regarding.**

44.5.1 M/s. Sky Steel And Power Private Limited has made an online application vide proposal no. IA/CG/IND/227543/2021 dated 02/09/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToR for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) and 1(d) Thermal Power Plant under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

Details submitted by Project proponent

44.5.2 The project of M/s. Sky Steel And Power Private Limited at Kesda Village, Simga Tehsil, Baloda bazar District, Chhattisgarh is for Establishment of Iron ore beneficiation plant (Beneficiated iron ore – 1.3 MTPA), Pellet plant (Pellets - 1.0 MTPA), DRI Kilns (Sponge iron - 3,30,000 TPA), Induction Furnace with LRF & CCM (Hot Billets / MS Billets / Ingots - 2,64,000 TPA), Rolling Mill (Rolled products - 2,97,000 TPA), Submerged Electric Arc Furnaces (FeSi – 17,`955 TPA / FeMn- 45,144 TPA / SiMn-23,940 TPA / FeCr- 26,600 TPA), WHRB based Power Plant – 22 MW, CFBC based Power Plant – 16 MW & Brick Manufacturing unit (56,000 Bricks/day).

44.5.3 Environmental site settings:

SNo	Particulars	Details	Remarks
i.	Total Land	24.88 Ha. (61.48 Acres).	Land Use: proposed project is agriculture land. The management have already entered into agreement with land owners for the entire land.
ii.	Existence of habitation & involvement of R & R, if any	No habitation exists in project site; Hence no R & R is involved.	---

<table>
<tr><th>SNo</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>iii.</td><td>Latitude and Longitude of the project site</td><td>Latitude and Longitude of the project site:<table><tr><td>Point</td><td>Coordinates</td></tr><tr><td>Point # 1</td><td>21°37'43.14"N, 81°47'45.77"E</td></tr><tr><td>Point # 2</td><td>21°37'43.67"N, 81°47'44.38"E</td></tr><tr><td>Point # 3</td><td>21°37'41.22"N, 81°47'43.23"E</td></tr><tr><td>Point # 4</td><td>21°37'41.83"N, 81°47'40.36"E</td></tr><tr><td>Point # 5</td><td>21°37'39.81"N, 81°47'39.25"E</td></tr><tr><td>Point # 6</td><td>21°37'37.82"N, 81°47'42.37"E</td></tr><tr><td>Point # 7</td><td>21°37'26.96"N, 81°47'40.24"E</td></tr><tr><td>Point # 8</td><td>21°37'20.27"N, 81°47'40.81"E</td></tr><tr><td>Point # 9</td><td>21°37'20.74"N, 81°47'38.28"E</td></tr><tr><td>Point # 10</td><td>21°37'15.50"N, 81°47'34.84"E</td></tr><tr><td>Point # 11</td><td>21°37'19.12"N, 81°47'31.10"E</td></tr><tr><td>Point # 12</td><td>21°37'20.06"N, 81°47'28.29"E</td></tr><tr><td>Point # 13</td><td>21°37'18.04"N, 81°47'28.69"E</td></tr><tr><td>Point # 14</td><td>21°37'17.26"N, 81°47'32.38"E</td></tr><tr><td>Point # 15</td><td>21°37'13.49"N, 81°47'31.90"E</td></tr><tr><td>Point # 16</td><td>21°37'05.83"N, 81°47'45.98"E</td></tr><tr><td>Point # 17</td><td>21°37'05.06"N, 81°47'47.02"E</td></tr><tr><td>Point # 18</td><td>21°37'17.04"N, 81°47'44.79"E</td></tr><tr><td>Point # 19</td><td>21°37'20.16"N, 81°47'47.65"E</td></tr><tr><td>Point # 20</td><td>21°37'25.21"N, 81°47'45.44"E</td></tr><tr><td>Point # 21</td><td>21°37'38.31"N, 81°47'46.53"E</td></tr><tr><td>Point # 22</td><td>21°37'41.07"N, 81°47'44.54"E</td></tr><tr><td>Point # 23</td><td>21°37'41.31"N, 81°47'45.31"E</td></tr><tr><td>Point # 24</td><td>21°37'42.81"N, 81°47'45.73"E</td></tr></table></td><td>---</td></tr>
<tr><td>iv.</td><td>Elevation of the project site</td><td>MSL of the Project area – 275 m to 284 m</td><td>---</td></tr>
<tr><td>v.</td><td>Involvement of Forest land, if any</td><td>No Forest land is involved in the project site.</td><td>---</td></tr>
<tr><td>vi.</td><td>Water body exists within the project site as well as study area</td><td><u>Project site:</u>
Seasonal Nala is Passing through the site to the Eastern direction. The existing hydrological pattern of the nala will not be disturbed. Culverts will be constructed at wherever crossing is envisaged.10 m wide plantation with land scaping on either side of nala will be developed.
<u>Study area:</u><table><tr><td>Water Body</td><td>Distance & Direction</td></tr><tr><td>Mahanadhi bhatapara Canal</td><td>0.15 km (SE)</td></tr><tr><td>Shivnath River</td><td>9.5 Kms (SW)</td></tr><tr><td>Jamuniya stream</td><td>5.1 Kms. (SE)</td></tr><tr><td>Otgan Pond</td><td>3.3 Kms (SW)</td></tr></table></td><td>---</td></tr>
</table>

SNo	Particulars	Details		Remarks
		Hatbandh Pond	3.8 Kms.(E)	
		Khilora Pond	7.6 Kms (NEE)	
		Parsada Pond	7.4 Kms. (SSW)	
		Shivnath River	9.5 Kms (SW)	
		Jamuniya stream	5.1 Kms. (SE)	
		Otgan Pond	3.3 Kms (SW)	
		Hatbandh Pond	3.8 Kms.(E)	
		Khilora Pond	7.6 Kms (NEE)	
		Parsada Pond	7.4 Kms. (SSW)	
vii.	Existence of ESZ/ ESA/ National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve/ Elephant Reserve etc. if any within the study area	Nil		---
viii.	Forest within the study area	Bilari Ghughua RF - 0.35 kms. (W) Bilari RF – 6.2 Kms (SSW)		--

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

SNo	Units (Products)		Plant Configuration	Production Capacity
1.	Iron ore Beneficiation (Beneficiated ore)		1 x 1.3MTPA	1.3MTPA (throughput)
2.	Pellet Plant (Pellet)		1 x 1.0MTPA	1.0MTPA
3.	DRI Kilns (Sponge Iron)		2 x 350 TPD 3 x 100 TPD	3,30,000 TPA
4.	Induction Furnace (Billets / Ingots / Hot Billets)		4 x 20 T	2,64,000 TPA
5.	Rolling Mill (Rolled products) (85 % Hot charging with Hot Billets and remaining 15% through RHF with LDO/LSHS as fuel)		3 x 300 TPD	2,97,000 TPA
6.	Ferro Alloys Unit (FeSi / FeMn / SiMn / FeCr)		3 x 6 MVA	FeSi – 17,955 TPA / FeMn-45,144 TPA / SiMn-23,940 TPA / FeCr-26,600 TPA
7.	Brick Manufacturing Unit		56000 Brick/ day	1,84,80,000 Bricks/ Annum
8.	Power Plant (38 MW)	WHRB Power Plant	2 x 8 MW 3 x 2 MW	22 MW
		CFBC Power Plant	1 x 16 MW	16 MW

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

SNo	Raw Material		Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport
1.	**For Iron Ore Beneficiation Plant (13, 00,000 TPA)**					
a)	Iron ore fines		13,00,000	Chhattisgarh / Orissa	~ 600 Kms.	By rail & road (through covered trucks)
2.	**For Pellet Plant (Pellets) –10,00,000 TPA**					
a)	Iron Ore Concentrate		10,40,000	Own generation	---	Through covered conveyers
b)	Bentonite		8,000	Gujarat	~ 600 Kms.	By rail & road (through covered trucks)
c)	Lime powder		15,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
d)	Anthracite Coal		44,000	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	OR					
	(OR) LDL /LSHS		13,300 KL/Annum	Chhattisgarh	~ 100 Kms.	By road (through tanker)
3.	**For DRI Kilns (Sponge Iron) – 3,30,000 TPA**					
a)	Pellets (100 %)		4,95,000	Own generation	---	Through covered conveyers
	or					
	Iron ore (100%)		5,28,000	Barbil, Orissa NMDC, Chhattisgarh	~ 500 Kms.	By rail & road (through covered trucks)
b)	Coal	Indian	4,29,000	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
		(or)				
		Imported	2,74,560	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road

SNo	Raw Material		Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport
						(through covered trucks)
c)	Dolomite		16,500	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
4.	**For Steel Melting Shop (Billets/ Ingots/Hot Billets) – 2,64,000 TPA**					
a)	Sponge Iron		2,67,000	Inhouse Generation	---	Through covered conveyers
b)	MS Scrap / Pig Iron		40,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
c)	Ferro alloys		13,000	Inhouse Generation	---	By road (through covered trucks)
5.	**For Rolling Mill through Hot charging (Rolled Products) – 2,52,450 TPA**					
a)	Hot Billets		2,61,361	Inhouse Generation	---	---
6.	**For Rolling Mill through Reheating Furance (Rolled Products) – 44,550 TPA**					
b)	M.S. Billets (External Purchase)		49,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
c)	LDO / LSHS		218 KL/annum	Nearby IOCL Depot	~ 100 Kms.	By road (through Tankers)
7.	**For CFBC Boiler [Power Generation 16 MW]**					
a)	Dolochar + Indian Coal	Dolochar	66,000	Inhouse Generation	---	through covered conveyors
		Indian Coal	73,920	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	OR					
b)	Dolochar +	Dolochar	66,000	Inhouse Generation	---	through covered conveyors

SNo	Raw Material		Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport
	Imported Coal	Imported Coal	35,536	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
8.	**For Ferro Alloys (3 x 6 MVA)**					
7 (i)	*For Ferro Silicon - 17,955 TPA*					
a)	Quartz		27,292	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
b)	LAM coke		4,219	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Mill scales		628	Inhouse Generation	---	By road (through covered trucks)
d)	MS Scrap		10,055	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
e)	Electrode paste		359	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Bagfilter dust		682	Inhouse Generation	---	---
7 (ii)	*For Ferro Manganese – 45,144 TPA*					
a)	Manganese Ore		1,02,703	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	LAM coke		16,478	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Dolomite		7,674	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)

SNo	Raw Material	Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport
d)	MS Scrap / Mill scales	6,772	Inhouse Generation	---	By road (through covered trucks)
e)	Electrode Paste	587	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Bag filter dust	2,257	In house generation	---	---
7(iii)	*For Silico Manganese – 23,940 TPA*				
a)	Manganese Ore	39,022	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	FeMn Slag	20,349	In house generation	---	----
c)	LAM Coke	8,978	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	Dolomite	5,387	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
e)	Electrode paste	479	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Quartz	5,746	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
g)	Bag filter dust	359	In house generation	---	---
7(iv)	*For Ferro Chrome – 26,600 TPA*				
a)	Chrome Ore	53,200	Sukinda, Odisha Import, South Africa	~ 500 Kms. ~ 600 Kms. (from Vizag Port)	By road (through covered trucks) From Port By Road

SNo	Raw Material	Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport
					(through covered Trucks)
b)	LAM Coke	8,778	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Quartz	4,655	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS Scrap / Mill Scale	3,990	Inhouse Generation	---	By road (through covered trucks)
e)	Magnetite / Bauxite	4,495	Chhattisgarh / Maharashtra	~ 500 Kms.	By road (through covered trucks)
f)	Electrode Paste	798	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
g)	Bagfilter dust	1,702	Own generation	---	---

44.5.6 Water required for the proposed project will be **2697 KLD**, Water required for proposed project will be sourced from Shivnath River (which is at a distance of 9.5 Km. from the project site). Water drawl permission from Water Resource Department, Chhattisgarh will be obtained after receipt of TOR letter for proposed project.

44.5.7 Power required for the proposed project will be **62 MW** and same will be sourced from **38 MW** Captive Power Plant & remaining **24 MW** is from State Grid.

44.5.8 The capital cost of the project is **Rs. 494 Crores**. Employment generation from proposed project will be 350 nos. through direct employment and 500 nos. through indirect employment.

44.5.9 Proposed Terms of Reference (**Baseline data collection period: 1stOctober 2021 to 31st December 2021**):

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
A. Air			

Attributes	**Sampling**		**Remarks**
	No. of Stations	**Frequency**	
a. Meteorological parameters	1	On hourly basis for one season	Wind Speed Wind Direction Temperature Relative Humidity Rainfall
b. AAQ parameters	8	24 hourly Twice a week for 3 months (One Season)	Parameters to be Monitored: $PM_{2.5}$ PM_{10} SO_2 NOx CO
B. Noise	8	On hourly basis for 24 Hrs. at each station	Parameters to be Monitored: Day equivalent Night equivalent
C. Water			
a. Ground Water	8	One sample at each of the locations	Parameters will be Monitored: as per IS: 10500
b. Surface Water	3	One sample at each of the locations	Parameters will be Monitored: as per BIS: 2296
D. Land			
a. Soil quality	8	One sample at each of the locations	Parameters will be Monitored: Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn
b. Land use	--	--	LU map will be prepared by concerned FAE for study area
E. Biological			
a. Aquatic	--	Once in Season	---
b. Terrestrial	--	Once in Season	---
F. Socio economic parameters	--	Once in Season	Social Impact Assessment will be carried out by concerned FAE for study area
G. Traffic Density	--	Once in Season	Vehicular traffic study will be carried out at Transportation route.

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

44.5.11 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd [S. No.133, List of ACOs with their Certificate no. NABET/EIA/1922/RA0149 valid up to 22.03.2022; Rev. 13, August 09, 2021].

Observations of the Committee

44.5.12 The EAC noted the following:

i. Three alternate sites were explored and Kesda has been selected due to rail road connectivity and site being away from human habitat.
ii. A seasonal nallah passes through site and one RF is adjacent only 350 m away from site.
iii. PP submitted that in 8.3 ha land is allocated for green belt and 119 trees shall be translocated or cut down. As compensatory trees plantation 1190 trees will be planted as Committed.

Recommendations of the Committee

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

i. The seasonal nallah passing through the project site shall not be disturbed. Action plan for landscaping on both embankments, with green belt covering 10 m land on both sides of the nallah shall be submitted. This shall be in addition to the 33% green belt development.
ii. Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.
iii. Action plan for fugitive emission control in the plant premises shall be provided.
iv. Action plan for green belt development covering 33% of the project area shall be submitted. This shall include 50 m green belt development inside the project area towards Bilari Ghughua RF located at distance of 350 m from the project site. 119 trees shall be translocated. 1190 trees shall be planted in view of relocated trees in addition to green belt.
v. Action plan for 100 % solid waste utilization shall be submitted.
vi. Action plan for rain water harvesting shall be submitted.
vii. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
viii. Air Cooled condensers shall be used in Captive Power Plant.
ix. 2697 KLD water shall be drawn from Sheonath River 9.5 Km away from site. Permission for water withdrawal shall be obtained. No groundwater abstraction shall be permitted.
x. Submerged Arc Furnace shall be equipped with 4th hole extraction system.
xi. SMS slag shall be crushed to recover metallics and flux and aggregate shall be used for construction of roads.

44.6 Setting up of 3.2 MTPA Pellet plant and 3.6 MTPA Pellet feed cum Beneficiation plant by **M/s. Resources Concentrates Private Limited (RCPL)** located at Somalapura Village, Sandur Taluk, **Bellary District, Karnataka. [**Online Proposal No. IA/KA/IND/225435/2021; File No.: J-11011/39/2021-IA.II(I)] **– Amendment inTerms of Reference– regarding**

44.6.1 M/s. Resources Concentrates Private Limited (RCPL) has made an online application vide proposal no. IA/KA/IND/225435/2021 dated 01/09/2021 along with Form 3 and sought for amendment in Terms of Reference accorded by the Ministry vide letter no. J-11011/39/2021-IA.II(I) dated 26/02/2021.

Details submitted by the project proponent

44.6.2 M/s. Resources Concentrates Private Limited (RCPL) had earlier applied for grant of ToR for setting up of 3.2 MTPA Pellet and 3.6 MTPA pellet feed cum Beneficiation plant. The proposal was considered in 30th meeting of reconstituted Expert Appraisal Committee (Industry- 1) held on 10-11th February, 2021. Accordingly TOR was issued vide letter no J-11011/39/2021-IA.II(I) dated 26/02/2021.

44.6.3 The configuration & capacity of units granted in TOR dated 26/02/2021:
No amendment proposed in configuration & capacity of units granted in TOR dated 26/02/2021.

44.6.4 Reasons for TOR Amendment sought:

a) Storage of paste tailings for minimum of 15 years in the area of 120 acre identified a kilometer away from project site in place of plan to reduce the storage up to 90 days of tailings generated which is mentioned in the ToRS. No. 16 (vii).

b) Change of process equipment in grinding of iron ores i.e. grinding mill will be replaced to High Pressure Grinding Rolls (HPGR) to avoid over grinding and generation of more fines which will chokes the filtration media.

c) As per ToR S. No. 16 (i), PM emissions from stack shall be less than 30 mg/Nm^3. The equipment will be designed less than 30 mg/Nm^3. The prescribed norms of 50 mg/Nm^3 may be permitted to adhere as per draft GSR 894 (E) dated 04.12.2019 for pellet plant.

44.6.5 Detail of amendment sought in granted ToR dated 26/02/2021:

S No	Reference of approved ToR	Description as per approved ToR	Amendment proposed
1	Sl. No. 16, Recommendation of the committee, Point no. i.	PM emission from stacks shall be less than 30 mg/ Nm^3.	The equipment will be designed less than 30 mg/Nm^3. The prescribed norms of 50 mg/Nm^3 may be permitted to adhere as per draft GSR 894 (E) dated 04.12.2019 for pellet plant.
2	Sl. No. 16, Recommendation of the committee, Point no. vii.	PP shall submit the plan to reduce storage up to 90 days of tailings generated.	Storage of paste tailings for minimum of 15 years in the area of 120 acre identified a km away from project site in place of plan to reduce the storage up to 90 days of tailings generated.

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

Observations of the Committee

44.6.7 The Committee noted the following:

i. TOR was granted for this project having 3.6 MTPA IOBP and 3.2 MTPA Pellet plant at Somapara Karnataka on 26.02.2021.

ii. Amendment is required for ;
   a. Change in process equipment for grinding of iron ore. High Pressure Grinding Rolls shall replace the grinding mill.
   b. Storage capacity for tailings to be increased to 15 years from 90 days in an area of 120 acres at 1 Km from plant site.
   c. Prescribed norm for PM emission may be relaxed to 50 mg/Nm^3.

iii. PP is proposing to send slurry to tailing pond by pumping @ 60:40 ratio for stacking up to a height or 41 meters.

Recommendations of the Committee

44.6.8 After deliberations, the Committee recommended for the rejection of the instant ToR amendment proposal and recommended to retain the specific ToRs granted by the Ministry vide letter dated 26/02/2021.

