

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

**Date of zero draft MoM sent to Chairman: 05/10/2021**

**Approval by Chairman: 09/10/2021**

**Uploading on PARIVESH: 10/10/2021**

**Summary record of the Forty fifth (45<sup>th</sup>) meeting of Re-Constituted Expert Appraisal Committee (REAC) held on 28 – 29<sup>th</sup>September, 2021 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.**

The Forty fifth 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 28 – 29<sup>th</sup>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 are as follows:

S. No.	Name	Position	28/09/2021	29/09/2021
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	<i>Member</i>	Present	Present
5.	Dr. Tejaswini Ananth Kumar	<i>Member</i>	Present	Present
6.	Dr. G.V. Subramanyam	Member	Present	Present
7.	Shri. Ashok Upadhyaya	Member	Present	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present	Present
9.	<i>Dr. Sanjay Deshmukh</i>	<i>Member</i>	<i>Absent</i>	<i>Absent</i>
10.	Prof. S.K. Singh	Member	Present	Present
11.	<i>Dr. R. Gopichandran</i>	<i>Member</i>	<i>Absent</i>	<i>Absent</i>
12.	Shri Jagannadha Rao Avasarala	Member	Present	Present
13.	Shri. J.S. Kamyotra	Member	Present	Present
<b>Officials from MoEF&amp;CC</b>				
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 44<sup>th</sup> meeting held during 13-14<sup>th</sup>September, 2021 were confirmed by the EAC as already uploaded on PARIVESH.

**28<sup>th</sup> September, 2021**

45.1 Proposed Modernization & Expansion of Ramasamy Raja Nagar Cement Plant (Replacement of Kiln-II with New Kiln & Shifting of Line-II Operations), increasing production of Clinker from 1.09 to 1.44 MTPA & Cement from 2.0 to 2.7 MTPA by **M/s. The Ramco Cements Limited** located at villages Tulukkappatti, Thammanayakkanpatti & Vachchakarapatti Villages Taluk & **District Virudhunagar, Tamil Nadu**. [Online Proposal No. IA/TN/IND/220866/2020, File No. J-11011/119/2009-IA.II(I)] – **Environment Clearance– regarding.**

45.1.1 M/s. The Ramco Cements Limited has made an online application vide proposal no. IA/TN/IND/220866/2020 dated 15/09/2021 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 (b) Cement Plants under Category “A” of the schedule of the EIA notification, 2006 and appraised at Central level.

**Details submitted by Project proponent**

45.1.2 The details of the ToR are furnished as below:

<b>Date of application</b>	<b>Consideration</b>	<b>Details</b>	<b>Date of accord</b>
27.10.2020	Standard TOR with public consultation	No. J-11011/119/2009-IA.II(I)	11.11.2020

45.1.3 The project of M/s. The Ramco Cements Limited located at Villages Tulukkappatti, Thammanayakkanpatti & Vachchakarapatti Villages Taluk & District Virudhunagar, Tamil Nadu is for proposed modernization & expansion of Ramasamy Raja Nagar Cement Plant (Replacement of Kiln-II with New Kiln & Shifting of Line-II Operations), increasing production of Clinker from 1.09 to 1.44 MTPA & Cement from 2.0 to 2.7 MTPA.

45.1.4 Environmental site settings:

<b>S. No.</b>	<b>Particulars</b>	<b>Details</b>	<b>Remarks</b>
i	Total land	191.434 ha (Existing Land: 191.434 ha + expansion Land: 0.00 ha) [Private: 191.434 ha]	Land use: Industrial Land
ii	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014.	Proposed expansion will be carried out within the existing project area of 191.434 ha. No additional land is required for the proposed expansion and modification.	Proposed expansion & Modification comes under existing industrial premises.
iii	Existence of habitation & involvement of R&R, if any.	No R&R involved.	Proposed expansion within the existing industrial premises.

S. No.	Particulars	Details	Remarks
iv	Latitude and Longitude of the project site	Latitude : 09°26'57" to 09°27'47" North Longitude : 77°55'05" to 77°55'56" East	Survey of India Topo Sheet No. 58 G/15
v	Elevation range of the project site	73- 89 m above mean sea level	-
vi	Involvement of Forest land if any.	No Forest Land is involved.	-
vii	Water body exists within the project site as well as study area	<b>Project area:</b> Nil <b>Study Area:</b> Seasonal Arjuna River: 0.3 km in WSW) and Mannarkottai River: 2.0 km in Northeast)	
viii	Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area	Not applicable.	

45.1.5 The existing cement plant of 2 MTPA was accorded EC on 06/07/2009 in the name of M/s. Madras Cement Limited. Coal based Captive Power Plant of 25 MW is accorded EC dated 06.02.2012 in the name of M/s. Madras Cement Limited. EC from MoEF&CC was obtained for the addition of 3<sup>rd</sup> Packer vide F. No. J11011/119/2009 IA.II (I) dated 29.11.2017 in the name of M/s. The Ramco Cements Limited. Renewal of consent to operate for the existing unit is accorded by Tamil Nadu Pollution Control Board (TNPCB) vide letter No 1908121827195 (Water Act) & 1908221827195 (Air Act) dated 18.09.2019. The validity of CTO is up to 31.03.2022. TNPCB has issued Hazardous Waste Authorization vide No. 16HFC5144632 dated 01.12.2016 which is valid till 01.12.2021.

45.1.6 Implementation status of the existing EC date 06.07.2009 and 06.02.2012.

S. No.	Facilities	Units	As per EC	Implementation Status as on 31.03.2021	Production as per CTO
1	Modernisation & Expansion of RR Nagar Cement Plant	Cement 1.0 MTPA to 2.0 MTPA	F. No. J-11011/119/2009 IA.II (I) dated 06.07.2009	All the activities proposed for Modernisation and Expansion had been implemented. The Plant is under operation	Cement 2.0 MTPA

S. No.	Facilities	Units	As per EC	Implementation Status as on 31.03.2021	Production as per CTO
				for 2.0 MTPA Cement from 2011.	
2	Addition of 3 <sup>rd</sup> packer in the Cement Plant	120 TPH	F. No. J-11011/119/2009 IA.II (I) dated 29.11.2017	Third Packer has been commissioned and is under operation.	--

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

S No	Name	Existing Units		Proposed Units		Total (Existing + Proposed)	
		Configuration	Production, MTPA	Configuration	Production, MTPA	Configuration	Production, MTPA
1	Clinker	Lines I&II	1.09	Lines I&II	0.35	Lines I&II	1.44
2	Cement	Lines I&II	2.00	Lines I&II	0.70	Lines I&II	2.70

45.1.8 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	Quantity required per annum, MTPA			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Limestone and Lime Kankar	1.63 @ 4730 TPD	0.53 @ 2010 TPD	2.16 @ 6740 TPD	Captive Mines@ Quarries in Pandalgudi Region	18	By Tippers (Through Own Haulage Roads)
2	Slag for Iron correction	0.016 @ 50 TPD	0.006 @ 13 TPD	0.022 @ 63 TPD	Tuticorin	70	By Road (Covered Trucks)
3	Fuel for Cement Plant	0.11 @ 318 TPD	0.018 @ 105 TPD	0.128 @ 423 TPD	Imported from USA, Middle East, Australia. Indigenous from BPCL, MRPL	70	By Rail & Road
	ii) 100% Imported Coal	0.16 @ 462 TPD	0.027 @ 122 TPD	0.187 @ 584 TPD	South Africa, Indonesia	100	
4	Clinker	1.09 @ 3150 TPD	0.35 @ 1025 TPD	1.44 @ 4175 TPD	Own Plant production	-	By closed conveyors
		0.28 @ 810 TPD	0.14-0.22 @ 410 TPD	0.42-0.50 @ 1220 TPD	From Sister Concerns/Import	200	By Rail & Road
5	Gypsum	0.08 @ 230 TPD	0.028 @ 60 TPD	0.108 @ 290 TPD	SPIC, Tuticorin	100	By road (Covered Trucks)
6	Dry Fly	0.54	0.137	0.677	TTPS, Coastal	100	By road

S No	Raw Material	Quantity required per annum, MTPA			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
	Ash	@ 1600 TPD	@ 450 TPD	@ 2050 TPD	Energy, NTPL, Tuticorin		(By closed Bowsers)
7	Wet Fly Ash	0.01 @ 30 TPD	0.044 @ 20 TPD	0.054 @ 50 TPD	TTPS, Tuticorin	300	By road (Covered Trucks)
8	Slag	-	63 TPD	63 TPD	Jindal, Salem	100	By road (Covered Trucks)

45.1.9 The existing water requirement for the project was estimated as 1180 m<sup>3</sup>/day, which was sourced from Arjuna River and ground water. Proposed water requirement is estimated as 1000 m<sup>3</sup>/day, out of which 1000 m<sup>3</sup>/day of fresh water requirement will be met from the seasonal Arjuna River. Alternatively, 800 m<sup>3</sup>/day will be met from the permitted bore wells in the campus and the remaining 200 m<sup>3</sup>/day will be met from the abandoned mine pits nearby. Permission for drawl of 800KLD groundwater is obtained from Water Resources Department, Govt. of Tamil Nadu vide Lr. No. DD(G)/OT10/G-6/317/Renewal NOC/Karaikudi/2021 dated 11.06.2021 valid till 21.03.2022 and surface water vide GO 1446/PWD dated 04.10.1975 & Agreement dated 15.10.1984 for 1500 KLD. In addition to this, PP submitted during the meeting that in a time frame of three years, no ground water will be withdrawn and the entire quantity will be met from rain water harvesting.

45.1.10 The power demand of existing plant operations and township is 22.34 MW. The power requirement for the proposed project is estimated as 33 MW, out of which 9 MW will be obtained from the Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) Grid.

45.1.11 Baseline environmental studies:

Period	December 2019 - February 2020 (Winter)
AAQ parameters at 14 locations (min. and max.)	PM <sub>2.5</sub> = 10 to 46 µg/m <sup>3</sup> PM <sub>10</sub> = 18 to 74 µg/m <sup>3</sup> SO <sub>2</sub> = 6 to 22 µg/m <sup>3</sup> NO <sub>2</sub> = 6 to 26 µg/m <sup>3</sup> CO = <0.1145 mg/m <sup>3</sup>
AAQ modelling (Incremental GLC)	PM = 1.597 ug/m <sup>3</sup> (0.2 km: SW) SO <sub>2</sub> = 1.894 ug/m <sup>3</sup> (0.1 km: SW) NO <sub>x</sub> = 11.790 ug/m <sup>3</sup> (0.2 km: SW)
Ground water quality at 10 locations	pH: 7.47 to 7.68 Total Hardness: 120 to 170 mg/l. Chlorides: 78 to 94 mg/l. Fluoride: 0.05 to 0.14 mg/l. Heavy metals were within the detectable limits.
Surface water quality at 8 locations	pH: 7.42 to 7.63 DO: 4.8 to 5.8 mg/l BOD: <1 to 2 mg/l COD: <5 to 8 mg/l
Noise levels (min. and max.)	40.4 dB(A) to 48.1 dB(A) for the day time and 38.2 dB(A) to 44.7 dB(A) for the night time

<p>Traffic assessment study findings</p>	<p>Existing Truck movements is 532 in a day and additional Truck movement will be 192 in a day. Existing Traffic Load (Baseline): 14318 PCU/day Additional Traffic Load during Operation of Expansion Project: 675 PCU/day Total traffic load will be 14993 PCU/day Traffic capacity as per the IRC 70:1980 for Highways: 624.7 PCU/hr or 14992.8 PCU/day. IRC 106-1990 Recommended Design Service Volume (PCU/hr.) for 4-Lane Divided (Two way) for Arterial Roads: 3600 PCU/hr Level of service is 0.17 Volume/ capacity ratio and represents condition of free flow as per IRC: 64-1990 Norms.</p>
<p>Flora and fauna</p>	<p><b><u>Flora:</u></b> The study area did not record the presence of any critically threatened species. <b><u>Fauna:</u></b> Peafowl, placed under Schedule-I as per Wild Life (Protection) Act, 1972 is found in the study area. Conservation plan is approved from Tamil Nadu Forest Department vide C No. D/5975/2016 dated 05/04/2017. The amount for Peafowl conservation plan is proposed 5.0 Lakhs for 5 years.</p>

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

S. No.	Type of Waste & (Authorized Qty.)	Source	Quantity generated (TPA)	Mode of Treatment / Disposal
1	5.1-Used or spent Oil (94.62 T/Annum)	Cement Plant	25.54 T	Send to authorized recyclers
2	5.2– Wastes/ Residues containing Oil (9125 T/Annum)	Cement Plant	Nil	Co-processing in cement kiln
3	21.1 – Paint Wastes & Residues (9125 T/Annum)	Cement Plant	Nil	Co-processing in cement kiln
4	35.3-Chemical sludge from waste water treatment (6000 T/Annum)	CPP-ETP, Textile Industries	270.28 T	Textile industries sludge permitted for use @7% for co processing in cement kiln.