44.7 Expansion of Iron Ore Pelletisation Plant (0.6 MTPA to 1.8 MTPA), Iron Ore Beneficiation Plant (3.0 MTPA), DRI Plant (0.6 MTPA), Pig Iron BF (0.6 MTPA), Sinter Plant (0.8 MTPA), SMS (1.2 MTPA), Rolling Mills (1.2 MTPA) & Captive Power Plant (125 MW) by **M/s. Ardent Steel Ltd.** located at Village - Phuljhar, Block - Bansapal, Tehsil - Telkoi, **District - Keonjhar, Odisha. [**Online Proposal No. IA/OR/IND/227462/2021; File No.: J-11011/112/2013-IA.II(I)] – **Amendment in Terms of Reference w.r.t. reduction in plant configuration–** regarding.

44.7.1 M/s. Ardent Steel Limited has made online application vide proposal no. IA/OR/IND/227462/2021 dated 02/09/2021 along with Form 3 and sought for amendment in Terms of Reference accorded by the Ministry vide letter no. J-11011/112/2013-IA.II(I) dated 27/06/2018.

Details submitted by the project proponent

44.7.2 M/s. Ardent Steel Limited had earlier applied for grant of ToR for Expansion of Iron Ore Pelletisation Plant (0.6 MTPA to 1.8 MTPA), Iron Ore Beneficiation Plant (3.0 MTPA), DRI Plant (0.6 MTPA), Pig Iron BF (0.6 MTPA), Sinter Plant (0.8 MTPA), SMS (1.2 MTPA), Rolling Mill(1.2MTPA) & CPP (125 MW). The proposal was considered in 32nd meeting of Expert Appraisal Committee (Industry- 1) held on 11-13th June, 2018. Accordingly TOR was issued vide letter no J-11011/112/2013-IA.II(I) dated 27/06/2018.

44.7.3 As per the documents submitted at the time of grant of ToR, the total land requirement for the expansion project was 180.473 ha including forest land of 21.246 ha.

44.7.4 The instant proposal of M/s. ASL for excluding the involvement of forest land of 21.246 ha and reduction in project area by reducing the capacity of the arc furnace, sinter plant, rolling mill and CPP. The configuration & capacity of units granted in TOR dated 27/06/2018 and proposed amendment is as follows:

S No	Unit/ facility	Description as per approved ToR	Amendment proposed
1	Iron Ore Pellet Plant	1.80 MTPA (0.6 MTPA + 1.2 MTPA)	1.70 MTPA (0.85 MTPA + 0.85 MTPA)

S No	Unit/ facility	Description as per approved ToR	Amendment proposed
2	Captive Power Plant	125 MW (WHRB: 75 MW + AFBC: 50 MW)	70 MW (WHRB: 35 MW + AFBC: 35 MW)
3	SMS/Arc Furnace	1.20 MTPA	0.72 MTPA
4	Sinter plant	0.80 MTPA (180 m^2 grate area)	0.60 MTPA
5	Iron ore beneficiation plant	3.0 MTPA	3.0 MTPA
6	Rolling mills	1.20 MTPA	0.70 MTPA
7	Pig iron (Blast furnace)	0.60 MTPA (1750 m^3)	0.60 MTPA
8	DRI plant	0.60 MTPA (4x500 TPD)	0.36 MTPA (2x600 TPD)

44.7.5 Any other amendment sought:

S No	Raw Material/ Project requirement	Description as per approved ToR	Amendment proposed
1	Iron ore fines	26,11,800 TPA	25,20,000 TPA
2	Bentonite	12,600 TPA	6,070 TPA
3	Limestone /Dolomite	2,80,500 TPA	2,80,000 TPA
4	Coal	8,14,800 TPA	8,05,640 TPA
5	Coke	3,14,000 TPA	3,14,000 TPA
6	Furnace Oil	18,000 TPA	16,465 TPA
7	Calcinated Dolo	16,000 TPA	15,912 TPA
8	Ferro Alloys	18,000 TPA	11,271 TPA
9	Water requirement	16, 184 KLD	11, 448 KLD
10	Electricity demand	93.8 MW	56.0 MW
11	Project area	211.613 ha	97.83 ha
12	Employment	1108	1037
13	Total project cost	4031.47 crores	1805.39 crores

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

Observations of the Committee

44.7.7 The Committee noted the following:

i. The figures stated in the ToR amendment application and ToR presentation made before the EAC with respect to the project area, water & power requirement are not consistent with each other. Further, PP failed to provide the break up for the existing and the reduced project area.

ii. PP had increased the pellet plant capacity from 0.6 MTPA to 0.69 MTPA under 7(ii) of EIA Notification, 2006 on 13/02/2020. Besides, PP has obtained capacity enhancement of pellet plant from 0.69 to 0.85 MTPA by taking CTO for trial run from SPCB. MoEF&CC has not been informed about it.

iii. Seven Forest patches still exist in southern side of the plot now proposed.

iv. Two routes for pipe laying have been suggested. Impact assessment for these routes to firm up the proposal has not been done. One of the route passes through dense human habitat.

Recommendations of the Committee

44.7.8 In view of the foregoing and after deliberations, the Committee recommended to return the proposal in its present form. Further, the Committee also recommended to seek clarification from Odisha Pollution Control Board regarding the trial run CTO permission given by them for enhancement of pellet plant capacity from 0.69 to 0.85 MTPA.

14th September, 2021

44.8 Setting up of a Greenfield Integrated Steel plant of capacity 13.2 MTPA crude steel with 10 MTPA Cement grinding unit and 900 MW Captive Power Plant by **M/s. JSW Utkal Steel Limited** located at Polanga, Bayanala Kandha, Gobindapur, Dhinkia, Nuagaon, Jatadhara villages, Ersama Tehsil, **Jagatsinghpur District, Odisha** [Online Proposal No. IA/OR/IND/74396/2018, File No. IA-J-11011/524/2017-IAII(I)] **– Environment Clearance– regarding.**

44.8.1 M/s. JSW Utkal Steel Limited has made an online application vide proposal no. IA/OR/IND/74396/2018 dated 02/09/2021 along with copy of EIA report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no.3(a) Metallurgical industries (ferrous & nonferrous), 4(b) Coke Oven Plants and 1(d) thermal power plants under Category "A" of the schedule of the EIA Notification, 2006 and is appraised at the Central level.

Details submitted by Project proponent

44.8.2 The details of the ToR are furnished as below:

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

44.8.3 The project of M/s. JSW Utkal Steel Limited located in Polanga, Bayanala Kandha, Gobindapur, Dhinkia, Nuagaon, Jatadhara villages, Ersama Tehsil, Jagatsinghpur District, Odisha is for setting up of a new Integrated Steel Plant for the Production of for production of 13.2 MTPA Crude Steel, 900 MW Captive power & 10 MTPA Cement grinding unit.

44.8.4 Environmental Site Settings:

SNo	Particulars	Details	Remarks
i.	Total land	1125.284 ha [Govt:-1125.284 ha]	Land use: Total land is 1125.284 ha out of which 1069.581 ha land is diverted from forest and rest of 55.703 ha (non-forest

SNo	Particulars	Details	Remarks
			land) is allotted by IDCO.
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014.	Total land is 1125.284 ha out of which 1069.581 ha land is diverted from forest and rest of 55.703 ha (non-forest land) is allotted by IDCO.	-
iii.	Existence of habitation & involvement of R&R, if any.	There are 142 Project Affected Families (PAF) who would be affected due to the proposed Greenfield project. Rehabilitation and Resettlement (R&R) shall be carried out as per R&R Plan duly approved by District Authorities. The tentative budgetary provisions required for implementation of R&R Plan is about INR 43 crores. This will be revised during final execution of the Project.	Presently JSWUSL has formulated a draft R&R plan based on The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 and Odisha R&R Policy 2006 (with amended conditions 2006).
iv.	Latitude and Longitude of the project site.	From 20°11'58" to 20°14'08" N latitude and 86°30'53" to 86°35'38" E longitude	
v.	Elevation of the project site.	13m above MSL(maximum) The land is low lying and needs to be raised to prevent flooding during cyclones. Maximum storm surge level observed historically was +5.5 m CD. The land is required to be raised to + 6.5 m CD to avoid flooding. Land would be raised using dredged sand from navigational channel of jetties. Estimated requirement of dredged sand is about 27 million m^3.	
vi.	Involvement of Forest land if any	Forest land = 1069.581 ha Forest Clearance (Stage I and Stage II) was awarded to earlier Project proponent for same site and same project. JSWUSL submitted an application to MoEF&CC for FC transfer from earlier project proponent to present Project Proponent. FAC	

SNo	Particulars	Details	Remarks
		accorded FC to JSWUSL vide letter no. F. No 8- 63/2007-FC dated 16th October 2019.	
vii.	Water body exists within the project site as well as study area	**Project site:** Nil **Study Area :** Mahanadi – 8.2 km NE Jatadhar Mohan river – Adjacent Mahanganadi – 0.4 km N Bay of Bengal - 0.5 km SE	Distance of nearest flood level is 50 m (Jatadhar Mohan river)
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil	-
ix.	Interlinked projects	i. Iron ore grinding and desliming plant with slurry transportation for 30 MTPA iron ore concentrate had been submitted vide proposal no. IA/OR/MIN/179208/2020 for which ToR was granted vide letter dated 29/12/2020. ii. Captive jetty (Proposal no: IA/OR/MIS/74417/2018). The EC proposal for Captive jetty is scheduled for consideration before the EAC – Infra on 17/09/2021. The captive jetty project also granted CRZ recommendation by the State CZMA (OCZMA) vide letter no. OCZMA/56/202041/OCZMA dated 01.02.2021.	

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

Sl. No.	Name	Configuration		Production, MTPA
1	Slurry dewatering system	Thickener, Filtration (pressure filter) with water recovery system		30.0
2	Coke oven	8 x 62 ovens block, 6.25 m tall stamp charged, CDQ		6.0
3	Sinter plant	1 x 500 m^2		5.775
4	Pellet plant	4 x 8.0 MTPA Grinding Unit - 180 TPH		32.0
5	DRI	1 x 1.2 MTPA		1.2
6	Blast furnace	3 x 5,350 cum		13.5
7	Steelmaking Shop (SMS)	SMS-1 3 x 350 t BOF 3 x 350 t LF 2 x 350 t RH	SMS-2 2 x 180 t BOF 2 x 180 t LF 1 X 180 t RH	13.49

Sl. No.	Name	Configuration	Production, MTPA
8	Caster Shop	Slab Caster - 3 x 2 strand Billet Caster - 1 x 8 strand Billet/Bloom Caster - 1 x 6 strand	13.2
9	Flat Product Mills	Plate Mill - 1 x 1.5 MTPA Hot Strip Mill - 2 x 5.5 MTPA Tinplate Coil - 2 X 0.25 MTPA Silicon Steel - 2 X 0.25 MTPA Cold Rolling Mill - 2 x 2.3 MTPA - Pickling line tandem cold mill(PLTCM)-2x2.3 MTPA - Continuous Annealing Line (CAL) - 2x1.0 MTPA - Continuous Galvanizing Line CGL - 4x0.5 MTPA - Colour coating Line CCL - 4x0.25 MTPA	9.74
10	Long Product Mill	Rebar mill - 1 x 1.2 MTPA Wire Rod Mill - 1 x 0.6 MTPA Medium Section Mill - 1.0 MTPA	2.8
11	Calcining Plant	6 x 600 TPD Lime Calcining Plant 1 x 600 TPD Dolo Calcining Plant	0.97 0.13
12	Cement Plant	Grinding, mixing of slag, clinker & fly ash	10.0
13	Captive Power Plant	By-product gas and coal based 3 x 300 MW	900 MW
14	Air Separation Plant	6 x 2,100 TPD	12,600 TPD
15	Tar processing plant	Distillation units for producing Carbon Black Oil, Anthracene Oil, Naphthalene, Wash Oil and Pitch	300,000 TPA
16	Benzol Refining Plant	Distillation units for producing BTX and other value added products	100,000 TPA

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

S No	Raw Material	Quantity, tons/annum	Source	Distance from site (Km)	Mode of transport
1	Coking Coal and Pet Coke*	7,831,900	International market Potential source- Mozambique, Australia and Canada	0 (Captive jetties)	Sea
2	Anthracite	192,000	International market Potential source- South Africa, Vietnam and Indonesia	0 (Captive jetties)	Sea

S No	Raw Material	Quantity, tons/annum	Source	Distance from site (Km)	Mode of transport
3	Iron ore (Lump)	1,187,900	Procured from the Joda-Barbil and Koiramines region, Odisha	330	Rail (50%)/ Road (50%)
4	Iron ore concentrate	30,000,000	Captive Iron ore grinding &desliming plant, Joda/Nuagaon	330	Slurry Pipeline from Joda/Nuagaon Plant
5	Iron ore fines	4,695,300	Procured from the Joda-Barbil and Koira mines region, Odisha	330	Rail
6	PCI coal	2,700,000	International market Potential source-Australia, South Africa and Indonesia	0 (Captive jetties)	Sea
7	Limestone	4,934,500	BF grade - Purchased from mines in Bagalkot area, Karnataka /Central India (Jukehi-Katni-Niwar area)SMS grade - Imported from Middle-East Countries (UAE & Oman)	1600	Sea (50%)/ Rail (40%)/ Road (10%)
8	Dolomite	2,350,100	International market & Purchases from mines located in Sundargarh district, Odisha &Katni-Bilaspur region, Central India	350	Sea (15%)/ Rail (70%)/ Road (15%)
9	Steam coal	2,700,000	Procured from Mahanadi Coalfields Limited (MCL) and South Eastern Coalfields Limited (SECL)	450	Rail
10	Bentonite	320,000	International market – Russia etc.	0 (Captive jetties)	Sea
11	Quartzite	270,000	International market – Brazil, Domestic - Rajasthan	1900	Sea (10%)/ Rail (50%)/ Road (40%)
12	Clinker	5,116,000	International market – Vietnam, Domestic - Gujarat	0 (Captive jetties)	Sea
13	Gypsum	232,000	Domestic – Rajasthan, Gujarat	1900	Rail 50%)/ Road (50%)

** Pet coke will be used after Hon'ble Supreme Court permits its utilization in Steel Plant.*

44.8.7 The water requirement for the project is estimated as 256,752 m^3 /day, out of which 223,872 m^3 /day of fresh water requirement will be obtained from the Upstream of Jobra barrage of Mahanadi River and the remaining requirement of 32,880 m^3 /day will be met from the recycling of treated effluent. The permission for drawl of surface water is obtained from Dept. of Water Resources, Government of Odisha vide Lr. No. 20873/WR/Irr.II-WRC-44/19 dated 19/09/2019.

44.8.8 The power requirement for the project is estimated as 1230 MW, out of which 900 MW will be met from the dual fired (bye product fuel gas and coal) CPP & 221 MW from CDQ & TRT and the balance 109 MW will be sourced Grid/JSW Energy.

S No	**Power Demand (MW)**	**Power Generation (MW)**	**Balance Power requirement (MW)**
01	1230 MW	900 MW from CPP	109 MW
		221 MW from CDQ & TRT	
Total	1230 MW	1121 MW	109 MW from Grid/ JSW Energy

44.8.9 Baseline Environmental Studies:

Period	Jan'18 to Apr'18, Nov'18 - Feb'19 and Apr'19 - May'19
AAQ parameters at 8 locations	$PM_{2.5}$ = 23.5 to 52.8 µg/m^3 PM_{10} = 46.2 to 90.2 µg/m^3 SO_2 = 4 to 9.5 µg/m^3 NO_2 = 7.8 to 45 µg/m^3 CO = <0.1 mg/m^3
AAQ modelling (Incremental GLC)	$PM_{2.5}$ = 3.5 µg/m^3 PM_{10} =7.7 µg/m^3 SO_2 = 6.6 µg/m^3 NOx = 8.9 µg/m^3
Ground water quality at 8 locations	pH: 6.5 to 7.1, Total Hardness: 835.8 to 2760 mg/l, Chlorides: 54.6 to 853.1 mg/l, Fluoride: 0.1 to 0.3 mg/l. Heavy metals are within the limits.
Surface water quality at 8 locations	pH: 6.7 to 8.1; DO: 3.25 to 5.5 mg/l BOD: from 5.0 to 57.5.mg/l. COD: from 39.0 to 288.8 mg/l
Noise levels	52.8 to 75 Leq dB(A) for the day time and 42.2 to 67.2 Leq dB(A) for the Night time
Traffic assessment study findings	• Design capacity of Four Lane Roads: 86,400 PCU/day • Present traffic load: - After merging of SH12 and NH 53 near Atharabanki – 38,506 PCU/day • Additional traffic load due to the project: NH 53 and SH 12 – 4589 PCU • Total traffic load in future due to project: 43,095 PCU/day (which is still within the carrying capacity of four lane divided roads of 86,400 PCU/day)

Flora and fauna	There are no endangered and Schedule I species exists in the study area.

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

S. No.	**Type of Waste**	**Source**	**Quantity generated (TPA)**	**Mode of Treatment / Disposal**
Non-hazardous wastes				
1.	BF Slag	Blast Furnace	4050000	Granulation in Slag granulation plant and used in cement manufacturing in captive cement plant. A small quantity would be used internally in the ISP
2.	Steelmaking Slag	SMS	2095000	Recovery of metallics & non-metallics for in-plant use. Balance utilized as railway ballast, in construction aggregate, after processing.
3.	Flue Dusts	Blast Furnace, SMS, Sinter Plant, Pellet Plant etc.	300000	Reuse in Agglomeration
4.	Mill Scales/Sludge	Mills	150000	Reuse in agglomeration
5.	Fly Ash	Coal based CPP	940000	Used to produce cement in the captive cement plant
6.	Bottom Ash	Coal based CPP	240000	Would be stored in ash pond and used for road making
Hazardous Wastes				
1.	Chrome Sludge	CRM	80	Disposed in secured landfill in TSDF
2.	Decanter tank & tar storage tank sludge	Coke Oven By product plant	800	Reused in coke oven
3.	Used & Waste oil	Mills and other units	1500	Sold to Recycled recyclers
4.	Zinc Dross	Galvanising Unit	30000	Sold to Recycled recyclers

44.8.11 Public Consultation:

Details of advertisement given	19th November, 2019
Date of public consultation	20th December, 2019
Venue	Badadanda, in front of Jagannath Temple at Gadakujang village
Presiding Officer	Sri Sangram Keshari Mohapatra

	Collector & District Magistrate, Jagatsinghpur
Major issues raised	• Air pollution (dust pollution) • Ground water contamination • Direct and indirect employment • 200 bedded Super Specialty Hospital in the local area • Up-gradation of existing govt. hospitals in three Gram Panchayats • up-gradation of existing educational institutions • establishment of technical training institute • vocational training centres • skill development centres • safe drinking water facilities in every village • development of sports infrastructure in the villages • SHGs are to be empowered with skill development and better management of financial implementation and training and establishment of BPO centres in the villages. • Construction or up-gradation of road and drainage system

Action plan as per MoEF&CC O.M. dated30/09/2020

Description of Physical Activity	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Total**
	(Rs. in Lakhs)				
Area Development					
Development of drainage, sewerage systems, roads, municipal solid wastes collection and disposal system as part of smart village	-	Dhinkia & Nuagoan 2km in each village	Gobindpur & Raghunathpur 2km in each village	Garhkujang 3 km Noliasahi 2km & abhay-chandapur 3 km	2400
Development of public community center and recreation center	-	-	Construction of community hall & procurement of TT board&caram board in Nuagoan	Construction of community hall & procurement of TT board &caram board in Garahkujang	200
Development of market infrastucture	Garhkujang 1No	Dhinkia 1No	Bayanalkanda 1No	Raghunathpur 1No	125

Description of Physical Activity	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Total**
	(Rs. in Lakhs)				
with water & electricity					
Development of playground and club house with TT,Caram board,foot ball, & cricket accessaries in Garhkujang, Gobindpu&Nuagoan	-	Development of land and fencing at all 3 villages	Commencement of club house construction in each village	Completion of club house construction& procurement of all accessories	1500
Establishment of libraries with 10 numbers of computers with internet	Dhinka&Pankapal	Balitutha&Unchanua-gan	Taladanda&Bhitarandhari	Chatua&Bamadeipu	200
Medical					
Upgradation of govt. hospital in 4 gram panchayats	Balitutha	Dhinkia	Jhimani	Kujang	200
Establishment of 200 bed hospital in consultation with local authorities	Identification of site and tendering & placement of order for construc-tion	Construction of Hospital building	Development of pathological lab	Procurement of instrument, beds etc	2000
Upgradation of health care facilities in peripheral villages	Portable X-ray, ECG,USG-5Nos each	Dental chairs-3Nos	Dental chairs-2 Nos	Any specific requirement of health centers	200
Education					
Establishment of public schools at Garhkujang	Identification of site and tendering & placement of order for construc-tion	Construction of school building	Procurement Chair, Table, computers(20 No.s), books etc	-	500
Strengthening of library & up gradation of existing village schools by	Gobindra Chandra High School	KapteswarBidyapitha& Sri AurobindoShikshyaSadana	Pankapal High School, Blituthat Panchayat High School &	GouraChandiBidyapithaGoverment High School &	180

Description of Physical Activity	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Total**
	(Rs. in Lakhs)				
providing Chair, table & books & 4 Nos of computers with internet to each library.			Janata High School	Sri AurobindoShiksya Sadana	
Drinking water					
Provision of drinking water through pipelines/tankers & installation of portable RO in peripheral villages or contribution to government fund for the same	Naliasahi & garhkujang	Dhenkia & Raghunathpur &Nuagoan	Abhaychandra-pur, Bayanalkanda &Gobindpur	Balitutha, Unchanuagan Chatua & Raghunathpur	2000
Livelihood					
Provision of mechanized boat to fishermen community of Noliasahi village for fishing in the near shore area.	5 Nos	3Nos	2 Nos	-	300
Construction of fishing jetty	Identification of site & statutory clearance	Start of construction	Continuation of construction	Commissioning of jetty	800
Solar light/Electricity					
Solar LED street lighting in villages (Dhinkia, Nuagoan, Gobindpur, Raghunathpur Garhkujang, Noliasahi, Pankapal, Bayanalkanda,	200 Nos. covering Dhinkia, Nuagoan, Gobindpur, Raghunath-pur	200 Nos covering Garhkujang, Noliasahi, Pankapal, Bayanal-kanda	200 covering Raghunathpur, Abhaychandapur & Kujang	-	400

Description of Physical Activity	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Total**
	(Rs. in Lakhs)				
Raghunathpur, Abhaychandapur&Kujang					
Infrastructure					
Construction/development of road in peripheral villages	2 km in Dhinkia	4 km in Dhinkia	4 km in Nuagaon	42 km in Noliasahi and 2 km in Bayanala Kandha	800
Swachh Bharat					
Distribution of dust bin in the surrounding villages & Mechanished vehicle for garbage lifting and transportation	1000 coloured bins in Dhinkia, Nuagaon and Gobindpur	4Nos of mechanized vehicle	500 Coloured bins in BayanalaKandha, Gadkujang, Abhaychandpur	-	700
Environment					
Construction of stone pitchuing in sea beach	-	1.0km	0.6km	0.4km	1000
Carry out urban plantation and afforestation programs in peripheral villages	20000 trees	20000 trees	30000 trees	30000 trees	400
Vocational training					
Skill development training on welding, electrician course, machinery, carpentry etc. and livelihood program	500 persons	500 persons	500persons	500 persons	2000
Skill development for women empowerment	Establishment of Skill development	1000 women	1000 women	1000 women	1000

Description of Physical Activity	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Total**
	(Rs. in Lakhs)				
on nursing, tailoring, beautician course, animal husbandry at village	center at Kujang				
Providing training to SHG members	200 Persons	200 persons	300 persons	100 persons	400
Establishment of technical training institute for skill development. Location will be decided in discussion with Local administration	Identification of land & tendering	Construction of building	Construction (contd.)	Completion of construction & procurement of tools & tackles	2000
Fund contribution towards establishment of BPOs in and provision of employment aid in textile units	100	100	100	-	300
Total					**19,605**

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

S.No.	**Description of Item**	**(Rs. In Crores)**	
		Capital Cost	**Recurring Cost**
1.	Water Conservation and Wastewater Treatment	775	54
2.	Air Pollution Control Measure	1650	115
3.	Solid Waste management	120	8.5
4.	Greenbelt Development	25	2
5.	EMS & laboratory	90	6.5

S.No.	Description of Item	(Rs. In Crores)	
		Capital Cost	**Recurring Cost**
6.	Addressed of Public Consultation concerns	196	14
	Total	2856.0	200.0

44.8.13 Greenbelt will be developed in 372 ha which is about 33 % of the total project area. A 10-20 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEFCC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 930,000 saplings will be planted and nurtured in 372 hectares in 5 years.

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

44.8.15 Name of the EIA consultant: M/s M. N. Dastur & Co. (P) Ltd. [Sl. No. 169, List of ACOs with their Certificate / Extension Letter no. Rev. 13, August 09, 2021].

44.8.16 M/s. JSW Utkal Steel Limited was earlier made application vide proposal no. IA/OR/IND/74396/2018 dated 04/03/2021. The proposal was considered by the EAC (Industry 1) in its 32nd meeting of the Re-constituted EAC (Industry-I) held on 15th-17th March, 2021.

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

44.8.18 In view of the request made by the project proponent, the Committee accepted the request of the project proponent to withdraw the proposal in its present form.

44.8.19 M/s. JSW Utkal Steel Limited had earlier made an application vide proposal no. IA/OR/IND/74396/2018 dated 05/05/2021. The proposal was considered by the EAC (Industry 1) in its 36th Meeting held on 18-19th May, 2021.

44.8.20 Besides above, the EAC has gone through the following records during 18-19th May, 2021.

A. Public representation

It was apprised to the EAC that Ministry was in receipt of a representation on 31/01/2020 and 07/02/2020 alleging that several shortcomings in the public hearing held for the project on 29/12/2019 inter-alia including no common EIA report has been prepared to covering each of the sectoral component in a comprehensive manner.

B. Report of District Magistrate and Odisha Pollution Control Board on public representation

As per the District Magistrate report dated 29/05/2020, the public hearing for the instant project was conducted by the District Administration on 29/12/2019 as per the guidelines laid down in the EIA Notification, 2006. Further with respect to the common EIA report, it has been responded by OPCB stating that JSW submitted individual EIA reports for both

the projects separately along with an integrated EIA report. All the three reports were distributed to the concern offices as per the guidelines of the EIA Notification, 2006 and was uploaded on to the OSPCB website.

Observations of the Committee held during 18-19th May, 2021

44.8.21 The Committee noted the following deficiencies in the proposal submitted by the proponent.

i. There are sand dunes in the vicinity of the project site and as per the ToR accorded, the Sand dunes are not supposed to be disturbed. However, PP has not shown the sand dunes to be protected on the lay out map and the area of these sand dunes.

ii. Existing level of the project site is lower than HFL. Level of the site to be raised to + 6.5 m CD to avoid flooding by using dredged sand from navigational channel of jetties. Estimated requirement of dredged sand is about 27 million m^3. Dredging work in creeks, its usage and disposal patterns has not been elaborated in the report.

iii. Raising of plant level by 6.5 m would block all drainage in the area from West to East and the drains will flood the area in North. It would also increase salinity in that area. It was recommended that a comprehensive drainage study of the area shall be conducted taking into account the history of topography and the heavy rains and cyclones in past. Impact of the project on natural drainage of the area shall be assessed.

iv. Water is proposed to be drawn from Jobra Barrage of Mahanadi River 87 km from site. Water is a scarce commodity in that area and PP has not explored the possibility of desalination of sea water for process use in the plant. CGWA have declared that there is very little water available in Mahanadi during lean season. GW abstraction shall not be permitted. The committee advised to look into another source of water for the plant.

v. A large reservoir is proposed to be constructed outside the plant boundary to receive fresh water from barrage. Capacity details, location of reservoir, land requirement and status of land acquisition for the same have not been furnished.

vi. Details of fuel to be fired in pellet plant is not available in the EIA report.

vii. Waste heat recovery details from Sinter cooler are not furnished.

viii. Sinter Plant, is of conventional type and BAT like, MEROS technology for emission control has not been proposed.

ix. BFs shall be equipped with TRT and Dry gas Cleaning Plant, stove waste gas heat recovery system is not included in the proposal.

x. Numbers and Size of DRI kilns to produce 1.2 MTPA Sponge iron have not been furnished. Power generation details from DRI kilns are also not given.

xi. There is no commitment of direct hot charging for slabs/billets.

xii. Acid recovery plant, CETP for CRM complex have been proposed. However there is no provision for incineration of oil scum and oily sludge generated in CRM and for disposal of Hazardous waste from CETP. Details of CETP are not included.

xiii. CO_2 recovery is envisaged from DRI exhaust gases and recycling of gases to the kiln is proposed in DRI. Details of the proposed system are not available.

xiv. Action plan with physical targets to address the issues raised during the public hearing as per MoEF&CC O.M. dated 30/09/2020 has not been furnished.

xv. Reporting structure for Head, Environment Management Cell has not been shown in the organization chart.

xvi. Details of trees exist in the site to be cut during construction have not been given.

xvii. R&R Plan based on Public Hearing, SIA and as per Odisha Governments R&R Plan preparation Guidelines has not been furnished.

xviii. Eight (8) AAQ stations are proposed for entire complex. Based on the Wind Rose and scattered locations of polluting units like CPP, Cement Plant and steel plant, these stations are inadequate. EIA consultant should give a justification for selecting the number of stations and their locations. AAQ has not been monitored as per the methodology explained in EIA report.

xix. The land use pattern in the diverted Forest clearance of 19.10.2019 has not been furnished.

xx. Calculation details of sea water requirement for once through cooling, heat generation and transfer details have not been furnished.

xxi. TOR issued for this project does not provide for BOOT as proposed for certain units. PP shall revisit the same.

xxii. Action Plan to protect the raw material stored outside during high storm are not available and shall be furnished.

xxiii. Green belt action covering 33% of the project area with a tree density of 2500 trees per ha shall be submitted. There shall be minimum three rows of trees along the plant boundary as a part of this green belt.

xxiv. Impact assessment of Raw Materials and finished product transport through road route has not been done.

xxv. Reason for High Fluoride and Phenol content in the sea water has not been explained.

xxvi. Explanation as to why iron ore slurry water shall be discharged into sea is not furnished.

xxvii. Scheme to avoid discharge of BOD treated water, FGD water and TSDF water into deep sea is not available.

xxviii. Scheme to treat plant run off before marine discharge is not available.

xxix. Explanation as to why PM, SO_2 and NOx emission loads are so high in the area has not been furnished.

xxx. Details of Sodar Monitoring for mixing height determination have not been furnished.

xxxi. Impact of sea water withdrawal for desalination and once through application shall be furnished.

xxxii. Details of fuel to be used for BF slag dryer are not provided.

xxxiii. Details of technology finally selected for pelletisation are not provided.

xxxiv. MSW generation details in the plant during operation and construction and the management plan for the same is not available.

xxxv. The details on "Alternate Technology" in Chapter 5 of EIA report are not available.

xxxvi. Treatment details of leachate from TSDF are not available.

xxxvii. Specific details for control of SO_2 and NOx emissions from the proposed complex are not available.

xxxviii. Variance in data provided in documents and PPT presented has been observed which needs to be rectified.

xxxix. All bag Houses and DE system design criteria have not been given (DE systems shall be designed for 150% of theoretical capacity calculated as per ACGIH).

xl. Dredging of Jetty is going to be regular practice. Mechanism to manage dredged material has not been furnished in EIA.

xli. EIA does not include the locations of wetlands existing in the study area and impact of the project on these wetlands.

xlii. Details of access roads to NH 5, SH12 and Paradeep port (if any) and impact of the same on environment has not been assessed.

xliii. Impact of thermal discharge into sea and mechanism to control the Delta T within 5 Degree C have not been furnished.

xliv. The following aspects have not been addressed in the EIA report.

a. Study on shoreline changes.
b. Plan for Marine environmental conservation.
c. Study on grain size analysis
d. Assessment of the impact of the project on the local fishing community in terms of economic losses and suggestions for mitigation and R&R
e. Oil spill management plan

xlv. Action plan to implement the recommendations of the Shore Line Study conducted by NCSCM shall be submitted.

xlvi. Action plan for Continuous Monitoring of the impact on coastal environment should be included in the scope of monitoring.

Recommendations of the Committee held during 18-19th May, 2021

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

44.8.23 M/s. JSW Utkal Steel Limited has made an online application vide proposal no. IA/OR/IND/74396/2018 dated 02/09/2021. Subsequently, the proposal was considered by REACin its 44th meeting held on 13th – 14th September, 2021.

44.8.24 During this period, EAC and Ministry was in receipt of following representations:

S.No.	Date	Issues raised
1.	10/09/2021	• Re-conduct of public hearing as per the procedure established by the EIA notification, 2006 after making relevant information available to the villagers in their local language. • Prior consent from Gram Sabha. • Lack of integrated EIA report • Incomplete public hearing notices
2.	11/09/2021	• Incomplete and unlawful public hearing held on 20/12/2019. • EIA Report has not justified the environmental and social impacts.
3.	12/09/2021	• Environmental impacts due to the project.

S.No.	Date	Issues raised
		• Expressed concerns in the reply provided by the project proponent on the observations made by the Expert Appraisal Committee (Industry-I) in the meeting held on 19th May, 2021.
4.	13/09/2021	• Written representations received in favour of project during Public Consultations are fabricated. • Livelihood of the locals likely to be affected.

Observations of the Committee

44.8.25 The Committee observed the following:

a. Common EIA report submitted through PARIVESH and presentation made before the EAC does not have concurrence from WAPCOS, the EIA consultant for Jetty to incorporate their data in Common EIA prepared by M/s. M.N. Dastur & Co. This is a violation of NABET clause of Plagiarism. Team members details from WAPCOS have also not been included in the Common EIA report.

b. Cumulative impact assessment is not available on Jetty EIA report uploaded on PARIVESH due to steel plant and that of steel plant due to Jetty in the EIA report.

c. PP submitted point wise reply to the observations made by the EAC in its meeting held on 18-19th May, 2021. The shortfalls observed in the submission made by PP are summarized as below:

i. Sand dunes inside the plant boundary measuring 11.53 ha shall be preserved. ***However, the point raised by EAC related to "in the vicinity of the project" has not been addressed.***

ii. 27 million cum dredged sand shall be used to raise the plant level by 6.5 meter. Scheme to dispose balance sand and the sand recovered during annual maintenance dredging shall be disposed offshore at two locations in the ocean. ***The mechanism to control turbidity due to the dredging in the area has not been furnished.***

iii. ***Comprehensive drainage study of the area has not been done.*** It is simply mentioned that there are two streams passing through the property in Northern and Southern side of the plot. These streams shall be diverted and merged with the peripheral drain designed to carry cyclonic run off. ***No details related to the quantity of approximate drainage in the catchment, the size of diverted drains and peripheral drain that would handle this run off have not been furnished as required under comprehensive study asked by EAC in its meeting held on 18-19th May, 2021.***

iv. Currently 80 % of the Jobra Dam water is drained into the sea as reported by PP. Proposed plant shall draw 98.1 Cusec water from Jobra (PP says), which will reduce the drainage into sea by maximum 10 %. Hence sea water desalination has not been considered from commercial viability point of view and also due to high power cost and its implication on climate change. ***Detailed report validating this claim that 80 % water is drained into sea has not been submitted. Also, the above claim by PP that enough water is available needs to be confirmed by Authorities managing water in the state. No calculations***

are available on the cost of desalination vs the CAPEX and OPEX of water withdrawal from Jobra Barrage.

v. WHR from Sinter Cooler for preheating of combustion air in ignition furnace has been proposed. ***No Power recovery as part of energy efficiency has been considered. The benefits of the proposal over the provision of power generation from Sinter Cooler Waste Heat have not been given. PP has ignored the suggestions of EAC w/o giving any reason.***

vi. MEROS like technology has been proposed for control of dioxins and furan in Sinter plant. ***Guaranteed emissions per Nm^3 of flue gas based on this technology have not been furnished.***

vii. ***Details of the effluent to be generated from Cold Rolling Mill and mechanism to be adopted for the disposal of hazardous waste from CRM has not been submitted.***

viii. Physical targets of EMPs for socio economic development as per OM of 30th Sept 2020 to be completed @ 196.05 Cr in 4 years have been given. However, EAC recommended to complete in three years. ***Accordingly, revised action needs to be submitted.***

ix. Nearly 1.3 lakh trees likely to be removed to set up the facility. ***Scheme to ensure felling of trees to bare minimum and the compensatory afforestation against the felling of trees needs to be submitted.***

x. Justification to select 8 Numbers of AAQ monitoring stations on land has been given. Desulfurization of COG and Power Plant flue gases has been proposed and Low NOx burners and DENOX facility using Ammonia has been proposed. ***On review of DMP in Chapter seven of EIA report, HIRA for NH_3 has not been done.***

xi. The land use pattern for the diverted forest land as per FC of 10.10.2019 has been given. ***In this regard, updated status has not been furnished.***

xii. Details of sea water requirement for once through cooling for a max temperature increase of 5 degree C has been given. Maximum 130000 cum/Hr. water shall be required. Water shall be discharged in the sea 2.25 km away from the shore. ***Details of the scientific assessment carried out for selecting the location of the sea water discharge has not been made available.***

xiii. Green belt shall be proposed with a tree density of 2500 trees per ha. Plantation shall be completed in 5 years. During discussions it emerged that only 25 % green belt has been proposed inside the plant and balance 8 % plantation shall be done outside the plant boundary. The land outside does not belong to PP. EAC does not accept this proposal. ***PP needs to submit revised action plan for green belt development covering 33% of the project area under green belt development with a tree density of 2500 trees per hectare.***

xiv. Plant runoff water shall be treated for TSS and Oil and Grease. ***The capacity of the treatment plant based on worst case cyclonic scenario has not been furnished.***

xv. ***Sodar study details have not been furnished.***

xvi. Wet lands have been described and marked by PP on map. **However, conservation plan to protect the wet land has not been made available by the proponent.**

xvii. ***Details of access road to NH5 and NH 12 have not been described along with impact of project on the roads.***

xviii. Impact of thermal discharge into sea and mechanism to control the Delta T within 5 Degree C has been furnished. ***Details of scientific study carried out in this regard to be submitted.***

xix. EAC taken note of the public representations received as referred at para 44.8.24.

Recommendations of the Committee

44.8.26 In view of the foregoing and after deliberations, the Committee recommended to return the proposal in its present from to address the observations enumerated at para no. 44.8.25. With respect to the public representations listed at point no. c (xix), the Committee recommended to seek the views of Odisha Pollution Control Board and the project proponent.