45.1.13 Public Consultation:

<b>Details of advertisement given</b>	12.05.2021
<b>Date of public consultation</b>	16.06.2021
<b>Venue</b>	Sri Pon Parvathy Mahal, Pattampudur
<b>Presiding Officer</b>	DRO/Additional District Magistrate
<b>Major issues raised</b>	<ul style="list-style-type: none"> <li>i. Desilting and clearance of water bodies</li> <li>ii. Green belt development in villages</li> <li>iii. Employment to local people and youths,</li> <li>iv. Skill development programmes</li> <li>v. Additional welfare measures under CSR activities</li> <li>vi. Disinfection for COVID,</li> <li>vii. Water-table level depletion</li> <li>viii. Drinking water supply</li> <li>ix. Dust pollution</li> <li>x. Impact on agriculture activities</li> <li>xi. Permission to utilize the dedicated haulage road by public,</li> <li>xii. Bus stop and health facility at RR Nagar</li> </ul>

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

<b>Concerns Raised during Public Hearing</b>	<b>Physical Activity &amp; Action Plan</b>	<b>Budget Allotted, Rs. In Lakhs &amp; Year of Implementation</b>			<b>Total Amount allotted, Rs</b>
		<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>	
Pollution (Dust) Control Measures	Provision of Pulse Jet Bagfilters with Wooven Fibre Glass with <b>PTFE Membrane</b> & acid resistance to Kiln RABH, Coal Mill & Cement Mill Bag Filters and ESPs for Cooler Stack	900	-	-	900.00
Pollution Monitoring	Provision of Continuous Ambient Air Quality Monitoring Stations ( <b>CAAQMs</b> ) – 3 Nos. for Cement Plant & 1 No. for CPP, total <b>4 Nos.</b>	200	-	-	200.00
Generation of local employment	Computer based Skill Development Centre at	25	25	25	75.00

Concerns Raised during Public Hearing	Physical Activity & Action Plan	Budget Allotted, Rs. In Lakhs & Year of Implementation			Total Amount allotted, Rs
		First Year	Second Year	Third Year	
and skill development programmes	Thammanaickenpatti. for the benefits of local youths				
Eco Development Measures	Desilting & Clearing of Water bodies at:  River water course from NH road to Vadiyur (6 km length and 120 m width)  Aranmanaiurani is having area of 1.5 acre & plantation of 2,000 tress  Thathampattikanmai area is of 50-acre extent.	9.60  8.00  -	-  -  7.24	-	24.84
Green Belt Development in nearby villages	Tulukkapatti, Thammanaickenpatti & Vachakarapatti	5	5	5	15.00
Drinking water supply to nearby villages	4 Nos. borewells with a Sintex tank for water supply at Vachakarapatti village	16			39.00
	Construction of new Borewells & OH Tanks for Meenatchipuram, Pattamputhur and Ettanayakkanpatti villages		15		
	Borewell for Vadi Panchayat will be constructed for Green Belt maintenance.			2	
	Borewell at Muniyasamy kovil street			3	
	Borewell at Nallurpatti			3	

Concerns Raised during Public Hearing	Physical Activity & Action Plan	Budget Allotted, Rs. In Lakhs & Year of Implementation			Total Amount allotted, Rs
		First Year	Second Year	Third Year	
	Village				
Infrastructure	Bus stop and health facility at RR Nagar		9		24.00
	Road works for Pattamputhur Adithiravidar Colony		10		
	Disinfection of nearby villages	5			
<b>Total</b>		<b>1168.6</b>	<b>71.24</b>	<b>38</b>	<b>1277.84</b>

- 45.1.14 The capital cost of the expansion project is Rs. 300 Crores and the capital cost for environmental protection measures is proposed as Rs.5.00 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.0.50 Crores. The employment generation from the existing / expansion is 465 persons. The details of cost for environmental protection measures is as follows:

SNo	Description of Item	Total (Existing & Proposed)	
		Capital Cost, Rs. in Crores	Recurring Cost, Rs. Crores/Annum
1	Air Pollution Control/Noise	9.80	2.50
2	Water Pollution Control	3.90	1.00
3	Environmental Monitoring and Management	-	0.20
4	Greenbelt Development	0.50	0.20
	<b>Total</b>	<b>14.2</b>	<b>3.9</b>
5	Addressal of Public Consultation Concerns	<b>Rs. 1277.84 lakhs</b>	

- 45.1.15 Existing green belt is developed in 33.00 ha with a tree density of 62,910 trees @ 1,906 Trees/Ha & Survival Rate 85-90%. Proposed green belt will be developed in 31.5 ha. Total greenbelt will be developed in 64.50 ha which is about 33.69% of the total project area. A 15 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 98340 saplings will be planted and nurtured in 31.50 hectares in 3 years.
- 45.1.16 The proponent has reported that there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.
- 45.1.17 Name of the EIA consultant: M/s. ABC Techno Labs India Private Limited [S. No.113, List of ACO's with their Certificate no. NABET/EIA/1922/RA0155 valid up to 24.05.2022; Rev. Rev. 14, September 15, 2021].

**Certified Compliance report from the regional Office**

- 45.1.18 The Status of compliance of earlier EC dated 06/02/2012 for coal based captive power plant of 25 MW was obtained from Integrated Regional Office, Chennai vide letter no. EP/12.1/867/TN/065 dated 27.01.2021 in the name of M/s. The Ramco Cements Limited. The status of compliance of earlier EC dated 06/07/2009 and 29/11/2017 for cement plant was obtained from Integrated Regional Office (IRO), Chennai vide letter no. EP/12.1/867/TN/066 dated 27/01/2021 in the name of M/s. The Ramco Cements Limited. As per the aforesaid certified reports received from IRO, Chennai, all conditions of the existing EC are being complied.
- 45.1.19 During the course of meeting, PP has submitted written submissions on the following points:
- i. PP assured to obtain the environmental clearance separately from SEIAA-Tamil Nadu for proposed enhancement in the township built-up area.
  - ii. Calculation to reduce the SO<sub>2</sub> emission from kiln even after use of 100% petcoke will be maintained as less than prescribed limit i.e., 100 mg/Nm<sup>3</sup>.
  - iii. Revised traffic impact assessment data considering the Passenger Car Unit (PCU) per day of traffic on the road.
  - iv. Action plan for phasing out ground water abstraction in next three years.
  - v. Revised action plan with physical target to address the issues raised during public hearing as mentioned at para no. 45.1.13.

**Observations of the Committee**

- 45.1.20 The Committee noted the following:
- i. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
  - ii. The Committee also deliberated on the certified compliance reports of Integrated Regional Office, Chennai, public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory
  - iii. The EAC noted that the written submissions made by the project proponent during the course of meeting are addressing the concerns of the Committee.

**Recommendations of the Committee**

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

**A. Specific Conditions**

- i. Project proponent shall obtain Environment Clearance from the Competent Authority for proposed township expansion.

- ii. The 800 KLD water requirement for the project shall be met from ground water resource and 1000 KLD of water shall be met from Ajay River. In the next three years from the date of issue of this EC, PP shall switch over to use of treated sewage and harvested rain water to meet 100 % of its ground water requirement as committed. Thereafter, no groundwater withdrawal will be permitted.
- iii. Waste oil generated from the existing and proposed cement plant expansion shall not be used as fuel in the kiln. It shall be handed over to the authorized recyclers in compliance to the provisions specified in Hazardous and Other Waste (M&TM) Rules, 2016.
- iv. 64.50 ha of land shall be developed into green belt with a tree density of 2500 trees per ha in a time frame of three years from date of grant of EC. This shall also include (i) land scape development without disturbing the natural stream and green belt development in southern part of the project site wherein two blocks are discontinued by a natural stream and (ii) green belt development with a width of 30 meters within the project site towards the villages namely Thammanaickenpatti (0.2 km in N), Vachchakarapatti (0.2 km in NNE) and Tulukkappatti (0.5 km in SE). In addition to this, gap filling shall be done in existing green belt developed area where tree density is only 1906 trees per ha.
- v. Particulate matter emissions from the existing and revamped production units shall be less than 20 mg/Nm<sup>3</sup> as committed by proponent.
- vi. Petcoke dosing shall be controlled automatically to control SO<sub>2</sub> emission from chimney within the prescribed limits.
- vii. Co-processing of paint sludge and Oily sludge as done presently shall be continued. Dioxin and furans shall be monitored twice a year and report shall be submitted to the Regional Office of the MoEF&CC.
- viii. Project proponent shall develop rainwater harvesting system as per the action plan submitted in order to achieve the gradual shifting of ground water usage in next three years from the date of issue of this EC.

## **B. General conditions**

### **I. Statutory compliance:**

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

### **II. Air quality monitoring and preservation**

- ii. The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as 4 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- iii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- v. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;
- vi. The project proponent shall provide wind shelter fence and chemical spraying on the raw material stock piles;
- vii. Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, and cement bagging plants.

### **III. Water quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25<sup>th</sup> August, 2014 (Cement) and subsequent amendment dated 9<sup>th</sup> May, 2016 (Cement) and 10<sup>th</sup> May, 2016 (in case of Co-processing Cement) as amended from time to time; S.O. 3305 (E) dated 7<sup>th</sup> December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall regularly monitor ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- iv. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- v. Water meters shall be provided at the inlet to all unit processes in the cement plant.
- vi. The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

### **IV. Noise monitoring and prevention**

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

### **V. Energy Conservation measures**

- i. Waste heat recovery system shall be provided for kiln and cooler.
- ii. The project proponent makes efforts to achieve power consumption less than 65 units/ton for Portland Pozzolona Cement (PPC) and 85 units/ton for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.

- iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
- iv. Provide the project proponent for LED lights in their offices and residential areas.

**VI. Waste management**

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

**VII. Green Belt**

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

**VIII. Public hearing and Human health issues**

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

**IX. Environment Management**

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

**X. Miscellaneous**

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

- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Integrated Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during public hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

45.2 Integrated Cement Project - Clinker 7.0 MTPA; Cement 7.5 MTPA; CPP 60 MW; WHRS 36 MW; and D.G. Set 12 MW by **M/s. UltraTech Cement Ltd.** located at Villages – Tunkara & Balara, Tehsil - Jaitaran, **District – Pali, Rajasthan.** [Online Proposal No. IA/RJ/IND/5678/2011, File No. J-11011/569/2011-IA.II(I)] – **Environment Clearance – regarding.**

45.2.1 M/s. UltraTech Cement Limited has made an online application vide proposal No. IA/RJ/IND/5678/2011 dated 17/09/2021 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no.3(b)

Cement Plants and 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**

45.2.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
20 <sup>th</sup> July, 2019	15 <sup>th</sup> Meeting of EAC held on 16 - 17 <sup>th</sup> January, 2020	Terms of Reference	10 <sup>th</sup> February, 2020

45.2.3 The project of M/s. UltraTech Cement Limited located in Villages –Tunkara & Balara, Tehsil - Jaitaran, District – Pali, Rajasthan is for expansion of integrated cement project - Clinker (2.2 to 7.0 MTPA); Cement (3.3 to 7.5 MTPA); CPP (30 to 60 MW); WHRS (5 to 36 MW) and D.G. Set (6 to 12 MW).