44.9 Proposed expansion-cum-modification of existing Integrated Steel Plant for ultimate production of 3.0 MTPA Pellets, 1.11 MTPA Sinter, 0.45 MTPA Coke, 84000 Nm^3/hour Producer Gas, 2.25 MTPA Sponge Iron, 0.77 MTPA Hot Metal/Pig Iron, 2.88 MTPA Billets, 1.65 MTPA Long Steel Products, 0.25 MTPA DI Pipe, 0.48 MTPA L D Converter, 10000 m^3 /day Oxygen Plant, 1.2 MTPA Cement Grinding Unit, 0.1 MTPA Ferro alloys & 316 MW Captive Power Plant by **M/s. Shyam Sel and Power Limited** located at Village Dhasna, P.S. Jamuria, P.O. Bahadurpur, **District Paschim Bardhaman, West Bengal**. [Online Proposal No. IA/WB/IND/6700/2008; File No.: J-11011/887/2007-IA.II(I)] – **Environment Clearance – regarding.**

44.9.1 M/s Shyam Sel & Power Ltd., has made an online application vide proposal no. IA/WB/IND/6700/2008 dated 03/09/2021 along with copy of EIA/EMP report, Form – 2 and copy of certified EC Compliance Report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & nonferrous) and schedule 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification, 2006 and is appraised at the Central level.

Details submitted by Project proponent

44.9.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
07/11/2020	Standard Terms of Reference was granted	Terms of Reference	11th November, 2020

44.9.3 The project of M/s Shyam Sel & Power Ltd. located in Dhasna Village, Jamuria Tehsil, Paschim Bardhaman District, West Bengal State is for expansion-cum-modification of integrated steel plant for ultimate production of 3.0 MTPA Pellets, 1.11 MTPA Sinter, 0.45 MTPA Coke, 84000 Nm^3/hour Producer Gas, 2.25 MTPA Sponge Iron, 0.77 MTPA Hot Metal/Pig Iron, 2.88 MTPA Billets, 1.65 MTPA Long Steel Products, 0.25 MTPA DI Pipe, 0.48 MTPA L D Converter, 10000 m^3 /day Oxygen Plant, 1.2 MTPA Cement Grinding Unit, 0.1 MTPA Ferro alloys & 316 MW Captive Power Plant.

44.9.4 Environmental Site Settings:

S. N.	Particulars	Details	Remarks
i.	Total land	284.09 ha [Private: 284.09 ha]	Land use: Industrial - 284.09 ha
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	284.09 ha	Total land has been acquired of the company.
iii.	Existence of habitation & involvement of R&R, if any	There is no habitation and no involvement of R&R	Total land has been acquired of the company.
iv.	Latitude and Longitude of the project site	Latitude 23°40’02.06"N to 23°41’50.13"N Longitude 87°07’00.06"E to 87°07’53.20"E	
V.	Elevation of the project site	104 meters AMSL	
vi.	Involvement of Forest land if any.	Nil	
vii.	Water body exists within the project site as well as study area	Project site: 8 numbers Water bodies and 1 number Nala Study area Ajay River - 7.0 Km in NE direction	-
viii.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area	Nil	

44.9.5 The existing project was accorded environmental clearance vide lr.no. F.No. J-11011/887/2007-IA.II(I) dated 26thDecember, 2019 for expansion of Integrated Steel Plant for ultimate production of 1.8 MTPA Pellets, 0.85 MTPA Sinter, 0.3 MTPA Coke, 36000 Nm3/hour Producer Gas, 0.89 MTPA Sponge Iron, 0.6 MTPA Hot Metal/Pig Iron, 1.51 MTPA Billets, 1.0 MTPA Long Steel Products, 0.1 MTPA DI Pipe, 1.2 MTPA Cement Grinding Unit, 0.1 MTPA Ferro alloys & 136 MW Captive Power Plant. Six nos. of Consent to Operate for the existing units were accorded by West Bengal Pollution Control Board vide letters:

(i) Consent Letter No. CO110131, Memo No. 1682-WPBA/Red(Bwn)/Cont(609)/10 dated 24.07.2018 valid up to 31.07.2023

(ii) Consent Letter No. CO128901, Memo No. 133-as-co-s/10/0041 dated 16.12.2019 valid up to 31.07.2023

(iii) Consent Letter No. CO128924, Memo No. 189-as-co-s/10/0041 dated 17.02.2020 valid up to 31.07.2023
(iv) Consent Letter No. CO128939, Memo No. 216-WPBA/Red(Bwn)/Cont(609)/10 dated 06.03.2020 valid up to 31.07.2023
(v) Memo No. 2050/WPBA/Red(Bwn)/Cont(669)/10(Part-IV) dated 05.10.2018
(vi) Consent Letter No. CO131914, Memo No. 11-WPBA/Red(Bwn)/Cont(669)/10(Part-V) dated 22.01.2021 valid upto 31.07.2023.

44.9.6 Implementation status of the existing EC:

SN	Capacity as per EC			Consent Status		Implementation Status	Remarks
	Facilities envisaged	**Capacity**	**Ultimate Capacity**	**CTE**	**CTO**		
1	Sinter Plant	0.85 MTPA	0.85 MTPA	0.85 MTPA	-	To be implemented	Capacity Enhancement from 0.85 MTPA to 1.11 MTPA proposed in current proposal
2	Pellet Plant 1	0.6 MTPA	1.8 MTPA (1800000 TPA)	0.6 MTPA	0.6 MTPA	Implemented	Capacity Enhancement from 0.6 MTPA to 0.9 MTPA proposed in current proposal
	Pellet Plant 2	0.6 MTPA		0.6 MTPA	0.6 MTPA	Implemented	Capacity Enhancement from 0.6 MTPA to 0.9 MTPA proposed in current proposal
	Pellet Plant 3	0.6 MTPA		0.6 MTPA	-	To be implemented	Capacity Enhancement from 0.6 MTPA to 1.2 MTPA proposed in current proposal
3	Blast Furnace	0.6 MTPA (1x450 m^3)	0.6 MTPA (600000 TPA)	0.6 MTPA (1x450 m^3)	-	To be implemented	Capacity Enhancement from 450 m^3 to 550 m^3 proposed in current proposal
4	Direct Reduced Iron (DRI) Plant	2 x 100 TPD	0.89 MTPA (890000 TPA)	2 x 100 TPD	2x100 TPD	Implemented	Capacity Enhancement from 100 TPD to 150 TPD proposed in current proposal
		3 x 300 TPD		3 x 300 TPD	3x300 TPD	Implemented	Capacity Enhancement from 300 TPD to 450 TPD proposed in current proposal
		2 x 90 TPD		2 x 90 TPD	2x90 TPD	Implemented	Capacity Enhancement from 90 TPD to 150 TPD proposed in current proposal
		4 x 350 TPD		4 x 350 TPD	1x350 TPD	1x350 TPD Implemented	Capacity Enhancement from 350 TPD to 450 TPD

SN	Capacity as per EC			Consent Status		Implementation Status	Remarks
	Facilities envisaged	**Capacity**	**Ultimate Capacity**	**CTE**	**CTO**		
						2x350 TPD under implementation 1x350 TPD to be implemented	Capacity Enhancement from 350 TPD to 700 TPD proposed in current proposal
5	Ferro Alloys Plant	3 X 9 MVA 2 x 4.5 MVA	0.1 MTPA	0.1 MTPA	0.1 MTPA	Implemented	
6	Steel Melting Shop (SMS) (Induction Furnace route)	12x18 T 2x15 T 4x5 T 8x8 T	1.51 MTPA (1.11 MTPA+ 0.4 MTPA)	1.51 MTPA	0.71 MTPA	4x18T, 2x15T, 4x5T, 8x8T Implemented 4x18T under implementation 4x18T, 1x45T to be implemented	
	SMS (Electric Arc Furnace route)	1 x 45 T (0.4 MTPA)					
7	Rolling Mill 1 - Structurals	0.15 MTPA	1 MTPA (1000000 TPA)	0.15 MTPA	0.15 MTPA	Implemented	Capacity Enhancement From 0.15 MTPA to 0.2 MTPA proposed in current proposal
	Rolling Mill 2 - TMT Bars	0.15 MTPA		0.15 MTPA	0.15 MTPA	Implemented	-
	Rolling Mill 3 - Wire Rods	0.2 MTPA		0.2 MTPA	0.2 MTPA	Implemented	Capacity Enhancement from 0.2 MTPA to 0.3 MTPA proposed in current proposal
	Rolling Mill 4 - Long Product	0.3 MTPA		0.3 MTPA	-	To be implemented	Capacity Enhancement from 0.3 MTPA to 0.5 MTPA proposed in current proposal
	Rolling Mill 5 - Long Product	0.2 MTPA		0.2 MTPA	-	Under implementation	-
8	Coke Oven Plant	0.3 MTPA	0.3 MTPA (300000 TPA)	0.3 MTPA	-	To be implemented	Capacity Enhancement from 0.3 MTPA to 0.45 MTPA proposed in current proposal
9	DI Pipe Plant	0.1 MTPA	0.1 MTPA (100000 TPA)	0.1 MTPA	-	To be implemented	Capacity Enhancement from 0.1 MTPA to 0.25 MTPA proposed in current proposal

SN	Capacity as per EC			Consent Status		Implementation Status	Remarks
	Facilities envisaged	Capacity	Ultimate Capacity	CTE	CTO		
10	Captive Power Plant	WHRB - 93 MW CFBC - 43 MW	136 MW	136 MW	91 MW	91 MW Implemented 45 MW to be implemented	-
11	Cement Grinding Unit	1.2 MTPA	1.2 MTPA	-	-	To be implemented	-
12	Producer Gas Plant	36,000 Nm^3/Hr (12 Nos. x 3000 Nm^3/Hr)	36,000 Nm^3/Hr (12 Nos. x 3000 Nm^3/Hr)	36,000 Nm^3/Hr (12 Nos. x 3000 Nm^3/Hr)	36,000 Nm^3/Hr (12 Nos. x 3000 Nm^3/Hr)	Implemented	-

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

S No	Name of Unit	Capacity as per EC		Units under Operation	Units under Implementation / To be Implemented	Proposed Project	Ultimate Capacity
		Capacity	Ultimate Capacity				
1	Sinter Plant	0.85 MTPA	0.85 MTPA	-	0.85 MTPA*	Capacity Enhancement from 0.85 MTPA to 1.11 MTPA	1.11 MTPA*
2	Pellet Plant 1	0.6 MTPA	1.8 MTPA (1800000 TPA)	0.6 MTPA*	-	Capacity Enhancement from 0.6 MTPA to 0.9 MTPA	0.9 MTPA*
	Pellet Plant 2	0.6 MTPA		0.6 MTPA*	-	Capacity Enhancement from 0.6 MTPA to 0.9 MTPA	0.9 MTPA*
	Pellet Plant 3	0.6 MTPA		-	0.6 MTPA*	Capacity Enhancement from 0.6 MTPA to 1.2 MTPA	1.2 MTPA*
3	Blast Furnace	0.6 MTPA (1x450 m^3)	0.6 MTPA (600000 TPA)	-	0.6 MTPA* (1x450 m^3)	Capacity Enhancement from 450 m^3 to 550 m^3	0.77 MTPA* (1x550 m^3)
4	Direct Reduced Iron (DRI) Plant	2 x 100 TPD	0.89 MTPA (890000 TPA)	2x100 TPD*	-	Capacity Enhancement from 100 TPD to 150 TPD	2x150 TPD*
		3 x 300 TPD		3x300 TPD*	-	Capacity Enhancement from 300 TPD to 450 TPD	3x450 TPD*
		2 x 90 TPD		2x90 TPD*	-	Capacity Enhancement from 90 TPD to 150 TPD	2x150 TPD*
		4 x 350 TPD		1x350 TPD*	3x350 TPD*	Capacity Enhancement from 350 TPD to 450 TPD Capacity Enhancement from 350 TPD to 700 TPD	3X450 TPD* 1x700 TPD*
		-	-	-	-	4x700 TPD (New)	4x700 TPD(New)
5	Ferro Alloys Plant	3 X 9 MVA 2 x 4.5 MVA	0.1 MTPA	0.1 MTPA	-	-	0.1 MTPA (3 X 9 MVA 2 x 4.5 MVA)

S No	Name of Unit	Capacity as per EC		Units under Operation	Units under Implementation / To be Implemented	Proposed Project	Ultimate Capacity
		Capacity	Ultimate Capacity				
6	Steel Melting Shop (SMS) (Induction Furnace route)	12x18 T	1.51 MTPA (1.11 MTPA + 0.4 MTPA)	4x18 T	8x18 T	2 x 8 T (New) 20 x 20 T (New)	12x18 T
		2x15 T		2x15 T	-		2x15 T
		4x5 T		4x5 T	-		4x5 T 2 x 8 T (New) 20 x 20 T (New)
		8x8T		8x8T	-		8 x 8T
	SMS (Electric Arc Furnace route)	1 x 45 T (0.4 MTPA)		-	1 x 45 T (0.4 MTPA)	-	1 x 45 T (0.4 MTPA)
7	Rolling Mill 1 - Structurals	0.15 MTPA	1 MTPA (1000000 TPA)	0.15 MTPA*	-	Capacity Enhancement From 0.15 MTPA to 0.2 MTPA	0.2 MTPA*
	Rolling Mill 2 - TMT Bars	0.15 MTPA		0.15MTPA	-	-	0.15 MTPA
	Rolling Mill 3 - Wire Rods	0.2 MTPA		0.2MTPA*	-	Capacity Enhancement from 0.2 MTPA to 0.3 MTPA	0.3 MTPA*
	Rolling Mill 4 - Long Product	0.3 MTPA		-	0.3 MTPA*	Capacity Enhancement from 0.3 MTPA to 0.5 MTPA	0.5 MTPA*
	Rolling Mill 5 - Long Product	0.2 MTPA		-	0.2 MTPA	-	0.2 MTPA
	Cold Rolling Mill 6 - Long Product	-		-		0.3 MTPA - New	0.3 MTPA - New
8	Coke Oven Plant	0.3 MTPA	0.3 MTPA (300000 TPA)	-	0.3 MTPA*	Capacity Enhancement from 0.3 MTPA to 0.45 MTPA	0.45 MTPA* (450000 TPA)
9	DI Pipe Plant	0.1 MTPA	0.1 MTPA (100000 TPA)	-	0.1 MTPA*	Capacity Enhancement from 0.1 MTPA to 0.25 MTPA	0.25 MTPA* (250000 TPA)
10	Captive Power Plant	WHRB - 93 MW CFBC - 43 MW	136 MW	WHRB - 48 MW CFBC – 43 MW	WHRB - 45 MW	WHRB - 86 MW (New) CFBC - 94 MW (New)	WHRB – 179 MW CFBC - 137 MW Total : 316 MW
11	Cement Grinding Unit	1.2 MTPA	1.2 MTPA	-	1.2 MTPA	-	1.2 MTPA

S No	Name of Unit	Capacity as per EC		Units under Operation	Units under Implementation / To be Implemented	Proposed Project	Ultimate Capacity
		Capacity	Ultimate Capacity				
12	Producer Gas Plant	36,000 Nm^3/Hr (12 Nos. x 3000 Nm^3/Hr)	36,000N m^3/Hr (12 Nos. x 3000 Nm^3/Hr)	36,000N m^3/Hr (12 Nos. x 3000 Nm^3/Hr)	-	48,000Nm^3/Hr (12 Nos. x 4000 Nm^3/Hr) - New	84,000Nm^3/Hr (12 Nos. x 3000 Nm^3/Hr) + 12 Nos. x 4000 Nm^3/H)
13	L D Converto r Plant	-	-	-	-	0.48 MTPA 60 Ton/ Heat - New	0.48 MTPA 60 Ton/ Heat – New
14	Oxygen Plant	-	-	-	-	10000 M^3/ Day - New	10000 M^3/ Day – New
Note: * Denotes Capacity enhancement of units under operation / units under implementation / units to be implemented for which EC has already been granted.							

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

Sl. No	Raw Material	Annual Requirement (in TPA)			Source	Distance (in km)	Transportation		
		Under Operation	Expansion + Under implementation / to be implemented	Total			Internal	Rail	Road
COKE OVEN PLANT									
1	Coking Coal		600000	600000	Imported-Haldia Port	290-300	-	540000	60000
SINTER PLANT									
1	Iron ore fines		998000	998000	Barbil-Joda, Orissa	300-350	-	898200	99800
2	Limestone		88700	88700	Birmitrapur,Orissa Bilaspur Raipur CG Katni MP	300 700 800 900	-	-	88700
3	Quicklime		55440	55440	Katni, MP	900	-	-	55440
4	Dolomite		44350	44350	Raipur CG Katni MP	800 900	-	-	44350
5	Coke Breeze		66530	66530	In House-Conveyor, Local Market	200	21500	-	45030
BLAST FURNACE									
1	Iron ore Lumps		123200	123200	Barbil-Joda, Orissa	350	-	110880	12320
2	Coke		494000	494000	In House - Conveyor, Local Market	200	428500	58950	6550
3	PCI Coal		154000	154000	Imported-Haldia Port	290-300	-	138600	15400
4	Limestone		15400	15400	Birmitrapur,Orissa Bilaspur Raipur CG Katni MP	300 700 800 900	-	-	15400

Sl. No	Raw Material	Annual Requirement (in TPA)			Source	Distance (in km)	Transportation		
		Under Operation	Expansion + Under implementation / to be implemented	Total			Internal	Rail	Road
5	Dolomite		7700	7700	Raipur CG Katni MP	800 900	-	6930	770
6	Quartzite		7700	7700	Belpahar, Orissa Bilaspur, Raipur CG	350 700	-	-	7700
7	Sinter		1108800	1108800	In-house	-	1108800	-	
SPONGE IRON PLANT									
1	Iron Ore	89890	285110	375000	Barbil-Joda, Orissa	350	-	337500	37,500
2	Coal	591690	1876710	2468400	Imported-Haldia Port	290-300	-	2221560	246840
3	Dolomite	322716	1023584	1346300	Raipur CG Katni MP	800 900	-	1211670	134630
4	Pellet	719118	2280882	3000000	In-house - Conveyor	-	3000000	-	
PELLET PLANT									
1	Iron ore Fines	1440000	2160000	3600000	Barbil-Joda, Orissa	350	-	3240000	360000
2	Limestone	12000	18000	30000	Birmitrapur,Orissa Bilaspur Raipur CG Katni MP	300 700 800 900	-	27000	3000
3	Bentonite	102000	153000	255000	Gujarat	2200	-	-	255000
4	Coal	48000	72000	120000	Imported-Haldia Port	290-300	-	108000	12000
PRODUCER GAS PLANT									
1	Coal	158400	211200	369600	Imported-Haldia Port	290-300	-	332640	36960
DUCTILE IRON PIPE									
1	Pig Iron		225000	225000	In-house	-	225000	-	-
2	Zinc		1750	1750	Local Market	200	-	-	1750
3	Scrap		25000	25000	In-house	-	25000	-	-
SMS (EAF ROUTE)									
1	Sponge		400000	400000	Local Market	100	-	-	400000
2	Scrap		19370	19370	In-house	-	19370	-	-
3	Ferro		750	750	In-house	-	750	-	-
4	Lime		39204	39204	Katni, MP	900	-	-	39204
5	DRI		66825	66825	In-house	-	66825	-	
SMS (IF ROUTE)									
1	Pig Iron	109885	330835	440720	In-house Conveyor Local Market	200	69800	-	370920
2	Scrap	30952	93188	124140	In-house		124140	-	-
3	Ferro	1238	3727	4965	In-house		4965	-	-
4	DRI	619036	1863764	2482800	In-house - Conveyor Local Market	100	2249600	-	233200
L D CONVERTOR									
1	Pig iron		475200	475200	In-house	-	475200	-	-
2	Scrap		124140	124140	In-house	-	124140	-	-
3	Ferro Alloys		5760	5760	In-house	-	5760	-	-
ROLLING MILL									

Sl. No	Raw Material	Annual Requirement (in TPA)			Source	Distance (in km)	Transportation		
		Under Operation	Expansion + Under implementation / to be implemented	Total			Internal	Rail	Road
1	Billet	525000	1207500	1732500	In-house	-	1732500	-	-
CEMENT GRINDING UNIT									
1	Clinker		708000	708000	Satna, MP	900	-	637200	70800
2	Gypsum		60000	60000	Katni, MP	900	-	-	60000
3	Slag from BF		163800	163800	In-house	-	163800	-	
4	Fly Ash from CPP		288000	288000	In-house	-	288000	-	
FERRO ALLOYS									
1	Ore	226300		226300	Imported-Haldia Port Odisha, Barbil	290-300 200	-	203670	22630
2	Coke & Coal	70300		70300	Jharkhand Assam	200 1100	-	63270	7030
3	Quartzite	32750		32750	Belpahar, Orissa Bilaspur, Raipur CG	350 700	-	-	32750
4	Dolomite	30000		30000	Raipur CG Katni MP	800 900	-	27000	3000
CAPTIVE POWER PLANT									
1	Coal	211296	461904	673200	Imported-Haldia Port Local market	290-300 100	-	605880	67320
2	Dolochar	211296	461904	673200	In-House		673200	-	
TOTAL		5921924	18499870	24421794			10806850	10768950	2845994
Percentage (%)							44%	44%	12%

44.9.9 The water requirement for the project is estimated as 16706 m^3 /day (overall project after expansion), out of which 11,365 m^3/day of fresh water requirement will be obtained from Irrigation & Waterways Department, West Bengal and 7000 m^3/day will be obtained from Asansol Municipal Corporation. The permission for drawl of water is obtained from Irrigation & Waterways Department, West Bengal in the name of M/s. Shyam Sel Limited vide Memo No. 63-I/I-4M-26/2006 dated 11/09/2008 and from Asansol Municipal Corporation Municipal Corporation in the name of M/s. Shyam Sel & Power Limited vide Ref. No. 0853/B-1/J/A.M.C dated 29/06/2021.

44.9.10 The power requirement for the project is estimated as 472 MW (overall project after expansion), out of which 316 MW shall be obtained from CPP and balance 156 MW from DVC & IPCL.

44.9.11 Baseline Environmental Studies:

Period	1st October, 2020 – 31st December, 2020
AAQ parameters at 8 locations	$PM_{2.5}$ = 21 - 45 µg/m^3 PM_{10} = 56 - 89 µg/m^3 SO_2 = 5 - 22 µg/m^3 NO_x = 9 - 38 µg/m^3 CO = 0.163 - 1.346 mg/m^3

AAQ modelling (Incremental GLC)	$PM_{2.5}$ = 0.0 µg/m^3 PM_{10} = 5.15 µg/ m^3 (1.0 km in SE) SO_2 = 7.69 µg/ m^3 (1.8 km in SSE) NOx = 7.63 µg/ m^3 (1.8 km in SSE)
Ground water quality at 8 locations	pH: 7.07 - 7.62, Total Hardness: 155 - 280 mg/l, Chlorides: 42 - 115 mg/l, Fluoride: 0.21 - 0.33 mg/l, Iron: 0.12 - 0.25 mg/l, TDS: 220 - 462 mg/l
Surface water quality at 10 locations (2 River water & 8 pond water samples)	River Water pH: 7.36 - 7.43, DO: 7.3 - 7.7 mg/l, BOD: 2 mg/l, COD: 4 mg/l, Fe: 0.06 - 0.07 mg/l, Coliform: 779 - 995 MPN/100ml, TDS: 118 - 131 mg/l, Total Hardness: 76 - 86 mg/l, Chloride: 23 - 26 mg/l Pond Water pH: 7.21 - 7.56, DO: 6.4 - 7.1 mg/l, BOD: 2 - 5 mg/l, COD: 8 - 24 mg/l, Fe: 0.08 - 0.21 mg/l, Coliform: 447 - 986 MPN/100ml, TDS: 219 - 372 mg/l, Total Hardness: 120 - 155 mg/l, Chloride: 42 - 86 mg/l
Noise levels	54.5 to 70.6 dBA for day time and 46.0 to 58.4 dBA for night time
Traffic assessment study findings	Existing Load : 28844 PCU/day at NH-2 near Ranisayar More 10511 PCU/day at Jamuria Cinema More 11385 PCU/day at Chakdola More Bus stand Total Load after Expansion : 30278 PCU/day at NH-2 near Ranisayar More 11945 PCU/day at Jamuria Cinema More 12819 PCU/day at Chakdola More Bus stand As per IRC:106 – 1990 code, Guidelines for Capacity of Urban Roads in Plain Areas, PCU capacity per day is 86,400 for NH-2 near Ranisayar More, 36,000 for Jamuria Road at Jamuria Cinema More and 86,400 for NH-60 at Chakdola More Bus stand. The total traffic

	load during operation of the proposed expansion shall be well within the traffic capacity.
Flora and fauna	There are no Schedule I species in the study area.

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

S. N.	Type	Quantity in Tons/Year			Utilization
		Existing Units	Proposed Units + Units to be implemented / under implementation	Total	
1	Dolochar from DRI Kilns	1,61,370	5,11,830	6,73,200	100% to be used in FBC boiler of CPP.
2	Slag from MBF	-	2,31,000	2,31,000	100% to be used in captive Cement Grinding Unit
3	Slag from Induction Furnaces, LD Converter & EAF	63,097	3,60,763	4,23,860	The slag generated from the furnaces shall be 4,23,860 TPA considering 100% production in all furnaces. After metal recovery about 10% metal shall be recovered from the total slag and the balance 3,81,474 TPA (as stone chips / road construction materials) shall be used for road construction & repairing / land filling purposes. Considering 7 m width & depth 24 inch (0.6 m) of the road and density of the slag as 3.5 ton/cum, 14700 T slag may be consumed for 1.0 km stretch. Therefore, the entire quantity of slag generated in a year (4,23,860 TPA) can be utilized for the construction of around 26 km roads among which around 6 km are internal roads i.e. within the plant site. Development of additional land for the proposed project will also consume around 2,25,225 Tons which is around 60% of the total annual generation of the slag.

S. N.	Type	Quantity in Tons/Year			Utilization
		Existing Units	**Proposed Units + Units to be implemented / under implementation**	**Total**	
					As per an estimate, it was found that around 600 km undeveloped (Kuchha) road is existing in the surrounding villages in the 10 km radius area. Hence, there is lot of potential of slag utilisation during construction of these roads.
4	Tar Sludge from Producer gas plant	21,000	7,000	28,000	Sold to WBPCB authorized vendor.
5	Coal Ash from PGP	82,875	27,625	1,10,500	To be used for Making construction Materials
6	Dust from ESP and Bag Filters of Sinter Plant		65,000	65,000	To be reused in process
7	Dust from ESP and Bag Filters of Pellet Plant	93,800	1,40,700	2,34,500	To be reused in process
8	Dust from GCP and Bag Filters of Blast Furnace		77,200	77,200	100% to be reused in Sinter Plant
9	Dust from ESP and Bag Filters of DRI Plant	42,787.5	1,35,712.5	1,78,500	100% to be reused in Sinter Plant
10	Dust from Bag Filters of	26,323	1,08,177	1,34,500	To be reused in process

S. N.	Type	Quantity in Tons/Year			Utilization
		Existing Units	**Proposed Units + Units to be implemented / under implementation**	**Total**	
	Induction Furnaces				
11	Mill scales from rolling mill and casting machines	10,000	23,000	33,000	To be reused in Induction Furnaces
12	Slag from Ferro Alloy Plant	80,000	-	80,000	The maximum slag generation is 80,000 TPA considering 100% production. After metal recovery about 10% metal is recovered from the total slag and the balance 72,000 TPA (as stone chips / road construction materials) is being used for road construction & repairing / land filling purposes. Considering 7 m width & depth 24 inch (0.6 m) of the road and density of the slag as 2.5 ton/cum, 10,500 T slag is consumed for 1.0 km stretch. Therefore, the entire quantity of slag generated in a year (80,000 TPA) is being utilized for the construction of around 7 km roads. Besides, significant amount of slag is also used for landfilling purposes both inside & outside the project site.
13	Fly Ash from CPP	1,49,452	3,69,523	5,18,975	Fly ash to be utilised for cement making / brick making. Bottom ash to be utilised for brick making / landfilling purposes.

S. N.	Type	Quantity in Tons/Year			Utilization
		Existing Units	Proposed Units + Units to be implemented / under implementation	Total	
14	Bottom Ash from CPP	37,363	92,381	1,29,744	The company has proposed a cement grinding unit of 1.2 MTPA capacity with the current proposal. Besides, the company is already operating a brick manufacturing plant within its existing plant premises with a capacity of 50,000 bricks per day. 3,34,873 TPA fly ash shall be utilised in the proposed Cement Grinding unit. The balance 34,650 TPA fly ash shall be utilised in brick making. All the necessary calculations for both fly and bottom ash in brick making are presented below: Weight of each brick - 3.5 kg Weight of 50,000 bricks = 1,75,000 kg Weight of bricks manufactured in a year = 57750 TPA Composition of the bricks : Fly ash - 60%, Bottom Ash - 34% and Cement - 6% For manufacturing 57,750 TPA of bricks, 34,650 TPA fly ash and 19,635 TPA bottom ash is required. Hence, balance 72,746 TPA bottom ash shall be used for landfilling purposes both inside and outside the plant premises. Alternatively, this balance bottom ash may also be disposed through filling of the abandoned mines of ECL the permission for which is already available.

44.9.13 Public Consultation:

Details of advertisement given	Advertisement in the Newspapers Sanmarg (Hindi), Bartaman (Bengali) and The Times of India (English) were published on 06/02/2021, 05/03/2021 and 05/03/2021 respectively.
Date of public consultation	9th March, 2021
Venue	Jamuria Town Hall, Jamuria, Dist. – Paschim Bardhaman, West Bengal
Presiding Officer	Sri. Apratim Ghosh, Additional District Magistrate, Paschim Bardhaman
Major issues raised	1. Greenbelt development 2. Source of water for the proposed expansion project 3. Employment of local people 4. Regarding Plastic Waste and its recycling 5. Providing financial aid & employment for local widows 6. Regarding Medical Camp for Eye Care 7. Regarding water spreading on road 8. Regarding setting up of Cultural & sports centre 9. Improvement of local school

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

Concerns raised during Public Hearing	**Physical Activity and Action Plan**	**Particulars**	**YEAR OF IMPLEMENTATION**				
			1st Year	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**
Greenbelt development in the area	There is proposal for development of parks, plantation of trees (greenbelt development) in the nearby areas.	Physical Target	Development of 1 park Plantation of 1000 nos. of trees	Development of 1 park Plantation of 1000 nos. of trees	Development of 1 park Plantation of 1000 nos. of trees	Plantation of 2000 nos. of trees	Plantation of 2000 nos. of trees
		Budget : Rs. 111 Lakhs	25 Lakhs	25 Lakhs	25 Lakhs	18 Lakhs	18 Lakhs
Source of water for the proposed expansion project	Requirement of the total 16,706 KLD water (Existing : 9605 KLD and Expansion : 7101 KLD) will be sourced from Ajoy river and Asansol Municipal Corporation.	Physical Target	-	-	-	-	-
		Budget	-	-	-	-	-
Employment of local people	In the proposed project, top most priority will be given to the local people based on their academic qualification. Skill development for unemployed local youths through National Skill Development	Physical Target	Construction of 6 - room training building and installation of 20 sewing machines, 10 computer systems & 10 machines for making hand craft items along with necessary raw materials, developing 5 workshops for practical training, providing equipment, machinery and raw materials based on the need of the local people				
		Budget: Rs. 114 Lakhs	24 Lakhs	35 Lakhs	25 Lakhs	15 Lakhs	15 Lakhs

Concerns raised during Public Hearing	**Physical Activity and Action Plan**	**Particulars**	**YEAR OF IMPLEMENTATION**				
			1st Year	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**
	Corporation, Govt. of India Scheme. Construction of a building along with the necessary infrastructures for this purpose like different machineries for industries.						
Regarding Plastic Waste and its recycling	The plant premises shall be declared as a plastic free zone. Plastic waste generation shall be minimized and the waste generated shall be disposed at a designated site from where it shall be collected at regular intervals and disposed through registered vendors.	Physical Target	The physical Target for the entire activities shall be achieved in 5 years.				
		Budget	Included in the EMP Cost.				
Providing financial aid & employment for local widows Regarding present poor condition of the local women	Women of Mamudpur village along with their existing self-help group shall be involved in various activities like jute handcraft, sewing, jam jelly and sauce making project etc.	Physical Target	Workshop centre with latest tailoring machines for training of women especially widows in activities like jute handicraft, sewing, jam jelly and sauce making project etc., financial assistance to the local self-help groups already operational in the area, working for the upliftment of women.				
		Budget : Rs. 78 Lakhs	25 Lakhs	20 Lakhs	13 Lakhs	10 Lakhs	10 Lakhs
Regarding Medical Camp for Eye Care	Medical camp for eye checkup for local people suffering from eye ailment shall be organized. Arrangements shall be made for cataract operation in Shankar Netralaya, Kolkata, at free of cost.	Physical Target	It will be done on regular basis.				
		Budget	As per requirement				
Regarding pollution control by	• Adequate control measures like installation of ESP, Bag filters, dust suppression system,	Physical Target	The physical Target for the entire activities shall be achieved in 5 years.				
		Budget	Included in the EMP Cost.				

Concerns raised during Public Hearing	**Physical Activity and Action Plan**	**Particulars**	**YEAR OF IMPLEMENTATION**				
			1st Year	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**
installing proper pollution control equipment	fume extraction system, sprinklers &stacks of adequate height at relevant places will be installed. • Air borne dust shall be controlled by mobile water tanker inside the plant premises. • Maintenance of air pollution control equipment shall be done at regular intervals. • All roads shall be paved on which movement of raw materials or products will take place inside the plant premises. • No waste water will be discharged outside the plant area. The plant is designed as a zero discharge plant. The entire wastewater will be recirculated and recycled. • The equipment shall comply with the Statutory limit of 85 dB(A) (at 1 m. from the source). Noise Reduction Systems will be provided.						
Regarding water spreading on road	Procurement of Mobile tankers for water sprinkling on Jamuria-Haripur Road.	Physical Target	Procure-ment of 1 tanker	Procurement of 1 tanker	-	-	-
		Budget : Rs. 30 Lakhs	Rs. 15 Lakhs	Rs. 15 Lakhs	-	-	-
Regarding setting up of Cultural & Sports centre	Development of cultural & Sports Centre at Chandipur for carrying out various events / activities will be started after visiting Chandipur village	Physical Target	Development of cultural & Sports centre at Chandipur for carrying out various events / activities				
		Budget: Rs. 68 Lakhs	Rs. 30 Lakhs	Rs. 20 Lakhs	Rs. 10 Lakhs	Rs. 5 Lakhs	Rs. 3 Lakhs

Concerns raised during Public Hearing	**Physical Activity and Action Plan**	**Particulars**	**YEAR OF IMPLEMENTATION**				
			1st Year	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**
Regarding improvement of the local Adibashi school	Development of building infrastructure, playground, class rooms, library facilities and providing computers in the Local Adibashi School.	Physical Target	Renovation & repairing of school building and constructing 4 extra classrooms in the school	Supplying desks, benches, chairs, blackboards	Development of library and providing books	Development of play-ground in the school and providing sports goods to the students	Providing 10 nos. of computers to the school
		Budget : Rs. 40 Lakhs	Rs. 15 Lakhs	Rs. 10 Lakhs	Rs. 5 Lakhs	Rs. 5 Lakhs	Rs. 5 Lakhs
Total Budget - Public Hearing related: Rs. 441 Lakhs							

Need based Activities	**Particulars**	**Year of Implementation**				
		1st Year	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**
Construction of W/C/Toilet (2) each - 10 numbers (@ Rs. 3.00 Lakhs per set of 2 Toilets).	Physical Target:	Construc-tion of 2 nos. Toilets	Construc-tion of 2 nos. Toilets	Construc-tion of 2 nos. Toilets	Construc-tion of 2 nos. Toilets	Construction of 2 nos. Toilets
	Budget : Rs. 30 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs
Construction & Repairing of roads in the surrounding areas	Physical Target:	Construc-tion of 1 km and repairing of existing roads	Construc-tion of 1 km and repairing of existing roads	Construc-tion of 1 km and repairing of existing roads	Construc-tion of 1 km and repairing of existing roads	Construction of 1 km and repairing of existing roads
	Budget : Rs. 50 Lakhs	Rs. 10 Lakhs	Rs. 10 Lakhs	Rs. 10 Lakhs	Rs. 10 Lakhs	Rs. 10 Lakhs
Street Lighting (Solar) provision at suitable public places in and around the nearby villages (150 numbers, @ Rs. 20,000/- per Solar Light)	Physical Target:	Providing 30 nos. Solar light	Providing 30 nos. Solar light	Providing 30 nos. Solar light	Providing 30 nos. Solar light	Providing 30 nos. Solar light
	Budget : Rs. 30 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs
Creation of irrigation and other agricultural infrastructures in the peripheral villages	Physical Target:	Development of pipelines to carry the irrigation water from Ajay / Damodar river to the fields			Supplying crop harvesting machines	Supplying pest control machines
	Budget : Rs. 107 Lakhs	Rs. 32 Lakhs	Rs. 30 Lakhs	Rs. 30 Lakhs	Rs. 10 Lakhs	Rs. 5 Lakhs