45.2.4 Environmental Site Settings:

SNo	Particulars	Details	Remarks
i.	Total land	156.10 ha. (Private land: 156.0 ha)	Land use: Total project area is 156.10 ha. Out of total area, 75.43% has already been changed to Industrial land from private agricultural land.
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Proposed expansion will be carried out within the existing project area of 156.0 ha. No additional land is required for the proposed expansion and modification.	--
iii.	Existence of habitation & involvement of R&R, if any.	No habitation exists within the plant site and R & R is not applicable.	Total project area is under the possession of the company.
iv.	Latitude and Longitude of the project site	Latitude: 26 <sup>o</sup> 14' 42.69" N to 26 <sup>o</sup> 15' 49.63" N Longitude: 74 <sup>o</sup> 05' 0.95" E to 74 <sup>o</sup> 06' 15.38" E	--
v.	Elevation of the project site	332 - 358 m above mean sea level	--
vi.	Involvement of Forest land if any.	No Forest Land is involved in the project area.	--
vii.	Water body exists within the project site as well as study area	<b>Project site:</b> Nil. <b>Study area:</b> • Small pond: 0.1 km western side of project site.	-

SNo	Particulars	Details	Remarks
		<ul style="list-style-type: none"> <li>Lilri River: 2.5 Km/ SE</li> <li>Sukri River: 7.0 Km/ SSE</li> <li>BalaraVillage pond: 3.0km/ NNE</li> <li>Girinanda Dam: 9.5 km/ SSE</li> </ul>	
viii.	Existence of ESZ/ESA/ National Park/ Wildlife Sanctuary/ Biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area	Nil. However, following Forests are present in study area: Asarlai RF: 1.5 Km/ SW Asarlai RF: 3.0 Km/ WSW KalulambiyaJod PF: 7.5 Km/ North Protected Forest: 8.5 Km/ NE	-

45.2.5 The existing project was accorded environmental clearance vide letter no. J-11011/569/2011-IA.II (I) dated 27<sup>th</sup> February, 2015 for Integrated Cement Project- Clinker (2.2 MTPA), Cement (3.3 MTPA), CPP (30 MW), WHRS (5MW) and D.G. Set (6 MW).The company has obtained Consent to Establish vide RSPCB letter no. F(CPM)/Pali(Jaitaran)/2681(1)/2016-2017/5366-5368 dated 02<sup>nd</sup> August, 2016 and extended vide letter no. F.Tech (C-137)/ RPCB/ CPM/ 541-542 dated 27<sup>th</sup> June, 2019 which is valid up to 31<sup>st</sup> July, 2022.

45.2.6 Implementation status of the existing EC:

S No	Facilities	Units	As per EC dated 27/02/2015	Implementation Status	Production as per CTO
1.	Clinker	MTPA	2.2	<i>Land development and construction for plant boundary &amp; offices and civil work has been started.</i>	*Project not implemented yet
2.	Cement	MTPA	3.3		
3.	CPP	MW	30		
4.	WHRS	MW	5		
5.	DG Set	MW	6		

\* The company could not implement the above said project due to unfavorable market scenario; and now, installation of the project with granted capacity would not be feasible to meet the current cement demand, therefore company proposed expansion. On the basis of EC granted, land development and construction for plant boundary & offices and civil work has been started.

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

Particular	Unit	Line - 1			Proposed Line - 2	Total Capacity after Expansion
		Capacity (as per EC dated 27/02/2015)	Proposed / Additional	Total		
Clinker	MTPA	2.2	1.3	3.5	3.5	7.0* (2 x 3.5)
Cement	MTPA	3.3	0.45	3.75	3.75	7.5 (2 x 3.75)
CPP	MW	30	Nil	30	30	60 (2 x 30)
WHRS	MW	5	13	18	18	36 (2 x 18)
D.G. Set	MW	6	Nil	6	6	12 (2 x 6)

\*Part of Clinker will be dispatched to split Grinding Units of UTCL

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

S No	Name of Raw Material	Quantity Required (MTPA)	Source	Approx. Distance & Mode of Transportation
1.	Limestone*	10.5	Captive Limestone mine	1.5 Km/ By Covered Conveyor belt
2.	Laterite/ Iron Ore/ Red Ochre	0.28	Chittorgarh & Bhilwara District of Rajasthan	200-250 km / Road
3.	Fly ash	2.625	CPP, Govt. Thermal Power Plant at Kota & Suratgarh in Rajasthan	150 to 250 km / Road
4.	Gypsum	0.525	FCI Aravali Gypsum and Minerals Ltd., Bhadwasiya, Jodhpur (Rajasthan) Rajasthan State Mines and Minerals Limited, Udaipur (Rajasthan)	150-200 km / Road

\*Limestone will also be used for lime dosing to control the SO<sub>2</sub> emission in Captive Power Plant

45.2.9 The water requirement as per the EC dated 27/02/2015 and proposed expansion is reported to be 3000 KLD, which will be sourced from the Ground Water and after development of Mine Pits & Mine Sump water. The NOC for drawl of groundwater was obtained from CGWA dated 03<sup>rd</sup> August, 2015 and latest renewal application was forwarded by Regional Director, CGWB (Western Region) to Member Secretary, CGWA dated 31.05.2021 and is reported to be under process.

45.2.10 The power requirement for the project is estimated as 85MW, which will be obtained from the Captive Power Plant, WHRS, Grid(JVVNL) and DG Set (in case of emergency).

45.2.11 Baseline Environmental Studies:

Period	Winter season (December, 2019 to February, 2020)
AAQ parameters at 13 locations (min. and max.)	PM <sub>2.5</sub> = 26.0 to 49.9µg/m <sup>3</sup> PM <sub>10</sub> = 50.3 to 86.4µg/m <sup>3</sup> SO <sub>2</sub> = 4.55 to 11.60 µg/m <sup>3</sup> NO <sub>2</sub> = 10.12 to 25.0 µg/m <sup>3</sup> CO = 0.53 to 0.92 µg/m <sup>3</sup>
AAQ modelling (Incremental GLC)	PM <sub>10</sub> = 6.29µg/m <sup>3</sup> (0.2 km/ South) SO <sub>2</sub> = 3.07µg/m <sup>3</sup> (1.0 km/ South) NO <sub>x</sub> = 6.88µg/m <sup>3</sup> (1.0 km/ South)
Ground water quality at 08 locations	pH: 7.24 to 8.10 Total Hardness: 286.78 to 1678.96 mg/l Chlorides: 412.86 to 2678.62mg/l Fluoride: 0.54 to 1.58 mg/l Heavy metals are within the limits

Period	Winter season (December, 2019 to February, 2020)
Surface water quality	Surface water samples could not be collected as all the water bodies were seasonal and were found dry during the study period.
Noise levels (min. and max.)	48.9 to 54.4 Leq dB (A) for the Day Time and 38.1 to 43.8 Leq dB (A) for the Night Time.
Traffic assessment study findings	<p>i. Transportation will be done 100% by road during initial years of plant operation until the installation of railway siding.</p> <ul style="list-style-type: none"> <li>• Total No. of increased trucks / tankers per Day (inward) = 464</li> <li>• Total No. of increased trucks / tankers per Day (outward) = 973</li> <li>• Total No. of increased trucks per day (inward + outward) - 464 + 973 = 1437</li> </ul> <p>ii. There will be 46% reduction in number of trucks after installation of railway siding.</p> <ul style="list-style-type: none"> <li>• Total No. of increased trucks per day (inward) = 346 and</li> <li>• Total No. of increased trucks per day (outward) = 416;</li> <li>• Total No. of increased trucks per day (inward + outward) = 346 + 416 = 762</li> </ul> <p>iii. M/s. UltraTech Cement Ltd. has already strengthened the road from NH - 112 (Nimaj Bypass to Plant Site) (Width - 10 meters with 1meter shoulders at both sides) for inward &amp; outward transportation of raw materials and finished product.</p>
Flora and fauna	<p><b>Flora:</b> As per the field survey and List of Flora; no endemic species of flora have been observed. But Guggule (Commiphorawightii) and Lal Booti (Euphorbia prostrata) are found listed as Critically Endangered.</p> <p><b>Fauna:</b> There is no schedule - 1 species in the study area. one species Land tortoise (<i>Testudo elongata</i>) is found Critically endangered (CR) but belongs to S-IV of IWPA 1972. Protective measures proposed by project proponent for Guggul and land Tortoise.</p>

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

Plant Unit	Type of Waste	Waste	Quantity	Treatment / Disposal
<b>Non-Hazardous Solid waste</b>				
Cement Plant	SW	Dust	-	Dust collected from various APCE will be totally recycled into the process.
MSW	SW	Bio-degradable and non-degradable waste	50 kg / Day	Bio-degradable waste will be composted, and non-degradable wastes will be disposed off suitably.
STP	SW	STP Sludge	50 kg/annum	Will be used as manure for greenbelt development / plantation
<b>Hazardous waste</b>				

Plant Unit	Type of Waste	Waste	Quantity	Treatment / Disposal
Plant Maintenance	HW	Used or Spent Oil	30-40 KL / annum	Will be sold to CPCB authorized recycler / Processing in kiln
		Contaminated cotton rags	20-25 Tonnes / annum	
		Empty barrels	1200-1500 Tones/year	
		Used batteries	3.5 tonnes /annum	Will be sold to CPCB registered recycler.

45.2.13 Public Consultation:

Details of advertisement given	“Dainik Bhaskar” and “The Times of India” dated 31 <sup>st</sup> January, 2021 and 01 <sup>st</sup> February, 2021 respectively.
Date of public consultation	2 <sup>nd</sup> March, 2021
Venue	Village- Balara, Government Senior Secondary School, (Playground), Tehsil- Jaitaran, District- Pali (Rajasthan).
Presiding Officer	Mr. Radheshyam Meena, Additional District Collector (Siling), Pali
Major issues raised	1. Infrastructure development 2. Environment 3. Health Care 4. Education 5. Water conservation

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

S. No.	Concerns raised during the Public Hearing	Physical activity to be done	Unit of Measurement			Tentative Budget (Rs. in lacs)
			01 <sup>st</sup> Year	02 <sup>nd</sup> Year	03 <sup>rd</sup> Year	
1.	Facilities for development	<b>Construction of toilets in Villages</b>				<b>32.5</b>
		Balara	10 Nos.	10 Nos.	10 Nos.	
		Tunkara	10 Nos.	10 Nos.	5 Nos.	
		Dagla	5 Nos.	5 Nos.	5 Nos.	
		Nimbera Khurd	5 Nos.	5 Nos.	5 Nos.	
		Nimaj	5 Nos.	5 Nos.	5 Nos.	
		Asarlai	5 Nos.	5 Nos.	5 Nos.	
		Mohrai	5 Nos.	-	5 Nos.	
		<b>Construction of Drainage Facilities in Village Balara</b>	750 Meter	-	-	<b>10</b>
		<b>Solar lighting of roads in Villages</b>				<b>16.1</b>
		Balara	10 Nos.	-	-	
		Tunkara	5 Nos.	5 Nos.		
		Dagla	-	-	5 Nos.	
		Nimbera Khurd	5 Nos.	5 Nos.	-	
		Mohrai	5 Nos.	-	-	
Mesia	-	5 Nos.	-			
Asarlai	10 Nos.	-	-			
Amarpura	-	-	5 Nos.			

S. No.	Concerns raised during the Public Hearing	Physical activity to be done	Unit of Measurement			Tentative Budget (Rs. in lacs)
			01 <sup>st</sup> Year	02 <sup>nd</sup> Year	03 <sup>rd</sup> Year	
		<b>Construction of community centre at Village Balara</b>	-	1 Nos.	-	<b>10</b>
2.	Environment related facilities	<b>Providing dustbins in Balara Village at Bus Stand</b>	10 Nos.	-	-	01
		<b>Distribution of saplings of local species in villages-</b>				<b>03</b>
		Balara	100 Nos.	-	-	
		Rabriyawas	-	100 Nos.	-	
		Amarpura	-	-	100 Nos.	
3.	Health-care facilities	<b>Providing medical equipments in villages</b>			<b>12.0</b>	
		Balara	1 No.	-		-
		Mohrai	-	-		1 No.
		Mesia	-	-		1 No.
		Asarlai	-	-		1 No.
		Tunkara	-	-		1 No.
		Rabriyawas	-	1 Nos.		-
		Balupura	-	-	1 No.	
4.	Education facilities	<b>Distribution of furniture (tables &amp; chairs) in schools in villages</b>			<b>15</b>	
		Balara	-	100 Nos.		-
		Tunkara	100 Nos.	-		-
		Rabriyawas	-	50 Nos.		-
		Balupura	-	-		50 Nos.
		<b>Construction of Skill development Centre</b>			<b>10</b>	
5.	Water conservation facilities	<b>Development of rain water harvesting system in village Tunkara by deepening of pond</b>	25000 Lacs Litter	-	-	04
		<b>Construction of water tanks for stray animals in villages</b>			<b>10</b>	
		Balara	3600 KL	-		-
		Asarlai	3600 KL	-		-
		Tunkara	3600 KL	-		-
		Mohrai	-	3600 KL		-
		Mesia	-	-	3600 KL	
<b>The total cost allocated for implementation of PH issues conducted on 02nd March, 2021</b>						<b>123.60</b>
<b>The total cost already spent for implementation of earlier PH issues conducted on 27th Feb., 2013</b>						<b>99.47</b>
<b>Total Amount for implementation of Public Hearing issues</b>						<b>223.07</b>

45.2.14 The capital cost of the project is Rs. 2200 Crores (Phase-I Rs.1200 Cr. & Phase-II Rs. 1000 Cr.) and the capital cost for environmental protection measures is proposed as Rs. 220Crores (Phase-I Rs.120 Cr. & Phase-II Rs. 100 Cr.). The annual recurring cost towards the environmental protection measures is proposed as Rs20 Crores. The employment generation from the proposed project is800 persons (regular and contractual) during operational phase and 1500 people during implementation phase. The details of cost for environmental protection measures are as follows:

Particular	Capital Cost	Recurring Cost / annum
Air Pollution Control	185	12
Water Pollution Control and Rain Water Harvesting Measures	20	1.5

Particular	Capital Cost	Recurring Cost / annum
Noise Pollution	1.5	1.0
Environment Monitoring and management	9.5	4.0
Greenbelt Development	4.0	1.5
<b>Total</b>	<b>220</b>	<b>20</b>

45.2.15 **Existing green belt:** approx. 5.5 ha area (Total 6950 of sapling) has already been covered under greenbelt development. Total greenbelt after expansion will be developed in 62.44 ha which is about 40% of the total project area. A 20 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 156100 saplings will be planted and nurtured in 62.44 ha.