Need based Activities	**Particulars**	**Year of Implementation**				
		1st Year	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**
Drinking water supply facility for the local villagers by treating (Ajay / Damodar) river water.	Physical Target:	Setting up of a water treatment plant	-	-	-	-
	Budget : Rs. 20 Lakhs	Rs. 20 Lakhs	-	-	-	-
Development and maintenance of existing ponds in the local villages	Physical Target:	Development & maintenance of 2 ponds	Development & maintenance of 2 ponds	Development &maintenance of 2 ponds	Development & maintenance of 2 ponds	Development & maintenance of 2 ponds
	Budget : Rs. 25 Lakhs	Rs. 5 Lakhs	Rs. 5 Lakhs	Rs. 5 Lakhs	Rs. 5 Lakhs	Rs. 5 Lakhs
Construction of Rain Water Harvesting structures in nearby villages for groundwater recharging	Physical Target:	Construction of 20 nos. RWH structures	Construction of 20 nos. RWH structures	Construction of 20 nos. RWH structures	Construction of 20 nos. RWH structures	Construction of 14 nos. RWH structures
	Budget : Rs. 28.5 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 4.5 Lakhs
Rain Water Harvesting ponds in nearby villages	Physical Target:	Development of 2 ponds	Development of 2 ponds	Development of 2 ponds	Development of 2 ponds	Development of 2 ponds
	Budget: Rs. 30 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs	Rs. 6 Lakhs
Providing green and blue dustbins in local villages (under Swach Bharat Scheme) for waste segregation and handling	Physical Target:	Providing 250 green dustbins and 250 blue dustbins	Providing 250 green dustbins and 250 blue dustbins	Providing 250 green dustbins and 250 blue dustbins	Providing 250 green dustbins and 250 blue dustbins	Providing 250 green dustbins and 250 blue dustbins
	Budget : Rs. 2.5 Lakhs	Rs. 0.5 Lakh	Rs. 0.5 Lakh	Rs. 0.5 Lakh	Rs. 0.5 Lakh	Rs. 0.5 Lakh
Procurement of buses to facilitate transportation of school students	Physical Target:	Procurement of 1 bus	Procurement of 1 bus	-	-	-
	Budget : Rs. 28 Lakhs	Rs. 14 Lakhs	Rs. 14 Lakhs	-	-	-
Reformation of Singaran River by clearing of water hyacinth and plastic waste	Physical Target:	Cleaning of the Singaran River twice in a year, by clearing of water hyacinth and plastic waste being dumped into the river. Setting up of awareness message printed placards along the shore to spread consciousness and prevent the locals from dumping waste into the river.				
	Budget : Rs. 20 Lakhs	Rs. 4 Lakh	Rs. 4 Lakh	Rs. 4 Lakh	Rs. 4 Lakh	Rs. 4 Lakh
Total Budget - Need based activities: Rs. 371 Lakhs						
Overall Budget (Public Hearing related + Need based Activities): Rs. 812 Lakhs						

44.9.14 The capital cost of the project is Rs. 1987.36 Crores and the capital cost for environmental protection measures is proposed as Rs. 192.84 Crores. The annual recurring cost towards

the environmental protection measures is proposed as Rs. 18.42 Crores. The employment generation from the proposed project / expansion is 2750 persons. The details of cost for environmental protection measures is as follows:

S. No.	Description of Item	Proposed (Rs. in Crores)	
		Capital Cost	Recurring Cost
i.	Air Pollution Control/Noise	89.0	8.9
ii.	Water Pollution Control	18.0	1.8
iii.	Green Belt Development	8.43	0.42
iv.	Solid/Hazardous Waste Management	16.0	1.6
v.	Noise Reduction	17.0	1.7
vi.	Occupational Health Management	15.0	1.5
vii.	Risk Mitigation & Safety Plan	18.0	1.8
viii.	Environmental Management Department	7.0	0.7
ix.	Addresal of Public Consultation concerns	4.41	-
TOTAL		192.84	18.42

44.9.15 The Company has earmarked 97.1 hectares (239.94 acres) for Green Belt Development, which is around 34% of the total plant area of 284.09 Hectares (702 acres) of land. Out of this 97.1 Hectares (239.94 acres) of land for greenery, 87.4 Hectares (216 acres) of land is already developed as greenery within the plant premises where around 2,21,990 number of trees (@2540 trees per hectares) have been planted. Remaining 9.7 Hectares (24 acres) of land will be utilised for greenery development in the plant area where around 24,250 number of trees (@2500 trees per hectares) will be planted. Thus, finally total 2,46,240 number of trees shall come under greenbelt in the plant premises. In addition to that around 18.4 Hectares (45.5 acres) of land will be used for greenbelt development purpose outside the plant premises. This 18.4 Hectares (45.5 acres) of land is just adjacent to the main plant. Around 46,000 number of trees (@2500 trees per hectares) will be planted in this additional land. Thus, total plantation area will be 28.1 Hectares (69.5 acres). Local and native species will be planted.

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

44.9.17 Name of the EIA consultant: M/s Envirotech East Pvt. Ltd.[Certificate No. NABET/EIA/1821/RA 0118, Validity – 8th October, 2021].

Certified compliance report from Regional Office

44.9.18 The Status of compliance of earlier EC was obtained from Regional Office, Kolkata vide letter no. 102-494/14/EPE dated 25/05/2021 in the name of M/s ShyamSel& Power Ltd. The Action taken report regarding the partially/non-complied condition was submitted to Kolkata Regional Office of MoEF&CC vide letter no. SSPL/JMR/ATR/21-01 dated 17th July, 2021. Accordingly, the Closure Report on Non-Compliances was obtained from Regional Office, Kolkata on 29/07/2021 which is presented below.

S. N.	Non-compliances reported if any	Corrective action taken	Present Status
1	It has been observed that the PA's have not installed	Purchase order for 4 Nos of Continuous ambient air quality	Complied

S. N.	Non-compliances reported if any	Corrective action taken	Present Status
	CAAQMS in the plant. It is required to install 4 CAAQMS in or outside the Project Boundary as recommended by the WBPCB.	monitoring station (USEPA / MCERT) using high quality laser sensors (Beta Rays Attenuation) technology already issued (PO No. J9/PA217-00043/21-22 dated 8th June, 2021) in compliance to point no –II. Air Quality Monitoring and Preservation Condition No. iii of EC dated 26.12.2019.	
2	It has been observed that the PA has not yet developed a fully functional tyre washing area. The PA is required to do the same at the designated place inthe trucking parking area.	The tyre washing facility in the truck parking area has been installed. Now the trucks tyre are washed before entering and leaving the plant premises.	Complied
3	The PA is required to provide GCP of SMS to reduce PH in circulating water to ensure optimal recycling of treated water for converter gas cleaning. It should be done and report must be submitted.	The existing Steel Melting Shops are equipped with Induction Furnaces (IF) with charge mix mostly with DRI and small part of scrap or pig iron. As such, during charging and initial heating, generated fumes are sucked by ID Fans of adequate capacity through hood, passes through respective bag house to Chimneys of adequate height to ensure State/ Central Pollution norms. It may be noted the circulating cooling water systems of these furnaces are by soft water and there is no connection between GCP and pH in circulating water.	Complied
4	The PA is required to Provide solar 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.	In accordance with the observation no. 4 that is to provide solar power generation and installation of solar lighting system, PP has made a contract / agreement has already been signed between M/S ShyamSel& Power ltd and VSV Renewable Pvt. Ltd. (Floating Type & Roof Top Type) and work regarding the same are already in progress.	Complied
5	The PA shall install waste recycling plant to recover	The metal recovery plant to recover scrap, metallic and flux for	Complied

S. N.	Non-compliances reported if any	Corrective action taken	Present Status
	scrap, metallic and flux for recycling to SMS.	recycling to SMS has already been installed.	

44.9.19 M/s. Shyam Sel & Power Limited had earlier made an application vide proposal no. IA/WB/IND/6700/2008 dated 22/07/2021. The proposal was considered by the REAC (Industry 1) in its 41st meeting held on 29 - 30th July, 2021 wherein the proposal was returned in present form due to the shortcomings as recorded in the minutes of meeting available on PARIVESH.

Observations of the Committee held during 29-30th July, 2021

44.9.20 The Committee noted the following:

i. As per form 2 and structure of the EIA report, KML file is an important document which facilitates the EAC to carryout due diligence of the proposal. However, the consultant failed to explain the features of the KML file and made the appraisal process infructuous.

ii. The Consultant misinform the EAC deliberately by not disclosing the natural features of the site as indicated by the KML file.

Recommendations of the Committee held during 29-30th July, 2021

44.9.21 After deliberations, the Committee recommended that the consultant may be issued a show cause notice for deliberately misinforming the EAC about the natural features of the site as indicated in the KML file. The Committee also recommended to return the proposal in its present form.

44.9.22 It was apprised to the EAC that SCN was issued to the EIA consultant on 31/08/2021 and reply has been submitted by the Consultant on 03/09/2021.

44.9.23 M/s. ShyamSel & Power Limited has again made an online application vide proposal no. IA/WB/IND/6700/2008 dated 03/09/2021. Subsequently, the proposal was considered by REACin its 44th meeting held on 13th – 14th September, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

44.9.24 The Committee noted the following:

i. Existing green belt is poor. It is noted that green belt is not available in existing plant. PP is required to submit a revised action plan for development of green belt all along the periphery of the project site covering 33% of the project area with a tree density of 2500 saplings per hectare.

ii. There are 8 water bodies inside the proposed complex and one nallah is passing through the project site. Conservation plan for protection of the said water bodies has not been submitted.

iii. On NE side there is a primary school only 50 mt. away from the plant boundary where DI plant is proposed, within the 500 m from the school premises no activity taken place except to plantation, PP need to relooked in to and submit a revised plant lay out.

iv. Present status of installation of CAAQMS has not been made available as reported in the RO report.
v. Road from high way to plant is a single road and the same road has three steel plants on it. PP has not furnished any plan to widen and maintain this road.
vi. 90 m^2 Sinter Plant is proposed without Sinter Cooler waste heat recovery.
vii. Stove waste gas heat recovery, Dry gas cleaning, CH and SH ventilation, Slag granulation Dog house for emission control from LD converter, land based bag filter for coke side emission control, PLL, PLD, PLO and charging emission control for coke ovens have not been proposed.
viii. BF gas and BOF gas shall be cleaned in dry system. Secondary Fume Extraction System for LD converter has not been proposed.
ix. Performance testing of PCDs has not been proposed in monitoring plan.
x. ToR point #9 pertaining Corporate Environment Policy has not been complied.
xi. As per the letter dated 11/09/2008 of Irrigation & Waterways Department, West Bengal, PP was supposed to obtain necessary permission for withdrawal of 2.5 MCD water from State Water Investigation Directorate (SWID). However, vopy of the said permission has not been made available.

Recommendations of the Committee

44.9.25 In view of the foregoing and after detailed deliberations, the Committee recommended to return the proposal in its present form to address the shortcomings enumerated at para number 44.9.24.

44.10 Expansion within the existing Chanderiya Lead Zinc Smelter Complex [Expansion in Hydro Plant by adding 1 Induction Furnace, 1 Slab Casting Line & Integration of RZO Unit in Hydro-II , Change in Product Mix in Pyro Unit on total metal basis & Installation of 1 Lead Refinery, Expansion of CPP through Modernization and Installation of 1 BPTG, Recovery of Minor Metals & Installation of 5 DG Sets] by **M/s. Hindustan Zinc Ltd.** located at villages Putholi, Ajoliya Ka Khera & Biliya, Tehsil Gangrar & Chittorgarh, **District Chittorgarh, Rajasthan** [Online Proposal No. IA/RJ/IND/215163/2021; File No.: J-11011/279/2006-IA.II(I).] – **Prescribing of Terms of Reference**– regarding**.**

44.10.1 M/s. Hindustan Zinc Limited has made an application online vide proposal no. IA/RJ/IND/215163/2021 dated 05/09/2021 along with the application in prescribed format (Form-I), copy of Pre-Feasibility Report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and is being appraised at Central Level.

Details submitted by Project proponent

44.10.2 The project of Hindustan Zinc Limited is located in Villages: Putholi, Ajoliya Ka Khera & Biliya, Tehsil: Gangrar & Chittorgarh, District: Chittorgarh, Rajasthan State is for Expansion within the existing Chanderiya Lead Zinc Smelter Complex [Expansion in Hydro Smelter Unit by adding 1 Induction Furnace, 1 Slab Casting Line & Integration of RZO Unit in Hydro-II , Change in Product Mix in Pyro Unit on total metal basis & Installation of 1 Lead Refinery, Expansion of CPP through Modernization and Installation

of 1 Back Pressure Turbine Generator, Recovery of Minor Metals & Installation of 5 DG Sets].

44.10.3 Environmental site settings:

S No	Particulars	Details	Remarks
i.	Total land	335.89 ha The total area is under possession of M/s. Hindustan Zinc Ltd.	Present land use of the Complex is Industrial & it will remain same after the expansion. Only the intensity of land use will be increased.
ii.	Existence of habitation & involvement of R&R, if any.	No existence of habitation & involvement of R&R.	-
iii.	Latitude and Longitude of the project site	Chanderiya Lead Zinc Smelter complex [all four corners] **A** 24°57'21.29"N, 74°38'34.39"E **B** 24°58'21.03"N, 74°40'43.43"E **C** 24°57'20.33"N, 74°38'37.46"E **D** 24°58'35.69"N, 74°39'16.22"E	-
iv.	Elevation of the project site	154 m – 175m AMSL	
v.	Involvement of Forest land if any.	Nil	-
vi.	Water body exists within the project site as well as study area	**Project site:** • Putholi Nala (Passing through the plant site) **Study area:** • Berach River (Adjacent in East direction from the Plant site) • Gambhir Nadi (~4.0 km in South direction from the Plant site) • Nagdika Nala (~8.5 km in NNE direction from the Plant site) • Canal (~8 km in WNW direction from the Plant site)	The water bodies falling in the study area are seasonal.
vii.	Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any	None (within the 10 km radius study area)	

S No	Particulars	Details	Remarks
	within the study area		

44.10.4 The existing project was accorded Concurrence letter initially for Pyro Plant vide no. J-11013/29/92-EI dated 03/06/1983; Production capacity of Pyro Plant was increased from 105000 TPA (Zn - 70,000 TPA + Pb – 35,000 TPA) to 140000 TPA (Zn – 105000 TPA + Pb - 35000 TPA) vide NOC obtained from RSPCB vide no. F.12 (Chittor-60) RPCB/Gr. III/19418 dated 05/03/2004. Environmental Clearance for {Hydro Plant} Zinc Smelter I (1,70,000 TPA Zinc Production)& CPP (154MW) vide F.No.J-11011/158/2003-IA.II(I) 31/03/2004; Environmental Clearance for Ausmelt Lead Smelter Plant (60,000 TPA) vide F.No.J-11011/17/2005-IA.II (I) 3/8/2005; Environmental Clearance for {Hydro Plant } Zinc Smelter II (2,10000 TPA) and expansion of {Hydro Plant } Zinc Smelter I (From 1,70,000 TPA to 2,10,000 TPA) vide no J-11011/279/2006-IA.II(I) dated 06/12/2006; Environmental Clearance for Inclusion of Fumer Plant within the {Hydro Plant } Zinc Smelter II vide F.No.J-11011/279/2006-IA.II(I) 5/10/2015; Environment Clearance for Capacity Expansion in Hydro I & Hydro II Zinc Smelters (from 4,20,000 TPA to 5,04,000 TPA) through debottlenecking vide letter no. J-11011/279/2006-IA.II (I) dated 14/10/2020.

44.10.5 Current CTO for Pyro Plant has been accorded by Rajasthan State Pollution Control Board (RSPCB) vide Order no. 2020-2021 / HDF /3070 dated 08/06/2020 (valid upto 29/02/2024). CTO for Hydro–I Plant and CPP (154 MW) has been accorded by RSPCBvide Order No. 2019-2020/HDF/2859 dated 16/01/2020 (valid upto 31/08/2023). CTO for Hydro– II Plant & CPP (100 MW) has been accorded by RSPCB vide Order no. 2019-2020/HDF/2818 dated 18/12/2019 (valid upto 31/01/2024). CTO for Fumer Plant within existing Hydro -II plant was accorded by RSPCB vide Order no. 2020-2021/HDF/3009 dated 08/05/2020 (valid upto 31/03/2025).CTO for Ausmelt Lead Plant was accorded from RSPCB vide Order no. 2020-2021/HDF/3069 dated 05/06/2020 (valid upto 31/08/2023). CTO for installation of 2 D.G. Sets (2 x 8MW) was obtained from RSPCB vide Order no. 2020-2021 / HDF / 3068 dated 05/06/2020 (valid upto 30/04/2024). CTO for Township was obtained vide Order no. 2018-2019/CPM/5201 dated 23/05/2018.

44.10.6 Implementation status of the existing EC:

S No	Facilities	Unit	As per existing ECs	Implementation status as on 31/08/2021	Production as per CTOs
A. Lead Zinc Smelter Unit (Pyro Plant)					
1.	Refined Lead	TPA	35,000	35,000	35,000
2.	Refined Zinc	TPA	105,000	105,000	105,000
Total		TPA	140,000	140,000	140,000
3.	Captive Power Plant	MW	90	Not installed	NA
B. Hydro-I + Hydro-II Zinc Smelter Unit (Incl. Fumer plant) with Captive Power Plant					
4.	Zinc (Hydro- I + II) with Fumer /	TPA	5,04,000	5,04,000	5,04,000 (Fumer Installed,

S No	Facilities	Unit	As per existing ECs	Implementation status as on 31/08/2021	Production as per CTOs
	Zinc Alloys and its Compounds			(Fumer Installed, Commissioning under progress)	Commissioning under progress)
5.	Captive Power Plant with Hydro-I	MW	154 (2x77)	154 (2x77)	154 (2x77)
6.	Captive Power Plant with Hydro-II	MW	100	100	100
	DG- Hydro -I	KVA	1 x 750 1 x 1000	1 x 750 1 x 1000	1 x 750 1 x 1000
	Hydro-II	KVA	1 x 625 2 x 1250 1 x 125 2 x 9265	1 x 625 2 x 1250 1 x 125 2 x 9265	1 x 625 2 x 1250 1 x 125 2 x 9265
7.	WHRB	MWH	34.7 1x (9.4) 1x (4.3) 1x (21)	34.7 (9.4) 1x (4.3) 1x (21)	34.7 1x (9.4) 1x (4.3) 1x (21)
8.	Cadmium Metal/ Cadmium Sponge (equivalent metal) (By-product)	TPA	680	680	680
9.	Copper Cement/ Copper sulphate/ Copper matte/ (equivalent metal) (By product)	TPA	510	510	510
C. Ausmelt Lead Smelter Plant					
10.	Lead	TPA	60, 000	60, 000	60, 000

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

S. No	Name of the facility	Unit	Existing		Additional		Total after expansion		Remarks
			Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	
Lead Zinc Smelter Unit (Pyro Plant)									
1	Refined Lead	TPA	35,000	1 x 140,000	1,05,000	1x 140,000	140000 [Total Metal Basis]	1 x 140,000	Change in product mix*
2	Refined Zinc	TPA	105,000		35,000				
	Total	TPA	140,000		140,000 (Change in product mix only)		140,000 (Change in product mix only)		
3	DG	KVA	NIL	NIL	2875	1x625 1x1500	2875	1x625 1x1500	To be added

S. No	Name of the facility	Unit	Existing		Additional		Total after expansion		Remarks
			Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	
						1x750		1x750	
4	Zn-Cd Alloy / Cadmium Metal (on equivalent cadmium basis) (By-product)	TPA	375	1 x 375	222	1 x 222	597	1 x 597	Increase in production capacity
5	Copper Matte / Copper Metal (on equivalent copper basis) (By-product)	TPA	2100	1 x 2100	1238	1 x 1238	3338	1 x 3338	Increase in production capacity
6	Silver (on equivalent silver basis) (By-product)	TPA	74	1 x 74	728.29	1 x 728.29	802.29	1 x 802.29	Increase in production capacity
7	Sulphuric Acid (By-product)	TPA	1,76,000	1 x 1,76,000	47,505	1 x 47,505	2,23,505	1 x 2,23,505	Increase in production capacity
8	Antimony Slag/Antimony Trioxide(Sb_2O_3) (on equivalent Antimony basis) (By-product)	TPA	NIL	NIL	992	1 x. 992	992	1 x. 992	To be added
9	Lead Oxide/ Concentrate (by products)	TPA	NIL	NIL	20,000	1 x 20,000	20,000	1 x 20,000	To be added
10	Calomel/Mercury Sludge (on equivalent mercury basis) (By-product)	TPA	NIL	NIL	14.8	1 x 14.8	14.8	1 x 14.8	To be added
Hydro-I + Hydro-II Zinc Smelter Unit & Captive Power Plant (Combined Capacity)									
1.	Zinc (Hydro- I + II) / Zinc Alloys and its Compounds	TPA	5,04,000	2 x 2,52,000	1,26,000	1 x 1,26,000	6,30,000	2 x 2,52,000 1 x 1,26,000	Increase in Production Capacity
Hydro I									
2.	Captive Power Plant	MW	154	2x77	36	2x18	190	2x95	Increase in Production Capacity
3.	DG	KVA	1750	1 x 750 1 x 1000	NIL	Nil	1750	1 x 750 1 x 1000	No change
4.	WHRB	MW	9.4	1 x 9.4	Nil	Nil	9.4	1 x 9.4	No change
5.	Back Pressure Turbine Generator	MW	NIL	Nil	6	1 x 6	6	1 x 6	To be added
6.	DG FGD	KVA	NIL	Nil	500	1 x 500	500	1 x 500	To be added
7.	Cadmium Metal/ Cadmium Sponge (equivalent metal) (By-product)	TPA	680	1 x 680	NIL	NIL	680	1 x 680	No change

S. No	Name of the facility	Unit	Existing		Additional		Total after expansion		Remarks
			Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	
8.	Copper Cement/ Copper sulphate/ Copper matte/ (equivalent metal) (By product)	TPA	510	1 x 510	NIL	NIL	510	1 x 510	No change
9.	Low grade lead concentrate (By-product)	TPA	30, 000	1 x 30, 000	NIL	NIL	30, 000	1 x 30, 000	No change
10.	Sulphuric Acid (By-product)	TPA	3,07,774	1 x 3,07,774	Nil	Nil	3,07,774	1 x 3,07,774	No change
11.	Calomel (Mercury Chloride) (By-product)	TPA	20	1 x 20	NIL	NIL	20	1 x 20	No change
12.	Sodium Chloride (By-product)	TPA	250	1 x 250	Nil	Nil	250	1 x 250	No change
13.	Sodium Sulphate (By-product)	TPA	1250	1* 1250	Nil	Nil	1250	1* 1250	No change
Hydro II									
1.	Captive Power Plant	MW	100	1 x 100	NIL	Nil	100	1 x 100	No Change
2.	DG	KVA	12,515	1 x 625 2 x 1250 1 x 125 2 x 9265	750	1 x 750	13,265	1 x 625 2 x 1250 1 x 125 2 x 9265 1 x 750	Additional DG to be installed
3.	WHRB	MW	25.3	1 x 4.3 1 x 21	1	1 x 1 -	26.3	1 x 5.3 1 x 21	Increase in power generation
4.	Cadmium Metal/ Cadmium Sponge (equivalent metal) (By-product)	TPA	680	1 x 680	NIL	NIL	680	1 x 680	No change
5.	Copper Cement/ Copper sulphate/ Copper matte/ (equivalent metal) (By product)	TPA	510	1 x 510	NIL	NIL	510	1 x 510	No change
6.	Lead Silver Cake (By-product)	TPA	16000	1 x 16000	16000	1 x 16000	32000	1 x 32000	Increase in production capacity
7.	Copper Speiss/ Copper Residue (By-product)	TPA	700	1 x 700	500	1 x 500	1200	1 x 1200	Increase in production capacity
8.	Sulphuric Acid (By-product)	TPA	307774	1 x 307774	Nil	Nil	307774	1 x 307774	No change

S. No	Name of the facility	Unit	Existing		Additional		Total after expansion		Remarks
			Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	
9.	Calomel (Mercury Chloride) (By-product)	TPA	20	1 x 20	NIL	NIL	20	1 x 20	No change
10.	Sodium Chloride (By-product)	TPA	250	1 x 250	Nil	Nil	250	1 x 250	No change
11.	Sodium Sulphate (By-product)	TPA	1250	1 x 1250	Nil	Nil	1250	1 x 1250	No change
Ausmelt Lead Smelter Plant									
1.	Lead	TPA	60, 000	1 x 60, 000	NIL	NIL	60, 000	1 x 60, 000	No Change
2.	Sulphuric Acid (By-product)	TPA	50500	1 x 50500	NIL	NIL	50500	1 x 50500	No Change
3.	Copper Sulphate (By-product)	TPA	7920	1 x 7920	NIL	NIL	7920	1 x 7920	No Change
4.	Silver (on equivalent silver basis) (By-product)	TPA	94.71	1 x 94.71	NIL	NIL	94.71	1 x 94.71	No Change
5.	Zinc Rich Dust (By-product)	TPA	6600	1 x 6600	NIL	NIL	6600	1 x 6600	No Change
Minor Metal Recovery Unit									
1.	Lead Bullion / Lead Silver Cake / Lead Cake/Low Grade Lead Cake / Low Grade Lead Material (on Equivalent metal basis)	TPA	NIL	NIL	8873	1 x 8873	8873	1 x 8873	To be added
2.	Cadmium Sponge/ Cadmium Metal/ Low Grade Cadmium (on Equivalent metal basis)	TPA	NIL	NIL	3050	1 x 3050	3050	1 x 3050	To be added
3.	Cobalt / Cobalt Concentrate (on Equivalent metal basis)	TPA	NIL	NIL	50	1 x 50	50	1 x 50	To be added
4.	Ni cake / Ni Compounds (on Equivalent metal basis)	TPA	NIL	NIL	30	1 x 30	30	1 x 30	To be added
5.	Zn So4 Solution (on Equivalent metal basis)	TPA	NIL	NIL	2781	1 x 2781	2781	1 x 2781	To be added
6.	CuSO4 Solution/ Copper Cement/ CU Matte (on	TPA	NIL	NIL	2436	1 x 2436	2436	1 x 2436	To be added

S. No	Name of the facility	Unit	Existing		Additional		Total after expansion		Remarks
			Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	
	Equivalent metal basis)								

**In Pyro Plant, Change in Product Mix has been proposed on total Metal basis i.e. 1,40,000 TPA (Refined Lead or Refined Zinc or Product Mix of both Metals).*

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

S. No.	Raw Material	Unit	Quantity			Source	Distance	Mode of Transport
			Existing	Additional	Total After expansion			
Zinc Lead Smelter Unit (Pyro Plant+ Ausmelt)								
1.	Zinc concentrate	TPA	199500	58000	257500	HZL mines-RA, SK &Zawar mines	~200 km	Through Trucks
2.	Lead concentrate	TPA	138500	196500	335000	HZL mines-RA, SK &Zawar mines	~200 km	Through Trucks
3.	Coke	TPA	100000	NIL	100000	Indigenous /imported	~1500 km	Through Rail / Trucks
4.	Lime Stone	TPA	45000	NIL	45000	Nearby Mines	~250 km	Through Trucks
5.	Iron ore /Iron Oxide	TPA	30000	NIL	30000	Mines Jabalpur	~1000 km	Through Trucks
6.	Zinc Oxide /Zinc Dust /Zinc Bearing material/ Zinc Dross	TPA	NIL	50000	50000	Market/ HZL Smelters Approx. / From authorised recyclers	~ 200 km	Through Trucks
7.	Lead Oxide / Lead Silver Cake / Low Grade Lead Material / Lead Bearing Outsourced Secondaries	TPA	Nil	50000	50000	Market/ HZL Smelters Approx./ From authorised recyclers	~ 200 km	Through Trucks
8.	Silica	MT	3600	NIL	3600	Nearby Mines	~150 km	Through Trucks
9.	Coal/ Coke	MT	1500	NIL	1500	Indigenous /imported	~1500 km	Through Rail / Trucks
10.	Dolomite	MT	1700	NIL	1700	Nearby Mines	~150 km	Through Trucks
Hydro I & Hydro-II Zinc Smelter Unit (Incl. Fumer plant) and CPP								
1.	Zinc concentrate	TPA	698458	NIL	698458	HZL mines-RA, SK &Zawar mines	~200 km	Through Trucks
2.	Calcine (ZnO)	TPA	337990	8916	346906	HZL Smelters	~200 km	Through Trucks
3.	Zinc Dross/ Ash/ Zinc bearing waste	TPA	15000	NIL	15000	Market/ HZL Smelters Approx./ From authorised recyclers	~200 km	Through Trucks
4.	Aluminium Metal	TPA	4800	NIL	4800	Market	~200 km	Through Trucks
5.	Magnesium Metal	TPA	60	NIL	60	Market	~200 km	Through Trucks
6.	Copper Metal	TPA	600	NIL	600	Market	~200 km	Through Trucks
7.	Limestone for FGD	TPA	NIL	131465	131465	Nearby Mines	~200 km	Through Trucks
8.	Zinc Cathode	TPA	NIL	200000	200000	HZL Smelter	~200 km	Through Trucks

S. No.	Raw Material	Unit	Quantity			Source	Distance	Mode of Transport
			Existing	Additional	Total After expansion			
9.	RZO	TPA	NIL	45000	45000	HZL Smelter	~200 km	Through Trucks
Minor Metal Recovery Unit								
10.	PF Cake	TPA	NIL	8800	8800	HZL Smelter	Captive / 200 km,	Through Trucks
11.	Cadmium Sponge	TPA	NIL	4000	4000	HZL Smelter	Captive / 200 km,	Through Trucks
12.	Copper Matte	TPA	NIL	3500	3500	HZL Smelter	Captive / 200 km,	Through Trucks
13.	Cobalt Cake	TPA	NIL	2000	2000	HZL Smelter	Captive / 200 km,	Through Trucks
14.	Copper Dross	TPA	NIL	12000	12000	HZL Smelter	Captive / 200 km,	Through Trucks
15.	Coal	TPA	NIL	1480	1480	HZL Smelter	Approx. 1500kms	Through Trucks
16.	Zinc Dust	TPA	NIL	2210	2210	HZL Smelter	Captive / 200 km,	Through Trucks
17.	Sulphuric Acid	TPA	NIL	6500	6500	HZL Smelter	Captive / 200 km,	through pipeline; through Tankers

44.10.9 Existing Water requirement for the project is 38570 KLD. After the expansion project, 500 KLD additional water will be required for the Minor Metal Unit which will be sourced from RO permeate water from ETP. Therefore, no additional Fresh Water will be required for the proposed expansion project. The water is being / will be sourced from Gosunda Dam (Fresh Water) & Proposed STP Chittorgarh/ Udaipur/ other proposed STP's (Recycled Water).

Permissions for drawl of water obtained for CLZS Complex are obtained as under:

- Letter reg. allocation of water (1500 MCFT) from Gosunda Dam obtained from Energy Dept., Govt. of Rajasthan vide letter no. F 2(28)Energy/86-IV/ dated 19/11/1994.
- Agreement signed between Municipal Corporation Udaipur, Urban Improvement Trust, Udaipur and Hindustan Zinc Ltd. on 09/05/2021 for supply of treated water from Proposed STP (20 MLD) at Udaipur .
- Letter of acceptance from Udaipur Smart City Limited vide letter no. {}USCL/2017-18/71 dated 22/06/2017 for Supply of 50% of the treated water of Proposed STPs (25 MLD + 10 MLD + 5 MLD) of Udaipur Town.
- Agreement between Nagar Parishad, Chittorgarh and Hindustan Zinc Ltd. on 05/01/2021 for supply of Treated water (3000 KLD) from STP at Chittorgarh.

44.10.10 The power requirement for the project is estimated as 308 MW, which will be available from the captive power plant/WHRB/ Solar Panels/AVVNL/Fumer/BPTG.

44.10.11 The capital cost of the project is Rs. 786 Crores and the capital cost for environment protection measures is proposed as Rs. 118.35 Crores. The total employment generation after the proposed expansion project will be 3279.

44.10.12 A Show Cause Notice was issued to the M/s. Hindustan Zinc Ltd by MOEF&CC, New Delhi vide letter J-11011/279/2006-IA.II (I) dated 06/04/2021 under Section 5 of

Environment (Protection) Act, 1986 for violation of provisions of under EIA Notification, 2006. Reply of the same was submitted to MOEF&CC, New Delhi vide letter HZL/CLZS/ENV/38/2021-22 dated 19/04/2021. After detailed deliberation as per the personal hearing held on 05/08/2021, the Show Cause Notice has been withdrawn by MOEF&CC, New Delhi vide letter dated 31/08/2021.

44.10.13 Name of the EIA consultant: M/s J.M. EnviroNetPvt. Ltd. [Sl. No. 42, List of ACOs with their Certificate / Extension Letter no. Rev. 13, August 09, 2021].

44.10.14 Proposed Terms of Reference (Baseline data collection period: **Post Monsoon October-December,2020**):

S. No.		**Environment Attributes**	**Sampling Frequency**	**Remarks (Parameters covered)**
		No. of Stations		
A. Air				
a.	Meteorological	Plant Site	Daily	Wind Speed, Wind Direction, Humidity, Temperature, Rainfall
b.	Ambient Air Quality	9	One Season Study (Twice a week)	PM_{10}, $PM_{2.5}$, SO_2, NO_x, CO, Lead, Nickel.
			Once in a study period	O_3, NH_3, Benzene, Benzo(a)pyrene (BaP)-Particulate phase only, Arsenic, Zinc
B. Noise				
a.	Noise Environment	9	Once in the Study Period	Leq Day time &Leq Night Time
C. Water				
a.	Ground Water	8	Once in the Study Period	pH (at 25°C), Colour, Turbidity, Odour, Taste, Total Hardness as CaCO3, Calcium as Ca, Alkalinity as $CaCO_3$, Chloride as Cl, Cyanide as CN, Magnesium as Mg, Total Dissolved Solids, Sulphate as SO_4, Fluoride as F, Nitrate as NO_3-N, Iron as Fe, Aluminum as Al, Boron, Phenolic Compounds, Anionic Detergents as MBAS, Hexa Chromium as Cr^{+6}, Chromium as Cr, Zinc as Zn, Copper as Cu, Manganese as Mn, Cadmium as Cd, Lead as Pb, Arsenic as As, Mercury as Hg, Sodium as Na, Potassium as K, Phosphate as PO_4, Nickel,

S. No.		Environment Attributes	Sampling Frequency	Remarks (Parameters covered)
		No. of Stations		
				Conductivity, Total Suspended Solid
b.	Surface Water	5	Once in the Study Period	pH (at 25°C), Colour, Turbidity, Odour, Total Hardness as $CaCO_3$, Calcium as Ca, Alkalinity as $CaCO_3$, Chloride as Cl, Residual free, Chlorine, Cyanide as CN, Magnesium as Mg, Total Dissolved Solids, Sulphate as SO_4, Fluoride as F, Nitrate as NO_3, Iron as Fe, Aluminum as Al, Boron, Phenolic Compounds, Anionic Detergents as MBAS, Hexa Chromium as Cr^{+6}, Zinc as Zn, Copper as Cu, Manganese as Mn, Lead as Pb, Selenium as Se, Arsenic as As, Mercury as Hg, Phosphate as PO_4, Total Suspended Solid, Biochemical oxygen demand, Chemical oxygen demand, Sodium as Na, Potassium as K, Conductivity, Nickel, Dissolve Oxygen
D. Land				
a.	Soil Testing	8 Sampling Locations	Once in the Study Period	pH (at 25°C) (1:2.5 soil water suspension),Conductivity (1:2 soil water sus), Soil Texture, Colour, Water holding capacity, Bulk density, Soluble Chloride, Exchangeable Calcium, Exchangeable Sodium, Available Potassium, Organic matter, Exchangeable Magnesium as Mg, Available Nitrogen as N, Available Phosphorus, Total Zinc as Zn, Total Manganese as Mn, Total Chromium as Cr, Total Lead as Pb, Total Cadmium as Cd, Total Copper as Cu, Organic Carbon, SAR Value
b.	Land Use / Land Cover	10 km radius Study Area	Once in the Study Period	Land use/ Land Cover Map by Satellite Imagery
E. Biological				
a.	Aquatic	Fauna & Flora		10 km radius Study Area

S. No.		Environment Attributes	Sampling Frequency	Remarks (Parameters covered)
		No. of Stations		
b.	Terrestrial		Once in the Study Period	
F. Socio-economic Parameters				

44.10.15 M/s. Hindustan Zinc Limited has earlier made an application online vide proposal no. IA/RJ/IND/192897/2021 dated 05/03/2021.

44.10.16 The proposal was considered by the EAC (Industry 1) in its 32nd meeting of the Re-constituted EAC (Industry-I) held on 15th-17th March, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee held during 15-17th March, 2021

44.10.17 The EAC noted the following:

i. Project proponent as well as the consultant deliberately suppressed the information regarding grant of EC by MoEF&CC on 05/01/2021 for setting up of the fertilizer complex in the land adjacent to the smelter complex wherein the green belt development for the existing zinc smelter was envisaged.
ii. No details have been mentioned about the Fertilizer complex neither in the Form I nor in the Pre-feasibility report as there is an involvement of inter-movement of materials between the smelter complex and fertilizer complex.
iii. Neither the proponent nor the consultant was unable to explain the products envisaged under the minor metal production.
iv. Consultant made contradicting statements on the baseline data collected during Oct to December, 2020 with respect to the prevailing meteorological conditions, location of sampling stations and parameters monitored for the different environmental components.
v. Implementation status of the EC dated 14/10/2020 has not been furnished.
vi. Scoping for carrying out the cumulative impact assessment including fertilizer complex has not been considered.
vii. Form I has been filled with generic information and no project specific quantities have been provided which are essentially required for due-diligence by the EAC.

Recommendations of the Committee held during 15-17th March, 2021

44.10.18 In view of the foregoing and after detailed deliberations, the committee recommended the following:

i. Proposal shall be returned in present form to address the concerns of the Committee as enumerated above.
ii. Show Cause Notice may be issued to the project proponent for deliberately suppressing the information regarding grant of EC by MoEF&CC on 05/01/2021 for setting up of the fertilizer complex in the land adjacent to the smelter complex.
iii. Show Cause Notice may be issued to the EIA consultant - M/s J.M. Enviro Net Pvt. Ltd. for deliberately suppressing the information regarding grant of EC by MoEF&CC on 05/01/2021 for setting up of the fertilizer complex in the land adjacent

to the smelter complex. Further, contradicting statements have been made on the baseline data collected during Oct to December, 2020 with respect to the prevailing meteorological conditions, location of sampling stations and parameters monitored for the different environmental components. Besides, Form I has been filled with generic information and no project specific quantities have been provided which are essentially required for due-diligence by the EAC.

44.10.19 As per recommended by EAC SCN was issued to M/s. J.M. Environet Private Limited dated 31/03/2021 and to M/s. Hindustan Zinc Limited dated 06/04/2021. In the response to this reply by from M/s. J.M. Environet Private Limited dated 12/04/2021 requested to revoke the show cause notice and reply from M/s. Hindustan Zinc Limited dated 19/04/2021 requesting the Ministry to drop the show cause notice. Based on reply submitted by M/s. Hindustan Zinc Limited and M/s. J.M. Environet Private Limited Ministry withdrawn the SCN issued to the PP on 31/08/2021.