45.2.16 There is an interlinked project of captive limestone mine with Production Capacity of 3.3 MTPA (ROM) located at Village(s) Mohrai, Dagla, Asarlai, Tunkara&Nimbera Khurd in Tehsil - Jaitaran and Village - Meshia in Tehsil - Raipur, District- Pali, Rajasthan (Area - 755.10 ha). Environment Clearance for the same has been obtained from MoEFCC, New Delhi vide letter no. J-11015/281/2011-IA.II (M) dated 02<sup>nd</sup> January, 2014. To cater the additional limestone requirement for proposed Expansion of Integrated Cement Project, company has proposed expansion in limestone production capacity from 3.3 to 5.77 MTPA in the above said Limestone Mine. Application for the same has been submitted to MoEF&CC New Delhi on 06<sup>th</sup> Nov., 2020 and ToR for the same has been obtained on 29<sup>th</sup> Dec., 2020.

45.2.17 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.

45.2.18 Name of the EIA consultant: M/s J.M. EnviroNet Pvt. Ltd. [Sl. No. 43, List of ACOs with their Certificate no. NABET/EIA/2023/RA 0186 valid up to 07.02.2023; Rev. 14, September 15, 2021].

**Certified compliance report from Regional Office:**

45.2.19 The status of compliance of earlier EC was obtained from Integrated Regional Office, Jaipur vide letter no. IV/ENV/R/IND-150/888/2015/SPL-50 to 51, dated 24<sup>th</sup> April, 2021 in the name of M/s. UltraTech Cement Limited. The action taken report by the proponent on the partially and non-complied EC conditions along with present status as furnished by the PP is given as below:

S No	Non-compliance details	Observation of RO (abridged)	Condition no.			Response by PP
			EC date	Specific	General	
1.	Action plan with financial and physical breakup/detail s on Enterprise	Enterprise Social Commitment (ESC) was not available	27 <sup>th</sup> February, 2015	SC No. 20	-	Earlier, company has obtained Environmental clearance but could not implement. Enterprise

S No	Non-compliance details	Observation of RO (abridged)	Condition no.			Response by PP
			EC date	Specific	General	
	Social Commitment (ESC) based on local needs was not available on site during the visit.	on site during the visit				Social Commitment (ESC) based on local needs were not prepared and implemented. Now, installation of the project with the same granted capacity would not be feasible to meet the current cement demand. Therefore, the company is proposing to install the Integrated Cement Project of expanded production capacity for which public hearing has been conducted for identify the local needs and based on the Public Hearing issues/suggestion; Company has prepared Socio-economic development plan.
2.	Analysis of report of AAQ and noise monitoring from Accredited laboratory have not been submitted by the unit	Analysis of report of AAQ and noise monitoring not submitted	27 <sup>th</sup> February, 2015	SC No. 4	-	Company is regularly conducted Ambient Air Quality Monitoring and Noise monitoring at project site by Accredited laboratory. The Test sheets of AAQ and noise monitoring by Accredited laboratory has been submitted.

45.2.20 During the course of meeting, PP has submitted written submissions on the following points:

- i. Revised rain water harvesting plan: To meet the 3000 m<sup>3</sup>/day water requirement for proposed integrated cement plant PP proposes the following:
  - 02 nos Rain Water Harvesting Pit/reservoir in Captive Limestone Mine
  - 01 no. Rain Water Harvesting Pit/reservoir in Cement Plant
- ii. Revised action plant in term of physical targets to address the issues raised during public hearing as mentioned at para no. 45.2.13.

- iii. Commitment to developed the green belt area in 40% of the total project area before 31<sup>st</sup> December, 2024.
- iv. Commitment to widened and strengthened the village road passing between project sites to crossing the road.
  - v. There is a part of village road, around 500 m, dividing the project site in two parcels, PP assured to widen and strengthen the same.
- vi. Revised the EMP budget after inclusion the monitoring cost of the ground water twice in a year.
- vii. Committed to kept the Sulphur content as 8.5% in the petcoke.
- viii. Commitment to provide the three (3) Continuous Ambient Air Quality Monitoring Stations (CAAQMS) as per the CPCB guidelines after obtaining the approval of SPCB for monitoring station location.

#### **Observations of the Committee**

45.2.21 The Committee noted the following:

- i. M/s. Ultratech Cement Limited obtained environmental clearance from MoEF&CC on 27/02/2015 for Integrated Cement Project. Subsequently Consent to Establish was obtained from Rajasthan Pollution Control Board (RPCB) dated 02/08/2016 and extended *vide* letter dated 27/06/2019 which is valid up to 31/07/2022. But PP could not implement the above said project due to unfavorable market scenario; and now, the instant proposal was submitted for expansion in earlier EC dated 27/02/2015. PP has been started land development and construction for plant boundary & offices and civil work according to EC dated 27/02/2015. In view of this, EAC opined that instant proposal shall be titled and considered as a green field project and accordingly, PP was asked to revise the action plan to address the issues raised during the public hearing held on 27/02/2013 and 2/3/2021.
- ii. Title of the project shall be “45.2 Integrated Cement Project - Clinker 7.0 MTPA; Cement 7.5 MTPA; CPP 60 MW; WHRS 36 MW; and D.G. Set 12 MW by M/s. UltraTech Cement Ltd. located at Villages –Tunkara & Balara, Tehsil - Jaitaran, District – Pali, Rajasthan”.
- iii. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
- iv. The Committee also deliberated up on the certified compliance report, public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing held on 27/02/2013 & 2/3/2021 and found it satisfactory
- v. The EAC noted that the written submissions made by the project proponent during the course of meeting found to be addressing the concerns of the Committee.

#### **Recommendations of the Committee**

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

**A. Specific Conditions**

- i. Prior permission of the Competent Authority shall be obtained for withdrawal of 3000 KLD of ground water. Rainwater harvesting shall be done in mines and cement plant area to ensure that by 31<sup>st</sup> March, 26, 100 % plant water requirement is met from harvested rainwater only.
- ii. 62.44 ha of land shall be developed into green belt with a tree density of 2500 trees per ha in a time frame of three years from date of grant of EC. This shall include 20 m wide green belt development within the project area towards the villages situated on the project site boundary. In addition to this, PP shall plant 550 trees or as required under the relevant State Government Rules/ Regulations, whichever is more, for the 55 trees proposed to be cut.
- iii. Limestone shall be transported to the plant from mines by conveyor belt only. No road transportation is permitted.
- iv. Particulate matter emissions from the existing and revamped production units shall be less than 30 mg/Nm<sup>3</sup>.
- v. Petcoke dosing shall be controlled automatically to control SO<sub>2</sub> emission from chimney within the prescribed limits.
- vi. Railway siding for transportation of materials shall be provided in next five years as committed by the project proponent.
- vii. Air cooled condensers shall be used in the captive power plant.
- viii. Dioxin and furans shall be monitored twice a year during co-processing of hazardous waste and report shall be submitted to the Regional Office of the MoEF&CC.

**B. General conditions**

**I. Statutory compliance:**

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

**II. Air quality monitoring and preservation**

- i. The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as 4 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
- iii. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- iv. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;

- v. The project proponent shall provide wind shelter fence and chemical spraying on the raw material stock piles;
- vi. Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, and cement bagging plants.

### **III. Water quality monitoring and preservation**

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25<sup>th</sup> August, 2014 (Cement) and subsequent amendment dated 9<sup>th</sup> May, 2016 (Cement) and 10<sup>th</sup> May, 2016 (in case of Co-processing Cement) as amended from time to time; S.O. 3305 (E) dated 7<sup>th</sup> December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall regularly monitor ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- iv. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- v. Water meters shall be provided at the inlet to all unit processes in the cement plant.
- vi. The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

### **IV. Noise monitoring and prevention**

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

### **V. Energy Conservation measures**

- i. Waste heat recovery system shall be provided for kiln and cooler.
- ii. The project proponent makes efforts to achieve power consumption less than 65 units/ton for Portland Pozzolona Cement (PPC) and 85 units/ton for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
- iv. Provide the project proponent for LED lights in their offices and residential areas.

### **VI. Waste management**

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

**VII. Green Belt**

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

**VIII. Public hearing and Human health issues**

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

**IX. Environment Management**

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

**X. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

45.3 Change of Product Mix for existing Steel Plant by addition of Argon Oxygen Decarburization vessel (AOD) of 25 Tons capacity for production of SS Billets and S.S Steel grade alloy Flats and rounds along with existing facilities i.e. 2x12 Ton induction furnace, 1 Ladle Furnace of capacity 15 Tonne, 4/7 radius Continuous Casting Machine & 22 TPH Reheating Furnace and Rolling Mill of 1,38,000 TPA by **M/s. D. S. Rolling Mills Pvt. Ltd.** located at Khasra No. 175, 181, 187-191, 195- 197 Village Dayalpur, Khanpur Block, Tehsil Lakshar, **District Haridwar, Uttarakhand.** [Online Proposal No. IA/UK/IND/228463/2021; File No.: IA-J- 11011/349/2013-IA.II(I)] – **Environment Clearance under Para 7 (ii) of EIA Notification, 2006** – regarding.

45.3.1 M/s. D. S. Rolling Mills Pvt. Ltd. has made an online application vide proposal no. IA/UK/IND/228463/2021 dated 15/09/2021 along with Form 2 and copy of EIA/EMP 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) under Category “B” of the schedule of the EIA Notification, 2006 and due to Interstate boundary of Uttarakhand and appraised at Central level.

45.3.2 The project proponent vide email dated 28/09/2021 requested the Ministry for withdrawal of the instant proposal due to changes in project planning. The said email was circulated to all the EAC members.

45.3.3 In view of the foregoing and after detailed deliberations, the Committee accepted the request of the project proponent and recommended for agreeing to the withdrawal of the proposal.

45.4 Greenfield Project for Installation of Iron Ore Pellet Plant (0.6 MTPA), DRI Plant (0.42 MTPA), SMS with Caster (0.6 MTPA), Rolling Mill (0.20 MTPA), RHF unit (0.36 MTPA), Blast Furnace (0.26 MTPA), Sinter Plant (0.40 MTPA), DIP Plant (0.24 MTPA), Coal Washery Unit (0.98 MTPA) with Captive Power Plant (97 MW)” for producing TMT bar, wire rods, steel bar coils and de-coiled bars and Ductile Iron Pipes by **M/s. Swadesh Metallics Pvt Ltd.** located at **Village-Kesda, Tehsil-Simga, District- Balodabazar-Bhatapara, Chhattisgarh.** [Online Proposal No. IA/CG/IND/227899/2021; File No.: IA-J-11011/46/2021-IA-II(I)] – **Prescribing for Terms of Reference** – regarding.

45.4.1 M/s. Swadesh Metallics Private limited has made an application online vide proposal no. IA/CG/IND/227899/2021 dated 06/09/2021 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), 1 (d) Power Plant and 2 (a) Coal Washeries under Category “A” of the schedule of the EIA Notification, 2006 and was appraised at Central Level.

**Details submitted by Project proponent**

45.4.2 The greenfield proposed project of M/s. Swadesh Metallics Private limited located in Village-Kesda, Tehsil-Simga, District- Balodabazar-Bhatapara, Chhattisgarh for Greenfield Project for Installation of Iron Ore Pellet Plant (0.6 MTPA), DRI Plant (0.42 MTPA), SMS with Caster (0.6 MTPA), Rolling Mill (0.20 MTPA), Rotary Hearth Furnace unit (0.36 MTPA), Blast Furnace (0.26 MTPA), Sinter Plant (0.40 MTPA), DIP Plant (0.24 MTPA), Coal Washery Unit (0.98 MTPA) with Captive Power Plant (97 MW)” for producing TMT bar, wire rods, steel bar coils and de-coiled bars and Ductile Iron Pipes.

45.4.3 Environmental site settings:

S No	Particulars	Details	Remarks
1	Total land	Total Land - 84.98 ha Agriculture – 32.86 ha Red Soil Murrum Land = 11.96 ha Barren Land = 40.16 ha	Land use is agricultural and will be diverted for industrial purpose.
2	Existence of habitation & involvement of R&R, if any.	No R & R involved in the project	
3	Latitude and Longitude of the project site	<b>Latitude</b>	
		<b>Longitude</b>	
		21°36'15.78"N      81°49'10.18"E 21°36'43.67"N      81°49'37.15"E	

S No	Particulars	Details	Remarks
		21°36'0.32"N    81°49'58.83"E 21°35'55.18"N    81°49'54.40"E	
4	Elevation of the project site	MSL – 281 m	
5	Involvement of Forest land if any.	No Forest land involved	
6	Water body exists within the project site as well as study area	<b>Project site:</b> Nil <b>Study Area:</b> Jamuniya Nala (Seasonal): 1.5 km, East Ghughua Pond – 5.20 km, West Manpur Dam – 7 km, SE Village pond: 0.45 km, NW Village pond: 1.36 km, SSW	
7	Existence of ESZ/ESA/ National Park/ wildlife sanctuary/biosphere reserve/tiger Reserve/ elephant reserve etc. if any within the study area	Nil. However, two reserve forests are present in study area: BilariGhughuaRF: 3.6 km/W Bilari RF: 7.5km/ WSW	

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

S No	Facility	Configuration	Capacity (MTPA)
1.	Iron Ore Pelletization Plant (With Grinding Unit)	1 x 0.6 MTPA	0.6
2.	DRI Plant (Sponge Iron)	4 x 350 TPD Kiln	0.42
3.	SMS with Caster (With Caster 6x11, 3 strands)	IF -12x15 tonnes	0.6
4.	Rolling Mill	600 TPD	0.20
5.	RHF unit	2x600 TPD	0.36
6.	Blast Furnace	250 m <sup>3</sup>	0.26
7.	Sinter Plant	45 m <sup>2</sup>	0.40
8.	DIP Plant	2 x 400 TPD	0.24
9.	Coal Washery	--	0.98
10.	Captive Power Plant	52 MW-WHRB 3 x 15 MW- CFBC	97 MW
11.	Producer Gas	8000 Nm <sup>3</sup> /hr	

45.4.5 Total water requirement for the proposed project is 5,648 KLD. Industrial Use will be 5,600 KLD (Source – Surface Water) Domestic Use will be 48 KLD (Source- Ground Water). A letter submitted by PP to the Chief Engineer, Mahanadi project, Raipur (CG) on 5<sup>th</sup> July, 2021 to obtained surface water of 6220 KLD.

- 45.4.6 It is estimated that about 118 MW of electricity will be required for operation of proposed plant; 97 MW power will be sourced from in house CPP and remaining will be sourced from State Electricity Board.
- 45.4.7 The capital cost of the project is Rs 1,480.50 Crores and the capital cost for environmental protection measures is proposed as Rs 30 Crores. Total manpower required for the project is approx. 2,150 persons (For Admin staff – 100, for Production – 1,800 and Contractual - 250).
- 45.4.8 It has been reported by PP that, there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.
- 45.4.9 Name of the EIA consultant: M/s Grass Roots Research and Creation India (P) Ltd. [S. No. 162, List of ACOs with their Certificate no. QCI/NABET/EIA/ACO/21/1908, valid up to 02/11/2021; Rev. 14, September 15, 2021].

45.4.10 Proposed Terms of Reference (**Baseline data collection period: December, 2020 to February, 2021.**):

Attributes	Parameters	Sampling		Remarks
		No of Stations	Frequency	
<b>A. Air</b>				
a. Meteorological parameters	Rainfall, Temperature, Relative humidity, wind speed	Project Site	Daily	
b. AAQ Parameters	PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> & CO	10	Twice in a week	
<b>B. Noise</b>	Leq, dB(A)-Day Leq, dB(A)-Night	08	Once in study a period	
<b>C. Water</b>				
a. Surface water	Total Parameters -32	08	Once in a month	
b. Ground water quality parameters	Total Parameters -32	08	Once in a month	
<b>D. Land</b>				
a. Soil Quality	Total Parameters -21	08	Once in a Study Period	
b. Land Use	10 KM Buffer Area			
<b>E. Biological</b>				
a. Aquatic			Once in a Study Period	
b. Terrestrial	10 KM Buffer Area	NA	Once in a Study Period	
<b>F. Socio-economic parameters</b>				
	10 KM buffer Area	NA	Once in a Study Period	

**Observations of the Committee**

45.4.11 The EAC noted the following:

- i. Terms of Reference is being sought for undertaking EIA study for the green field project titled “Installation of Iron Ore Pellet Plant (0.6 MTPA), DRI Plant (0.42 MTPA), SMS with Caster (0.6 MTPA), Rolling Mill (0.20 MTPA), RHF unit (0.36 MTPA), Blast Furnace (0.26 MTPA), Sinter Plant (0.40 MTPA), DIP Plant (0.24 MTPA), Coal Washery Unit (0.98 MTPA) with Captive Power Plant (97 MW)” for producing TMT bar, wire rods, steel bar coils and de-coiled bars and Ductile Iron Pipes by M/s. Swadesh Metallics Pvt Ltd. located at Village-Kesda, Tehsil-Simga, District- Balodabazar-Bhatapara, Chhattisgarh”.
- ii. Total area of the proposed project is 84.98 ha and green belt will be developed in about 29.13 ha.
- iii. 5648 KLD water is proposed to be drawn from River. Only 48 KLD water for domestic use is proposed to be drawn from the Ground.
- iv. Phenolic water is to be treated in acid alkali tank, followed by secondary treatment by aeration. The treated water after filtration is proposed to be used in the producer gas plant.
- v. There would not be any impact on village Kesda and Mahamaya temple as the same are more than a kilometer from chimneys.
- vi. RHF would generate 20 MW power.
- vii. Induction furnace in DIP would be 3x10T.
- viii. BF gas and PGP would be used for annealing and no separate PGP is proposed for DIP.
- ix. SMS slag would be used for filling of low lying area.

#### **Recommendations of the Committee**

45.4.12 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. PP shall furnish details of proposed Producer Gas Plant (PGP) of 8000 Nm<sup>3</sup>/hr. capacity, including the requirement of Producer Gas in the Pellet plant in Annealing furnace in the EIA report. Producer Gas Plants shall be of closed type.
- ii. Action plan for utilization of tar recovered from PGP shall be submitted.
- iii. As submitted by the PP, the phenolic water generated from the Producer Gas Plant (PGP) shall be treated and reused in the process. Detail for the same shall be furnished in the EIA/ EMP report.
- iv. Blast furnace (BF) with dry gas cleaning system and WHRB from BF Stove shall be provided.
- v. 48 KLD of ground water for domestic water shall be permitted, 5600 KLD shall be met from river Jamuria.
- vi. Action plan to limit the particulate matter emission from all the stacks below 30 mg/Nm<sup>3</sup> shall be furnished.
- vii. Action plan for fugitive emission control in the plant premises shall be provided.
- viii. Action plan for green belt development covering 33% of the project area, with 2500 plants per ha shall be submitted. This shall include 30 m green belt development inside the project area towards the Kesda village and Mahamaya Temple side.
- ix. Action plan for 100 % solid waste utilization shall be submitted.
- x. Action plan for rain water harvesting shall be submitted.
- xi. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

- xii. Air Cooled condensers shall be used in Captive Power Plant.
- xiii. Action plan for generation of 20 MW WHRB power from Rotary Hearth Furnace RHF unit shall be submitted.
- xiv. SMS slag shall be crushed to recover metallics and flux and balance aggregate shall be sold for construction. Only 90 days storage for slag shall be permitted.

45.5 Proposed Standalone Grinding Unit with Cement Production Capacity 3.0 MTPA and D.G Set of 250 KVA along with Railway siding by **M/s. ACC Limited** located at SalaiBanwa, Village: Panari and Kota, Tehsil: Obra, **District: Sonbhadra, Uttar Pradesh**. [Online Proposal No. IA/UP/IND/228969/2021; File No.: IA-J-11011/361/2021-IA-II(IND-I)] – **Prescribing for Terms of Reference**– regarding.

45.5.1 M/s. ACC Limited has made an online application vide proposal no. IA/UP/IND/228969/2021 dated 13/09/2021 along with the application in prescribed format (Form- I), Copy of Pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no 3 ‘(b)’ Cement Plants Under Category “B” of the schedule of the EIA Notification, 2006 but it attracts general condition due to the Eco-Sensitive Zone of Kaimoor Wildlife Sanctuary falling at a distance of 4.5 km from the proposed project site; Therefore, the project will be treated as Category - “A” project and appraised at Central Level.

**Details submitted by Project proponent**

45.5.2 The project of M/s. ACC Limited is located in SalaiBanwa, Village: Panari and Kota, Tehsil: Obra, District: Sonbhadra, Uttar Pradesh is for Proposed Standalone Grinding Unit with Cement Production Capacity 3.0 MTPA and D.G Set of 250 KVA along with Railway siding.

45.5.3 Environmental site settings:

S No	Particulars	Details	Remarks
i.	Total land	Total Project area: 32.6 ha; (Government land: 3.43 ha Private land: 29.17 ha)	Land Use – agriculture land.
ii.	Existence of habitation & involvement of R&R, if any.	No habitation exist within the project site and R&R is not applicable.	--
iii.	Latitude and Longitude of the project site	Latitude - 24°25'50.39" N to 24°26'27.12" N Longitude - 083°00'35.79" E to 083°00'56.84" E	--
iv.	Elevation of the project site	213 m to 233 m above mean sea level	--
v.	Involvement of Forest land if any.	No Forest land is involved in the project area	

S No	Particulars	Details	Remarks
vi.	Water body exists within the project site as well as study area	<p><b>Project site:</b> two natural drainage passes through project site.</p> <p><b>Study Area:</b>                      Rihand River (~3.5 km in SSW)                      Son River (~5.5 km in NE)                      Obra Dam (~4.5 km in West)                      Naula Nala (~1.0 km in South)                      Kajrahat Nala (~4.5 km in NE)                      Chhotaghagh Nala (~5.5 km in South)                      DatasiNadi (~8.0 km in SSW)                      BandijhariyaNadi (~8.5 km in SSW)                      Parewal Nala (~8.5 km in NNW)                      Jatiya Nala (~9.5 km in ENE)</p>	--
vii.	Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area	<p>Kaimoor Wildlife Sanctuary: ~5.5 km in NE</p> <p>As per MoEFCC notification S.O. 2601 dated 22/09/2015, the extent of Eco-sensitive zone is up to 1 km from the boundary of the Kaimoor Wildlife Sanctuary. The proposed project site will be located outside the Eco-Sensitive Zone i.e., at a distance of approx. ~4.5 km.</p> <p>Tapu Reserve: ~8.0 km/ NNW</p>	--

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

S No	Name	Proposed Units	
		Configuration	Production
1	Cement	Vertical Rolling Mill 350 TPH	3.0 MTPA
2	DG set	--	250 kVA

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

S No	Name of Raw Material	Quantity (MTPA)	Source	Distance from site (Kms)	Mode of Transportation
1.	Clinker	1.7841	ACC Kymore or ACC Amehta or open market also, if required	~358 km	By Rail / Road
2.	Gypsum	0.165	Rajasthan or Open market	~850-1200 km	By Rail / Road
3.	Fly ash	1.05	Obra Thermal Power Plant/ Others if necessitated	~9.5 Km	By Road
4.	Grinding	0.0009	Open market	~1000 km	By Road

S No	Name of Raw Material	Quantity (MTPA)	Source	Distance from site (Kms)	Mode of Transportation
	Aid				

- 45.5.6 The water requirement for the project is estimated as 319KLD, which will be obtained from ground water through bore well(s). The permission for drawl of groundwater will be obtained for the proposed Grinding Unit.
- 45.5.7 The power requirement for the project is estimated as 18 MW, which will be obtained from the Poorvanchal Vidyut Vitaran Nigam Ltd, Govt. of UP and D.G. sets of 250 KVA for back up during Grid power failure.
- 45.5.8 The capital cost of the project is Rs. 600.80 Crores and the capital cost for environmental protection measures is proposed as Rs. 25 Crores. The employment generation from the proposed project is 250 Persons.
- 45.5.9 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.
- 45.5.10 Name of the EIA consultant: M/s. J.M. EnviroNet Pvt. Ltd. [Sl. No. 9, List of ACOs with their Certificate no. NABET/EIA/2023/RA 0186, valid up to 07/02/2023; Rev. 14, September 15, 2021]
- 45.5.11 Proposed Terms of Reference (**Post Monsoon Season (October, 2020 to December, 2020)**):