44.10.20 M/s. Hindustan Zinc Limited has again made an application online vide proposal no. IA/RJ/IND/215163/2021 dated 05/09/2021The proposal was considered by the EAC (Industry 1) in its 44th meeting of the Re-constituted EAC (Industry-I) held on 13-14th September, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

44.10.21 The EAC noted the following:

i. Terms of Reference is being sought for expansion of zinc smelter complex.
ii. No additional water shall be taken as make up for expansion. 500 KL/Hr. requirement shall be met from RO water.
iii. Fertilizer plant is an interlinked project coming up adjacent to the zinc smelter complex.

Recommendations of the Committee

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

i. One-month Ambient Air Quality (AAQ) data shall be collected additionally at locations near old stations and new location selected / corrected based on wind rose.
ii. No additional water shall be taken as make up for proposed expansion. 500 KL/Hr. requirement shall be met from RO water.
iii. Action plan for green belt development covering 37% of the project area shall be submitted. Tree density in the existing green belt shall be increased from present 1200 trees per ha to 2500 trees per ha by gap filling.
iv. Fertilizer plant is an interlinked project at project site. Cumulative impact assessment shall be carried out by integrating following units under implementation:
    a. Activities proposed under the proposed expansion of Chanderiya Lead Zinc Smelter Complex.
    b. Proposed Ammonium Phosphate Fertilizer Complex of 1.02 MTPA (2x 0.51 MTPA)
    c. Capacity expansion from 4,20,000 to 5,04,000 TPA in Hydro-1 and Hydro-II Zinc Smelter through debottlenecking within the CLZS Complex
    d. Fumer Plant within the CLZS Complex as per EC issued vide F.No.J-11011/279/2006-IA.II(I) 5/10/2015.

v. Risk assessment shall be done for expansion project and the Disaster Management Plant for existing plant shall be upgraded to include new units/products.
vi. SO_2 emissions from H_2SO_4 plant shall be < 1 kg/t of acid.
vii. Acid mist from H_2SO_4 plant shall be < 30 mg/Nm^3.
viii. Action plan for rain water harvesting shall be submitted.
ix. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
x. Action plan to reduce the fugitive emissions from the plant shall be furnished.
xi. The project proponent shall submit action plan for reuse/ recycling of entire wastewater after treatment.
xii. Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.

44.11 Proposed expansion of Integrated Steel Plant from 1.0 to 2.0 MTPA (finished steel) with 283 MW CPP by **M/s. Orissa Metallurgical Industry Private Limited** located at Village - Gokulpur, P.S – Kharagpur, **District Paschim Medinipur, West Bengal** [Online Proposal No. IA/WB/IND/227381/2021; File No.: IA-J-11011/56/2017-IAII(I)] – **Prescribing of Terms of Reference**– regarding.

44.11.1 **M/s. Orissa Metallurgical Industry Private Limited** has made an application online vide proposal no. IA/WB/IND/227381/2021 dated 06/09/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & nonferrous) under Category "A" of the schedule of the EIA Notification, 2006.

44.11.2 The proposal was listed for consideration before the EAC in its meeting held on 13-14th September, 2021. However, the project proponent vide letter dated 11/09/2021 requested for withdrawal of the proposal as they are intending to change the project configuration.

44.11.3 In view of the forgoing and after deliberations, the Committee recommended that proposal shall be allowed to be withdrawn as requested by the project proponent.

44.12 Establishment of Pellet Plant 0.4 MTPA, 1 x 350 TPD DRI Kilns (sponge iron1,15,500 TPA), 2 x 7.5 MVA Ferro Alloys Unit (FeMn-40,300 TPA / SiMn-28,215 TPA / Pig Iron – 56,400 TPA.), Fly ash Brick making plant of 8.6 MTPA (26,000 bricks/day) by forward integration in the existing 15 MW Biomass based power plant premises & Conversion of existing 15 MW Biomass based power plant to 8.0 MW WHRB & 7.0 MW Dolochar & Coal based power plant by **M/s. MVK Industries Private Limited** located at Amartal & Kirari Villages, Akaltara Tehsil, **Janjgir-Champa District, Chhattisgarh**. [Online Proposal No. IA/CG/IND/227632/2021; File No.: IA-J-11011/341/2021-IA-II(IND-I)] – **Prescribing of Terms of Reference** – regarding.

44.12.1 M/s. MVK Industries Pvt. Ltd. has made an application online vide proposal no. IA/CG/IND/227632/2021 dated 4th September, 2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToR for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned

above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification, 2006 and is being appraised at Central Level.

Details submitted by Project proponent

44.12.2 The project of M/s. MVK Industries Pvt. Ltd. located at Amartal & Kirari Villages, Akaltara Tehsil, Janjgir-Champa District, Chhattisgarh is for establishment of Pellet Plant 0.4 MTPA, 1 x 350 TPD DRI Kilns (sponge iron1,15,500 TPA), 1 x 15 MVA Ferro Alloys Unit (FeMn-40,300 TPA / SiMn-28,215 TPA / Pig Iron – 56,400 TPA.), Fly ash Brick making plant of 8.6 MTPA (26,000 bricks/day) by forward integration in the existing 15 MW Biomass based power plant premises & Conversion of existing 15 MW Biomass based power plant to 8.0 MW WHRB & 7.0 MW Dolochar & Coal based power plant.

44.12.3 Environmental site settings:

<table>
<tr><th>SNo</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>ix.</td><td>Total Land</td><td>13.055 ha. (32.26 Acres)
[CSIDC land: 5.067 Ha. (12.52 Acres); Private Land: 7.988 Ha. (19.74 Acres)]</td><td>Land Use:
Out of total land
CSIDC land: 5.067 ha. (12.52 Ac.)
Pvt. Land converted to Industrial: 5.008 ha. (12.38 Ac.)
Land yet to be converted is: 2.980 ha. (7.36 Ac.)</td></tr>
<tr><td>x.</td><td>Existence of habitation & involvement of R & R, if any</td><td>No habitation exists in the additional land proposed; Hence no R & R is involved.</td><td>---</td></tr>
<tr><td>xi.</td><td>Latitude and Longitude of the project site</td><td>Latitude and Longitude of the Plant site:
<table><tr><td>Point</td><td>Coordinates</td></tr><tr><td>Point # 1</td><td>21°59'44.93"N, 82°27'43.03"E</td></tr><tr><td>Point # 2</td><td>21°59'42.58"N, 82°27'42.86"E</td></tr><tr><td>Point # 3</td><td>21°59'34.12"N, 82°27'45.20"E</td></tr><tr><td>Point # 4</td><td>21°59'34.19"N, 82°27'45.93"E</td></tr><tr><td>Point # 5</td><td>21°59'32.49"N, 82°27'46.30"E</td></tr><tr><td>Point # 6</td><td>21°59'33.22"N, 82°27'56.89"E</td></tr><tr><td>Point # 7</td><td>21°59'42.47"N, 82°27'58.13"E</td></tr></table></td><td>---</td></tr>
</table>

<table>
<tr><th>SNo</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td><table><tr><td>Point # 8</td><td>21°59'44.58"N, 82°27'46.10"E</td></tr><tr><td>Point # 9</td><td>21°59'43.87"N, 82°27'46.02"E</td></tr><tr><td>Point # 10</td><td>21°59'43.90"N, 82°27'45.52"E</td></tr></table></td><td></td></tr>
<tr><td>xii.</td><td>Elevation of the project site</td><td>269 m to 273 m AMSL</td><td>---</td></tr>
<tr><td>xiii.</td><td>Involvement of Forest land, if any</td><td>No Forest land is involved in the project site.</td><td>---</td></tr>
<tr><td>xiv.</td><td>Water body exists within the project site as well as study area</td><td>Project site:
Nil
Study area:<table><tr><td>Water Body</td><td>Distance & Direction</td></tr><tr><td>Hasdeo Branch Canal</td><td>1.0 Km. (W);</td></tr><tr><td>Amartal Pond</td><td>0.3 Kms (N) ;</td></tr><tr><td>Kirari Pond</td><td>1.1 Kms. (SW)</td></tr><tr><td>PawaiNala</td><td>1.2 Kms. (S)</td></tr><tr><td>ChhirkNala</td><td>2.7 Kms. (NE)</td></tr><tr><td>KanjNala</td><td>5.0 Kms. (E)</td></tr></table>Few other seasonal are flowing within 10 Km. radius of the plant site. Few ponds exist within 10 Km. Radius.</td><td>---</td></tr>
<tr><td>xv.</td><td>Existence of ESZ/ESA/National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve, Reserved Forest etc. if any within the study area</td><td>Nil</td><td>---</td></tr>
</table>

44.12.4 The existing project was accorded Consent to establish in the Name of M/s. KVK Bio Energy Pvt. Ltd. vide lr.no. 1723 / TS / CECB / 2004 dated 22/05/2004. Consent to Operate for the existing unit was accorded by Chhattisgarh Environment Conservation Board (CECB) vide lr. no. 7548 / TS / CECB / 2020 dated 24/11/2020. The validity of CTO is up to 23/11/2021. MVK Industries has taken over the Biomass based Power plant. Accordingly, CECB transferred the CTO in the name of M/s. MVK Industries Pvt. Ltd. Vide order dated 05/07/2021. EC was not applicable, as consent was obtained prior to EIA notification 2006 & its subsequent amendments. As per 1994 EIA notification also, EC was not applicable as the project cost was Rs. 40 Crores which is less than Rs. 100 Crores limit.

44.12.5 Implementation status of the existing CTE

S.No.	Facilities	As per CTE dated	Implementation Status as on 08/09/2021	Production as per CTO
1	15 MW Biomass based power plant	1723 / TS / CECB / 2004, dated 22/05/2004	In operation	15 MW Electricity

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

SNo	Units (Products)	Existing Plant capacity	Proposed Expansion	After Proposed Expansion
1	Biomass Power Plant	15 MW (Biomass Power plant)	Converted to 8.0 MW WHRB Power Plant & 7.0 MW Dolochar / coal based power plant	Converted to 8.0 MW WHRB Power Plant & 7.0 MW Dolochar/ coal based power plant
2	Pellet Plant	---	4,00,000 TPA	4,00,000 TPA
3	DRI Kilns (Sponge Iron)	---	1,15,500 TPA (1 x 350 TPD)	1,15,500 TPA (1 x 350 TPD)
4	Ferro Alloys Unit (FeMn / SiMn)	---	2 x 7.5 MVA FeMn-40,300 TPA / SiMn-28,215 TPA / Pig Iron – 56,400 TPA	2 x 7.5 MVA FeMn-40,300 TPA / SiMn-28,215 TPA / Pig Iron – 56,400 TPA
5	Fly ash Brick making plant	---	26,000 bricks/day (8.6 million Bricks per Annum)	26,000 bricks/day (8.6 million Bricks per Annum)

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

S No	Raw Material	Quantity (TPA)	Sources	Distance from Plant (in Kms)	Mode of Transport
9.	For Pellet Plant (Pellets) - 4,00,000 TPA				
a)	Iron Ore Concentrate	4,10,000	Chhattisgarh & Odisha	~ 600 Kms.	By rail & road (through covered trucks)
b)	Bentonite	3,200	Gujarat	~ 600 Kms.	By rail & road (through covered trucks)
c)	Limestone	16,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)

S No	Raw Material		Quantity (TPA)	Sources	Distance from Plant (in Kms)	Mode of Transport
d)	Anthracite Coal		17,600	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
10.	For DRI Kilns (Sponge Iron) – 1,15,500 TPA					
a)	Pellets (100 %)		1,73,250	Own generation & purchased from outside	---	Through covered conveyers & By road (through covered trucks)
	or					
b)	Iron ore (100%)		1,84,800	Barbil, Orissa NMDC, Chhattisgarh	~ 500 Kms.	By rail & road (through covered trucks)
c)	Coal	Indian	1,50,150	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
		Imported	96,096	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
d)	Dolomite		5,775	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
11.	For 7.0 MW FBC Power plant					
a)	Dolochar + Indian Coal	Dolochar	23,100	In plant generation	---	through covered conveyors
		Indian Coal	35,228	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	OR					
b)	Dolochar +	Dolochar	23,100	In plant generation	---	through covered conveyors

S No	Raw Material		Quantity (TPA)	Sources	Distance from Plant (in Kms)	Mode of Transport
	Imported Coal	Imported Coal	22,546	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
12.	For Ferro Alloys (2 x 7.5 MVA) FeMn-40,300 TPA /SiMn-28,215 TPA /Pig Iron – 56,400 TPA					
4(i)	*For Ferro Manganese – 40,300 TPA*					
a)	Manganese Ore		91,683	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	LAM Coke		14,710	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Dolomite		6,851	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS scrap / Mill scales		6,045	Inhouse Generation	---	By road (through covered trucks)
e)	Electrode paste		524	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Bag filter dust		2,015	Inhouse Generation	---	---
6(ii)	*For Silico Manganese – 28,215 TPA*					
a)	Manganese Ore		45,990	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	FeMn Slag		23,983	In house generation	---	----
c)	LAM Coke		10,581	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	Dolomite		6,348	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
e)	Electrode paste		564	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)

S No	Raw Material	Quantity (TPA)	Sources	Distance from Plant (in Kms)	Mode of Transport
f)	Quartz	6,772	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
g)	Bag filter dust	423	Inhouse Generation	---	---
6(iii)	*For Pig Iron – 56,400 TPA*				
a)	HG Iron ore	83,190	Barbil, Odisha NMDC, Chhattisgarh	~ 500 Kms.	By road (through covered trucks)
b)	LAM Coke	27,354	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Lime stone	7,050	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	Quartz	3,384	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
e)	Bag filter dust	1,692	Own generation	---	---

44.12.8 Water required for the proposed forward integration project will be 690 KLD. Total water requirement for existing & expansion project will be 2600 KLD. Water required for proposed project will be sourced from Groundwater. The permission for drawl of groundwater will be obtained from CGWA.

44.12.9 Power required for the proposed project will be 21.5 MW and same will be sourced from Captive Power Plant (15.0 MW) and remaining (6.5 MW) from State Grid.

44.12.10 The capital cost of the proposed expansion project is Rs. 193 Crores and the capital cost for environmental protection measures is proposed as Rs. 13 Crores. Employment generation from proposed project will be 250 nos. through direct employment and 500 nos. through indirect employment.

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

44.12.12 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [Sl. No. 133, List of ACOs with their Certificate / Extension Letter no. Rev. 13, August 09, 2021]

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

Attributes	**Sampling**		**Remarks**
	No. of Stations	**Frequency**	
A. Air			
i. Meteorological parameters	1	On hourly basis for one season	• Wind Speed • Wind Direction • Temperature • Relative Humidity • Rainfall
ii. AAQ parameters	8	24 hourly Twice a week for 3 months (One Season)	Parameters Monitored: • PM10, • PM2.5, • SO2, • NOx, • CO,
B. Noise	8	On hourly basis for 24 Hrs. at each station	Parameters Monitored: • Day equivalent • Night equivalent
C. Water			
I. Ground Water	8	One sample at each of the locations	Parameters Monitored: as per IS: 10500
II. Surface Water	4	One sample at each of the locations	Parameters Monitored: as per BIS: 2296
D. Land			
I. Soil quality	8	One sample at each of the locations	Parameters Monitored: Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn
II. Land use	--	--	LU map prepared by concerned FAE for study area
E. Biological			
I. Aquatic	--	Once in Season	---
II. Terrestrial	--	Once in Season	---
F. Socio economic parameters	--	Once in Season	Social Impact Assessment carried out by concerned FAE for study area
G. Traffic Density	--	Once in Season	Vehicular traffic study carried out at Transportation route.

44.12.14 The proposal was considered by the EAC (Industry 1) in its 44th meeting of the Re-constituted EAC (Industry-I) held on 13-14th September, 2021. The observations and recommendations of EAC is given as below:

Observations of the Committee

44.12.15 The EAC noted the following:

i. Terms of Reference is being sought for expansion of existing 15 MW biomass power plant for establishment of Pellet Plant 0.4 MTPA, 1 x 350 TPD DRI Kilns (sponge iron1,15,500 TPA), 1 x 15 MVA Ferro Alloys Unit (FeMn-40,300 TPA / SiMn-28,215 TPA / Pig Iron – 56,400 TPA.) and Fly ash Brick making plant of 8.6 MTPA (26,000 bricks/day).
ii. Existing Biomass based boiler shall be converted to AFBC and WHRB. Existing 15 MW turbine shall be used to generate power
iii. The total land available is 13.055 ha. 3.75 ha additional land is required for expansion. This land shall be used for green belt development and truck parking (124 trucks per day).

Recommendations of the Committee

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

i. Scheme for use of surface water shall be furnished for gradual phase out of ground water in a time frame of 18 months shall be submitted.
ii. Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.
iii. Action plan for fugitive emission control in the plant premises shall be provided.
iv. Action plan for green belt development (@ 2500 rees per hectare) covering 33% of the project area shall be submitted. This shall include green belt development within the project site towards the Amartal village located at distance of 160m from plant The
v. The 88 trees which are to be felled shall be translocated and additional 440 trees shall be planted in view of tree removal These shall be in addition to green belt development in 33% of the project area.
vi. 3.75 ha additionally acquired land shall be used for green belt development and truck parking (124 trucks per day).
vii. Action plan for 100 % solid waste utilization shall be submitted.
viii. Action plan for rain water harvesting shall be submitted.
ix. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
x. Submerged Arc Furnace shall be equipped with 4th hole extraction system.

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ANNEXURE –1

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

1. **Executive Summary**
2. **Introduction**
   - i. Details of the EIA Consultant including NABET accreditation
   - ii. Information about the project proponent
   - iii. Importance and benefits of the project
3. **Project Description**
   - i. Cost of project and time of completion.
   - ii. Products with capacities for the proposed project.
   - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
   - iv. List of raw materials required and their source along with mode of transportation.
   - v. Other chemicals and materials required with quantities and storage capacities
   - vi. Details of Emission, effluents, hazardous waste generation and their management.
   - vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
   - viii. The project proponent shall furnish the requisite documents from the competent authority in support of drawl of ground water and surface water and supply of electricity.
   - ix. Process description along with major equipment and machineries, process flow sheet (Quantitative) from raw material to products to be provided
   - x. Hazard identification and details of proposed safety systems.
   - xi. Expansion/modernization proposals:
     - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 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 44 EAC held on 13-14th September, 2021

From : cnpandey@iitgn.ac.in Tue, Sep 21, 2021 01:05 PM

Subject : Re: Draft MoM of 44 EAC held on 13-14th September, 2021 1 attachment

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

Cc : VIPINGUPTA <gupta.vipin@gov.in>, Sujit Kumar Bajpayee <sujit.baju@gov.in>

Dear Mr Sundar,
Thanks for the draft MoM for the 44th EIA meeting sent by you. The MoM has been approved with very minor language corrections. The finalised and approved MoM for the 44th EAC meeting is being sent as the attached document to this mail for further necessary action. Please put it on PARIVESH as per the practice.
With best wishes,
C. N. Pandey,
Chairman, EAC (Industry I)
MoEFCC, Govt of India.