Attributes	Parameters	Sampling		Remarks
		No. of Stations	Frequency	
A. Air				
a. Meteorology	Temperature, Relative Humidity, Wind Speed, Wind Direction, Rainfall	01 (Project site)	Hourly	-
b. Air	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>2</sub> , CO and PAHs	08	Twice a week (24 Hourly)	-
B. Noise				
	Equivalent noise levels in Leq in dB (A)	08	Once in a season (Day & Night time)	-
C. Water				
a. Surface water/ b. Ground water quality parameters	Parameters as per IS 10500 - 2012	08	Once in a season	-
D. Land				
a. Soil Quality	Parameters As per IS 2720/USDA	08	Once in a season	-

Attributes	Parameters	Sampling		Remarks
		No. of Stations	Frequency	
b. Land Use	Agriculture, Habitation, Industry, Stony waste/ Quarries, Forest area, Plantation/ Vegetation, Open scrub, Water bodies etc	10 km radius Study Area	Once in a Study period Season	-
E. Biological				
a. Aquatic	Flora and fauna	Study area	Once in a season	-
b. Terrestrial				
F. Socio-economic parameters	Economic Demography	Study area	Once in a season	-

#### Observations of the Committee

45.5.12

The EAC noted the following:

- i. Instant proposal is for undertaking EIA study for setting up of standalone grinding unit at SalaiBanwa, Village: Panari and Kota, Tehsil: Obra, District: Sonbhadra, Uttar Pradesh.
- ii. The project falls under Category 'B' schedule 3(b) of the EIA Notification, 2006. As the Eco-Sensitive Zone of Kaimoor Wildlife Sanctuary falls at a distance of 4.5 km from the proposed project site; General condition is applicable on the project. Therefore, the project will be treated as Category "A" project and will be appraised at Central Level (MoEF&CC, New Delhi).
- iii. Total project area is 32.6 ha.
- iv. There are two nallahs passing through the project site.

#### Recommendations of the Committee

45.5.13

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. There are two rivers present near the project site, PP shall explore the feasibility of water withdrawal from any surface source. No ground water withdrawal shall be permitted for proposed the project except upto 50 KLD of water only for domestic purposes.
- ii. Action plan to limit the dust emission from all the stacks below 30 mg/Nm<sup>3</sup> 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 40% of the project area shall be submitted. In addition to this, two natural nallahs passing through the project site shall be landscaped on both embankments, with green belt covering 10 m land on both sides of the nallah. A plan for this shall be submitted. This shall be in addition to the 40% green belt development of the project area.
- v. Action plan for rain water harvesting shall be submitted.
- vi. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

45.6 Proposed Greenfield Cement Plant - 3.2 MTPA Clinker & 4.25 MTPA Cement (OPC/PPC/PSC/ Composite Cement), 30 MW Thermal Power Plant, 15 MW Waste Heat Recovery Plant by **M/s NU Vista Limited** located at Tangeda Village, Dachehalli Tehsil, **Guntur District, Andhra Pradesh**. [Online Proposal No. IA/AP/IND/229694/2021; File No.: J-11011/226/2016-IA.II(I)] – **Prescribing for Terms of Reference** – regarding.

45.6.1 M/s. NU Vista Limited has made an online application vide proposal no. IA/AP/IND/229694/2021, dated 17/09/2021 along with the application in prescribed format (Form- I), Copy of Pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no 3 ‘(b)’ Cement Plants 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**

45.6.2 The project of M/s. NU Vista Limited is located in Tangeda Village, Dachehalli Tehsil, Guntur District, Andhra Pradesh is for Proposed Greenfield Cement Plant - 3.2 MTPA Clinker & 4.25 MTPA Cement (OPC/PPC/PSC/ Composite Cement), 30 MW Thermal Power Plant, 15 MW Waste Heat Recovery Plant and 100 TPH Synthetic Gypsum Plant.

45.6.3 The project was earlier accorded Terms of Reference in the name of M/s. Emami Cement Limited vide letter no. J-11011/226/2016-IA.II(I) dated 3<sup>rd</sup> January, 2017. The validity of TOR expired on 2<sup>nd</sup> January, 2021. Due to change of Name from M/s. Emami Cement Ltd to M/s. NU Vista Limited, a fresh application for obtaining TOR is being filed.

45.6.4 Environmental site settings:

S No	Particulars	Details	Remarks		
i.	Total land.	125 ha. Private Agricultural land  NVL has purchased about 70.0 Ha. of land directly and balance is under process	Land use:		
			<b>S No</b>	<b>Descriptions</b>	<b>Area (ha.)</b>
			1	Cement Plant	13.50
			2	Captive Power Plant	10.00
			3	Raw material storage Handling (Ramp) area	13.00
			4	Parking Area	4.00
			5	Colony	10.00
			6	Greenbelt area	41.25
			7	General store and others utilities Building	2.50
			8	Railway siding	8.50
			9	Future Provision Cement+CPP	17.25
10	Roads	5.00			
		<b>Total area</b>	<b>125.0</b>		
ii.	Existence of habitation	None, No R&R is involved			

S No	Particulars	Details	Remarks
	&involvement of R&R, if any.		
iii.	Latitude and Longitude of the project site	<b>Latitude:</b> 16°38'41.15"N - 16°39'51.71"N, North <b>Longitude:</b> 79°48'11.36"E - 79°48'48.26"E East	
iv.	Elevation of the project site	80 m above MSL.	
v.	Involvement of Forest land if any.	No Forest Land Involved	
vi.	Water body exists within the project site as well as study area	<b>Project site:</b> Nil <b>Study area:</b> Tangeda Major Canal – Adjacent to the plant site in West Vemuleru R: 7.83 km/ NNW Krishna River: 2.93 km/ NNE MamidimottaVagu: 6.46 km/ NE UraVagu: 7.9 km/ ENE ElagaVagu: 8.45 km/ENE GanneruVagu: 8.55 km/ ESE RallaVagu: 6.20 km/ ESE Tadutla Minor: 7.6 km/ SE BarimedaVagu: Adjacent/E NendraVagu: 0.67 km/ NNW NaguleruVagu: 9.17 km/ W	Krishna River is at 2.93 km  HFL of Krishna River is 56 m AMSL  Plant site is 80 m AMSL
vii.	ExistenceofESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any withinthestudy area	Nil. However, following forests are located in the study area: Sultanpur RF: 3.8 km/ NNE Tangeda RF: 0.1/ N Regulagadda RF: 4.2 km/ ENE Vemavaram RF: 3.9 km/ SE Madinapadu RF: 3.8 km/ WNW Gurrambodu RF: 6.2 km/NNW	

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

S No	Name	Production
1	Clinker	3.2 MTPA
2	Cement (OPC/PPC/PSC/Composite Cement)	4.25 MTPA
3	Coal Based Captive Power Plant (CPP)	30 MW

S No	Name	Production
4	Waste Heat Recovery Based Power Plant (WHRB)	15 MW

45.6.6 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.	Name of Raw Material	Quantity (MTPA)	Source	Approx distance from plant (km)	Mode of Transportation
1.	Limestone	4.80	Captive Mine / Outsource	Adjacent	Covered Conveyor Belt
2.	Bauxite	0.09	East Godavari & Vishakhapatnam (AP) / Local Market	300	Road
3.	Iron Ore	0.09	Cuddaph District (AP) / Local Market	450	Road
4.	Gypsum (Mineral / Synthetic)	0.22	Captive Synthetic Gypsum Unit / Near-by Fertilizer Plants at Vizag / Vishakhapatnam	300	Road
5.	Fly ash	0.7	CPP / Thermal Power Plants at VTPS /TSGENCO and Near-by Power Plants	30-100	Road
6	Slag	0.32	Vishakhapatnam and Steel plants in southern part of country / Local Market	300	Road / Rail
7	Coal for cement plant	0.48	Coal Indian - Preferably SCCL / Open market Imported Coal - Indonesia, South Africa, Australia etc.	220	Rail
8	Coal for power plant	0.182	Coal Indian - E-auction	200-250	Rail

45.6.7 Total water requirement of the proposed greenfield cement plant is estimated to be about 3500 m<sup>3</sup>/day. The requirement will be met from ground water & Krishna River. Permission for drawl of water will be obtained from concerned competent authority.

45.6.8 The average specific power consumption in the cement plant is estimated to be about 70 kWhr/T of cement. Total power requirement for the proposed project will be 40 MW. The total power requirement of the cement plant including the requirement of the colony will

be met from the proposed 30 MW Captive Coal based Thermal Power Plant & 15 MW Waste Heat Recovery Power Plant. In case additional power is required, will be sourced from Grid. 2325 kVA diesel fired DG sets will be installed as standby power supply units.

- 45.6.9 The capital cost of the project is Rs.1950 Crores and the capital cost for environmental protection measures is proposed as Rs.97.50 Crores. The employment generation from the proposed project is 538.
- 45.6.10 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.
- 45.6.11 Name of the EIA consultant: M/s.B.S. Envi Tech Pvt. Ltd. [Sl. No. 141, List of ACOs with their Certificate no. NABET/EIA/1922/RA 0174, valid up to 16/11/2022; Rev. 14, September 15, 2021].
- 45.6.12 Proposed Terms of Reference (**Baseline data collection period: Post Monsoon season 2021 (October 2021 – December 2021):**

Attributes		Sampling		Remarks
		No. of Stations	Frequency	
<b>A. Air</b> a) Meteorological Parameters	Temperature, wind speed, wind direction, relative humidity, rainfall, and cloud cover	1	24 hours	-
	b) AAQ parameters PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , and CO	7	Twice a week per month for three months	-
<b>B. Noise</b>	Day and Night	7	24-hour reading will collect once in the monitoring season	-
<b>C. Water</b> Surface water/ Ground water quality parameters	Surface water as per CPCB Ground Water as per IS 10500	7	Once in monitoring season	-
<b>D. Land</b> a) Soil quality	pH, Electrical Conductivity, Exchangeable Cations, CEC, Organic Carbon, Organic Matter available NPK and Heavy Metals	7	Once in monitoring season	-
	Remote sensing	10 km		

Attributes		Sampling		Remarks
		No. of Stations	Frequency	
b) Land use	satellite data	radial distance	-	-
<b>E. Biological</b> a. Aquatic b. Terrestrial	Primary as well as secondary data will be conducted for flora and fauna of the study area during monitoring Season.			
<b>F. Socio-economic parameters</b>	Primary and Secondary Data Collection Need Based Studies			

- 45.6.13 During the course of meeting, PP has submitted written submissions on the following points:
- i. Project proponent has withdrawn the proposal of 100 TPH Synthetic Gypsum plant from the project/activity.

**Observations of the Committee**

- 45.6.14 The EAC noted the following:
- i. TOR is being sought for undertaking EIA study for a greenfield Integrated Cement Plant for production of 3.2 MT per annum Clinker and 4.25 MT per annum of cement, 30 MW CPP and 16 MW WHRB at Tangeda, Andhra Pradesh.
  - ii. Earlier, TOR for this project was obtained on 31<sup>st</sup> Jan 2017 in the name of Emami Cements. The validity of the TOR has since expired and the plant could not take off. The plant is now taken over by M/s. Nu Vista.
  - iii. Housing colony is proposed to be built for 200 dwellings in an area of 19000 sqm, within the plant complex. Necessary approvals in this regard will be obtained by the PP from the concerned competent authority.
  - iv. 3500 KLD water shall be drawn from ground and Krishna river flowing 2.93 km N of the site.
  - v. Nearest village Tangeda is only 380 m in NE direction.
  - vi. Tangeda RF is only 100 m from the plant site.
  - vii. Interstate boundary of AP and Telangana is only 3.2 km NNE.

**Recommendations of the Committee**

- 45.6.15 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:
- i. Action plan to limit the dust emission from all the stacks below 30 mg/Nm<sup>3</sup> shall be furnished.
  - ii. Action plan for fugitive emission control in the plant premises shall be provided.
  - iii. Action plan for green belt development covering 33% of the project area shall be submitted. This shall include 30 m green belt development inside the project area towards RF and Tangeda village.
  - iv. Action plan for 100 % solid waste utilization shall be submitted.
  - v. Action plan for extensive rain water harvesting shall be submitted.
  - vi. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

- vii. Air Cooled condensers shall be used in Captive Power Plant.
- viii. 3500 KLD water shall be drawn from Krishna River flowing 2.93 km N of the site. No ground water abstraction is permitted.
- ix. PP shall conduct ambient air quality monitoring at Minimum of 9 AAQ monitoring stations and the existing monitoring network accordingly realigned.
- x. Air cooled condensers shall be used in the power plant.

45.7 **M/s. NCL Industries Ltd.,** (30 MW Coal based TPP), Mattapalli (V), Mattampalli (M), **Nalgonda District, Telangana.** [Online Proposal No. IA/TG/IND/205416/2021; File No.: J-11011/377/2021-IA.II(I)] – **Extension of validity of Environment Clearance** – regarding.

45.7.1 M/s. NCL Industries Limited has made online application vide proposal no. IA/TG/IND/205416/2021 dated 23/03/2021 along with Form 6 and sought extension of validity of Environment Clearance accorded by the SEIAA, Andhra Pradesh vide order No. SEIAA/AP/NLG-35/2011/692 dated 27.04.2013. The unit obtained EC during the year 2013 under category B when it was United Andhra Pradesh. Due to state bi-furcation in June, 2014, now the general condition is applying for project due to inter-state boundary of Telangana and Andhra Pradesh at a distance of 2.1 KM from the site and hence the project is now coming under category 'A'. EDS was raised to the PP on 31/03/2021 with a request to transfer the entire file from SEIAA to MoEF&CC. Accordingly, the file was sent by the SEIAA on 5/5/2021 and PP replied to the EDS on 15/09/2021.

45.7.2 The validity period of the EC cited above got expired on 26/04/2020. However, as per the provisions of S.O. 221 (E) dated 18/01/2021, the period from the 1<sup>st</sup> April, 2020 to the 31<sup>st</sup> March, 2021 shall not be considered for the purpose of calculation of the period of validity of Prior Environmental Clearances granted under the provisions of this notification in view of outbreak of Corona Virus (COVID-19) and subsequent lockdowns (total or partial) declared for its control, however, all activities undertaken during this period in respect of the Environmental Clearance granted shall be treated as valid.

**Details submitted by the project proponent**

45.7.3 M/s. NCL Industries Limited was obtained Environmental Clearance from SEIAA vide order No. SEIAA/AP/NLG-35/2011/692 dated 27.04.2013 for captive coal based Thermal Power plant with a capacity of 30MW at Mattapalli Village, Mattampalli Mandal, Nalgonda District, Telangana, Andhra Pradesh. CFE was issued from Andhra Pradesh State Pollution Control Board vide order No240/CB/CFE/RO-NLG/HO/2014-23 dated 01.04.2014.

45.7.4 The implementation status of the EC dated 27/04/2013 is as follows:

S No	Facilities	Units	As per EC Dated	Implementation Status	Consent (CTE/CTO)
1	Electricity	30 MW	SEIAA/AP/NLG-35/2011/692 dated 27.04.2013	Due to the financial Reasons, NCL Limited could not implement the	CFE obtained vide Order no: 240/CB/CFE/R O-NLG/HO/2014-

S No	Facilities	Units	As per EC Dated	Implementation Status	Consent (CTE/CTO)
				project. Now the unit proposed to initiate project activities and expected to complete the project within next 3 years period.	23 Dated: 01.04.2014.

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

45.7.6 Due to the financial Reasons, NCL Industries Limited could not implement the project. Now the unit proposed to initiate project activities and expected to complete the project within next 3 years period.

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

#### Observations of the Committee

45.7.8 The Committee noted the following:

- i. The NCL Industries Limited is operating the cement plant 1984 and obtained EC from MOEF&CC on 22/01/2008, 15/12/2009 and 28/10/2016 and captive power plant of 30 MW as per EC dated 27/04/2013 from SEIAA, Andhra Pradesh in same plant premises. Besides, PP also obtained expansion ToR from MoEF&CC on 1/4/2021 based on the proposal number IA/TG/IND/204788/2021. However, PP has not disclosed the fact regarding the grant of EC for the 30 MW power plant by the SEIAA on 27/04/2013 neither during 2016 nor in 2021. The layout exhibited as part of EC validity extension and expansion ToR proposal are found to be not in consistent with each other.
- ii. The proponent vide their email dated 29/09/2021 requested for withdrawal of their EC validity extension proposal.

#### Recommendations of the Committee

45.7.9 In view of above and after deliberations, the Committee recommended the following:

- i. Instant proposal of EC validity extension of the proponent may be withdrawn as requested by the proponent.
- ii. Ministry may seek an explanation from the PP for not disclosing the grant of EC for their captive power plant by SEIAA – AP at the time of grant of EC during 2016 and expansion ToR application submitted on 1<sup>st</sup> April, 2021.

45.8 Brownfield project or enhancing the production capacity of sponge Iron from (2x100 TPD DRI)- 60,000 TPA to Sponge Iron (6x100 TPD DRI)- 200,000 TPA along with new set up of MS Billet 300,000 TPA and/or Rerolled Steel Products through Hot Charging 150,000 TPA and through Reheating Furnace 150,000 TPA; MS Black Pipe Mill 140,000 TPA, Galvanizing plant 100,000 TPA, Captive Power Plant 20MW (12MW through WHRB and

8MW through AFBC) and Fly Ash Bricks 69,300 TPA by **M/s. KalindiIspat Private Limited** located at Village- Belpa, Tahsil- Masturi, **District- Bilaspur, Chhattisgarh.** [Online Proposal No. IA/CG/IND/228099/2021; File No.: IA-J-11011/126/2021-IA-II(I)] – **Amendment in Terms of Reference**– regarding.

45.8.1 M/s. Kalindi Ispat Private Limited has made an application online vide proposal no. IA/CG/IND/228099/2021, dated 07/09/2021 along with Form 3 and sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. IA-J-11011/126/2021-IA-II(I) dated 01/07/2021.

**Details submitted by the project proponent**

45.8.2 M/s. KalindiIspat Private Limited had earlier applied for grant of ToR for Brownfield project for enhancing the production capacity of sponge Iron from (2x100 TPD DRI)-60,000 TPA to Sponge Iron (6x100 TPD DRI)- 200,000 TPA along with new set up of MS Billet 300,000 TPA and/or Rerolled Steel Products through Hot Charging 150,000 TPA and through Reheating Furnace 150,000 TPA; MS Black Pipe Mill 140,000 TPA, Galvanizing plant 100,000 TPA, Captive Power Plant 20MW (12MW through WHRB and 8MW through AFBC) and Fly Ash Bricks 69,300 TPA. The proposal was considered in 38<sup>nd</sup> meeting held on 15-16<sup>th</sup> June, 2021. Accordingly TOR was issued vide letter no J-11011/126/2021-IA.II (I) dated 1<sup>st</sup> July, 2021.

45.8.3 Reason for seeking amendment of ToR:

As per ToR Letter Vide F. No. IA-J-11011/126/2021-IA-II(I) dated 01/07/2021, Baseline data collected during summer season (1<sup>st</sup> March, 2021 to 31<sup>st</sup> May, 2021) is not allowed for preparation of EIA as it was not found in accordance to the CPCB guidelines. Hence the committee suggested collecting a fresh baseline data during post monsoon 2021.

The only change requested is to allow us to use of already collected baseline data during Pre Monsoon Season 1<sup>st</sup> March, 2021 to 31<sup>st</sup> May, 2021 to carryout Public Hearing Process. Our present capacity of the plant is just 2x100 TPD i.e. with about 200 TPD DRI productions. The daily Coal consumption in this is less than 300 Tons per day. So the present contribution to the GLC is not contributed significantly. On conducting the modeling exercise from our present facility of the plant PP found that contribution to GLC is not significant.

45.8.4 No changes are proposed in project configuration and capacity of granted ToR dated 01/07/2021.

45.8.5 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**

45.8.6 EAC opined that, the ToR was granted to the project cited above by Ministry on 01/07/2021 with specific ToR of Baseline study shall be again conducted in post monsoon period because of the data already collected during March to May, 2021 was not as per the CPCB guideline. Now, PP has requested to allow him to use the environmental baseline data collected during March to May, 2021 for conducting the public hearing.

**Recommendation of the Committee**

45.8.7 In view of the foregoing and after deliberations, the EAC rejected the ToR amendment proposal of the proponent.

45.9 Proposed Integrated Cement Plant (Clinker - 4.5 MTPA; Cement - 4.0 MTPA; WHRS - 37.5 MW and D.G. Sets - 2500 KVA [{(2 x 1000 KVA) & (1 x 500 KVA)} or {(1 x 1000 KVA), (2 x 500 KVA) & (2 x 250 KVA)}] by **M/s. Shree Cement Limited (Unit: Bangur Cement Unit)** at Villages: Bhivgarh, Jawangarh and Ras - II, Tehsil - Jaitaran, **District: Pali, Rajasthan.** [Online Proposal No. IA/RJ/IND/228334/2021; File No.: IA-J-11011/398/2018-IA-II(I)] – **Amendment in Terms of Reference** – regarding.

45.9.1 M/s. Shree Cement Limited (Unit: Bangur Cement Unit) has made an online application vide proposal no. IA/RJ/IND/228334/2021 dated 08/09/2021 along with Form 3 and sought for amendment in Terms of Reference accorded by the Ministry vide letter no. J-11011/398/2018-IA.II(I) dated 10/07/2019.

**Details submitted by the project proponent**

45.9.2 M/s. Shree Cement Limited (Unit: Bangur Cement Unit) had earlier applied for grant of ToR for Integrated Cement Plant Clinker (4.5 MTPA), Cement (8.0 MTPA), WHRS (37.5 MW). The proposal was considered in 2<sup>nd</sup> meeting held on 10-12<sup>th</sup> December, 2018. Accordingly TOR was issued vide letter no J-11011/398/2018-IA.II (I) dated 10<sup>th</sup> July 2019.

45.9.3 Reason for seeking amendment and transfer of ToR:  
Due to land constraint, the company could not be able to acquire part of the land required for the project as per earlier submitted land details; therefore, the company is reducing the project land area, changing the project configuration with re-orientation of the plant layout and proposing amendment in ToR Letter issued by MoEF&CC, New Delhi.

However, Baseline study for the project has been carried out during Winter Season (Dec., 2020 to Feb., 2021) as per ToR letter issued by MoEF&CC, New Delhi.

45.9.4 The production capacity details as per the granted ToR dated 10/07/2019 vis-à-vis proposed changes are as follows:

S No	Product / Activity (Capacity/ Area)	Quantity As per approved	Quantity proposed	Unit
1	Cement	8.0	4.0	Million TPA
2	Clinker	4.5	4.5	Million TPA
3	WHRs	37.5	37.5	MW
4	DG Sets	0	2500	KVA

45.9.5 In case of other changes, details as per the granted ToR vis-à-vis proposed changes:

S. No.	Plant / Equipment / Facility	Detail as per ToR granted	Amendment proposed	Remarks
1.	Crusher	1450 TPH	1450 TPH	No Change
2.	Limestone Reclaimer	2 x 1500 TPH	1500 TPH	1500 TPH capacity will be reduced
3.	Cement Mill	2 x 13000 TPD	1 x 13000 TPD	13000 TPD capacity

S. No.	Plant / Equipment / Facility	Detail as per ToR granted	Amendment proposed	Remarks
				will be reduced
4.	Coal &Petcoke Mill	100 / 65 TPH (Coal &Petcoke)	100 / 65 TPH (Coal &Petcoke)	No Change
5.	Raw Meal Silo	20000 MT	20000 MT	No Change
6.	Limestone Stacker	2 x 1500 TPH	2900 TPH	100 TPH capacity will be reduced
7.	Gypsum Storage	2 x 15000 MT	15000 MT	15000 MT capacity will be reduced
8.	Clinker Tank	2 x 75000 MT	2 x 100000 MT	50000 MT will be increased
9.	Coal Reclaimer	300 TPH	300 TPH	No Change
10.	Slag	Nil	1 x 7500 MT	1 x 7500 MT capacity will be increased
11.	Limestone stockpile	2 x 75000 MT	1 x 100000 MT	50000 MT capacity reduced
12.	Kiln	13500 TPD	13500 TPD	No change
13.	Iron Ore / Laterite storage	15000 MT	5000 MT capacity will be increased	5000 MT capacity will be increased
14.	Packer	4 Packers each with 16 spouts double discharge type	4 Packers each with 16 spouts double discharge type	No change
15.	Pond ash storage	2 x 15000 MT	10000 MT	20000 MT capacity reduced
16.	Coal & Gypsum stacker	1500 TPH	1500 TPH	No change
17.	Cement Silo	4 x 10000 MT	4 x 10000 MT	No Change
18.	Coal &Petcoke Storage	5000 MT	5000 MT	No Change
19.	Raw Mill (VRM)	800 TPH	900 TPH	100 TPH Capacity will be increased

S. No.	Reference of Approved ToR	Description as per Approved ToR	Description as per Proposal	Remarks
1.	Project Title in the Subject	Integrated Cement Plant (Clinker - 4.5 MTPA; Cement - 8.0 MTPA; WHRS - 37.5 MW)	Integrated Cement Plant (Clinker - 4.5 MTPA; Cement - 4.0 MTPA; WHRS - 37.5 MW and D.G. Sets - 2500 KVA {(2 x 1000 KVA) & (1 x 500 KVA)} or {(1 x 1000 KVA), (2 x 500 KVA) & (2 x 250 KVA)})	✓ Configuration of project changed due to reduction in area. ✓ Reduction in Cement mill Capacity from 8.0 MTPA to 4.0 MTPA
2.	S. No. 2, Line no. 2	Project (Clinker - 4.5 MTPA; Cement - 8.0 MTPA; WHRS - 37.5 MW)	Project (Clinker - 4.5 MTPA; Cement - 4.0 MTPA; WHRS - 37.5 MW and D.G. Sets - 2500 KVA {(2 x 1000 KVA) & (1 x 500 KVA)} or {(1 x 1000 KVA), (2x500 KVA) & (2 x 250 KVA)})	✓ Configuration of project changed due to reduction in area. ✓ Reduction in Cement mill Capacity from 8.0 MTPA to 4.0 MTPA
3.	S. No. 5	The land was purchased/ acquired for the proposed plant is <b>40.87 ha</b> (101	The total area required for the Proposed Plant is <b>32.27 ha</b> (79.73 acre) which is	Due to land constraint, Area of the plant site is

S. No.	Reference of Approved ToR	Description as per Approved ToR	Description as per Proposal	Remarks
		acre); out of which 21.25 ha was converted to industrial area and the rest 19.62 ha is agricultural land. No forest land is involved. Out of the total area 40.87 ha, 3.17 ha area is yet to be purchased. Out of the total area, <b>14.57 ha</b> (36%) will be used for greenbelt & plantation development around the plant boundary.	totally under the possession of company. Out of 32.27 ha (79.73 acre) area 21.62 ha (53.43 acre) has been converted into industrial and conversion of remaining 10.65 ha (26.30 acre) from agricultural to industrial is under process. No forest land is involved. Out of the total area, <b>11.74 ha</b> (36.37%) will be used for greenbelt plantation & plantation development around the plant boundary.	reduced from 40.87 ha (101 acre) to 32.27 ha (79.73 acre).
4.	S. No. 7	Total project cost is Rs. 1310 Crores (Phase-I: Rs. 990 Cr and Phase-II: 320 Cr). Proposed employment generation from proposed project will be 230nos of persons through direct employment and 900 nos. of persons through indirect employment.	Total project cost is Rs. 1872 Crores. Proposed employment generation from proposed project will be 170nos of persons Regular manpower & 600 contractual manpower through direct employment and 1000 nos. of persons through indirect employment.	Project cost has been increased as the cost of plant & machinery has been increased, cost of the project has been calculated based on recent cost assessments.
5.	S. No. 8	The targeted production capacity will be Clinker - 4.5 MTPA, Cement - 8.0 MTPA & WHRS - 37.5 MW.	The targeted production capacity will be Clinker - 4.5 MTPA, Cement - 4.0 MTPA, WHRS - 37.5 MW and D.G. Sets - 2500 KVA [(2 x 1000 KVA) & (1 x 500 KVA)] or [(1 x 1000 KVA), (2x500 KVA) & (2 x 250 KVA)].	- Configuration of project changed due to reduction in area. - Reduction in Cement mill Capacity from 8.0 MTPA to 4.0 MTPA
6.	S. No. 9	The electricity load of <b>55.2MW</b> will be sourced from existing Captive Power Plant of Shree Cement Ltd. and Proposed WHRS.	The electricity load of <b>46.17MW</b> will be sourced from existing Captive Power Plant of Shree Cement Ltd. and Proposed WHRS.	-
7.	S. No. 11	Water Consumption for the proposed project will be <b>630 KLD</b> which will be sourced from ground water (125 KLD) and mine pit (505 KLD) and no waste water will be discharged from the cement plant. Domestic waste water (40 KLD) will be treated in STP and treated water will be used for greenbelt development / plantation. No industrial waste water	Water Consumption for the proposed project will be <b>530 KLD</b> which will be sourced from ground water (50 KLD, domestic waster requirement) and balance required 480 KLD water will be source either from treated water of Beawar City STP through pipeline or mine pit and no waste water will be discharged from the cement plant. Domestic waste water (34 KLD) will be treated in STP and treated water will be	-

S. No.	Reference of Approved ToR	Description as per Approved ToR	Description as per Proposal	Remarks
		will be generated	used for greenbelt development / plantation. No industrial waste water will be generated.	
8.	Specific Condition No. 1	The project proponent shall plan for development of <b>50 m wide</b> greenbelt in northern and southern sides to create barrier between plant and agricultural fields.	The project proponent shall plan for development of <b>25 m wide</b> greenbelt in northern and southern sides to create barrier between plant and agricultural fields.	Due to unavailability of land & difficulty in reorientation of plant machinery, we have reduced the width of plantation from 50 m to 25 m wide greenbelt in northern and southern sides to create barrier between plant and agricultural fields. However, we assure that we will create a thick barrier of plantation as greenbelt with more number & density of trees in this area.

45.9.6 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.

45.9.7 The proposal was considered in 45<sup>th</sup> meeting held on 28-29<sup>th</sup> September, 2021. The observations and recommendations of EAC is given as below:

#### Observations of the Committee

45.9.8 The Committee noted the following:

- i. The original Terms of Reference (ToR) was accorded by the Ministry vide letter dated 10/07/2019 for Clinker - 4.5 MTPA; Cement - 8.0 MTPA; WHRS - 37.5 MW.
- ii. The plant configuration is changed to Clinker - 4.5 MTPA; Cement - 4.0 MTPA; WHRS - 37.5 MW and D.G. Sets - 2500 KVA.
- iii. Other changes that shall accrue due to the proposed change are:
  - a. Project land area reduced from 40.87 ha to 32.27 ha.
  - b. Total project cost increased from Rs. 1310 crores to Rs. 1872 crores.
  - c. Total employment reduced from 230 to 170 persons.
  - d. Total electricity load reduced from 55.2 MW to 46.17 MW.
  - e. Total water requirement reduced from 630 KLD to 530 KLD.
  - f. Greenbelt along the periphery reduced from 50 m to 25 m in width.

#### Recommendations of the Committee

45.9.9 In view of the foregoing and after deliberations, the Committee recommended for amendment of ToR dated 10/07/2019 as mentioned at paragraph 45.9.4 and 45.9.5 subject to stipulation following additional specific ToRs:

- i. Action plan with physical targets to address the issues raised during public consultation shall be submitted as per MoEF&CC O.M. dated 30/9/2020.

- ii. Action plan for green belt development covering 37% of the total project area all along periphery of the project site with a tree density of 2500 trees per hectare shall be submitted.

**29<sup>th</sup> September, 2021**

45.10 Expansion of Steel Plant (1000TPD Sponge Iron; 1000 TPD Billet; 50MW Captive Power; 1000 TPD TMT to 1000 TPD Sponge Iron; 3000 TPD Billet; 3000 TPD TMT; 50 MW Captive Power) by **M/s. Om Sairam Steels & Alloys** located at Plot No.1,2,3,8,9,10, Add. MIDC Phase II and Gut No. 46 & 63 at Village Daregaon, **District Jalna, Maharashtra.** [Online Proposal No. IA/MH/IND/228546/2015, File No. IA-J-11011/57/2015-IA-II(I)] – **Environment Clearance**– regarding.

45.10.1 M/s. Om Sairam Steels and Alloys has made an online application vide proposal no. IA/MH/IND/228546/2015 dated 19/09/2021 along with copy of EIA/EMP report, Form-2 and copy of certified EC Compliance report 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**

45.10.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
24/04/2019	8 <sup>th</sup> REAC (Industry- 1) meeting held on 26 <sup>th</sup> June, 2019	Terms of Reference	05/09/2019

45.10.3 The project of M/s. OmSairam Steels and Alloys located at Plot No.1,2,3,8,9,10, Add. MIDC Phase II and Gut No. 46 & 63 at Village Daregaon, District Jalna, Maharashtra is for expansion of Steel Plant (1000TPD Sponge Iron; 1000 TPD Billet; 50MW Captive Power; 1000 TPD TMT to 1000 TPD Sponge Iron; 3000 TPD Billet; 3000 TPD TMT; 50 MW Captive Power).

45.10.4 Environmental Site Settings:

SN	Particulars	Detail	Remarks																
i.	Total land	6.86 ha [Government land]  Project built up area 5.3473 Ha along with extra land of 1.5127 Ha allocated by MIDC for Greenbelt Development inside the Industrial Area.	Land use: Industrial Land																
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Total land has been leased out from MIDC for industrial development.	--																
		<table border="1"> <thead> <tr> <th>S No</th> <th>Plot No</th> <th>Area (ha)</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>F1</td> <td>05367</td> <td>Lease executed on 23<sup>rd</sup> October,2003</td> </tr> <tr> <td>2</td> <td>F2</td> <td>0.574</td> <td></td> </tr> <tr> <td>3</td> <td>F3</td> <td>0.423</td> <td>Lease executed on 8<sup>th</sup></td> </tr> </tbody> </table>	S No	Plot No	Area (ha)	Remark	1	F1	05367	Lease executed on 23 <sup>rd</sup> October,2003	2	F2	0.574		3	F3	0.423	Lease executed on 8 <sup>th</sup>	
S No	Plot No	Area (ha)	Remark																
1	F1	05367	Lease executed on 23 <sup>rd</sup> October,2003																
2	F2	0.574																	
3	F3	0.423	Lease executed on 8 <sup>th</sup>																

				October,2008	
		4	F8	0.45	Lease executed on 2 <sup>nd</sup> February,2009
		5	F9	0.45	Lease executed on 2 <sup>nd</sup> February,2009
		6	F10	0.9036	Lease executed on 2 <sup>nd</sup> February,2009
		7	Gut.46	1.21	Amalgamated vide letter No MIDC/ROA/ADDI Jalna/108/2009 dated 26/2/2009
		8	Gut.63	0.8	purchased on 17/08/2009
		9	D.53	0.9244	Amalgamated vide letter No 2687 dated 17/05/2018 for greenbelt development
		10	Adjoining plot F1,F2,F3,	0.5883	These area are amalgamated to plant area for greenbelt development vide letter no MIDC/ROA/ADDI Jalna/541/2010 dated 04/02/2010
iii.	Existence of habitation & involvement of R&R, if any.	Proposed enhancement project is coming within the existing plant premises. Hence no land acquisition is required. Therefore, no R&R is required.			--
iv.	Latitude and Longitude of the project site	<b>Corner</b>	<b>Latitude</b>	<b>Longitude</b>	--
		A	19°50'53.65"	75°50'45.04"	
		B	19°50'51.09"	75°50'45.15"	
		C	19°50'51.12"	75°50'45.68"	
		D	19°50'46.50"	75°50'41.26"	
		E	19°50'46.36"	75°50'33.88"	
		F	19°50'45.56"	75°50'33.93"	
		G	19°50'45.42"	75°50'31.96"	
		H	19°50'46.34"	75°50'31.85"	
		I	19°50'46.07"	75°50'29.11"	
		J	19°50'48.98"	75°50'28.76"	
		K	19°50'50.00"	75°50'35.75"	
		L	19°50'52.74"	75°50'35.53"	
v.	Elevation of the project site	529 m above MSL			--
vi.	Involvement of Forest land if any.	No forest Land involved.			--
vii.	Water body exists within the project site as well as study area	<b>Project site:</b> Nil  <b>Study area:</b> Following water bodies are present: <ul style="list-style-type: none"> <li>• Moti Talab-1.94 Km SE</li> <li>• Mukteswar Talab-3.25 Km SE</li> </ul>			--

		• Kundalika River-3.93 NE	
viii.	Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area	Nil	--

45.10.5 The existing project was accorded environmental clearance vide lr.no. J-11011/57/2015-IA.II(I) dated 22/01/2018 and amended on 17/09/2019. Consent to Operate for the existing unit was accorded by Maharashtra Pollution Control Board vide lr. no. 1.0/BO/JD(APC)Amendment/CC-1518(A) dated 23/03/2021. The validity of CTO was up to 30/06/2021. Vide Circular No. MPCB/AST/Circular/TB- dated 06/05/2021 of Maharashtra Pollution Control Board the validity of CTO is extended till 31<sup>st</sup>October 2021.MPCB granted authorization for handling of hazardous waste vide letter no. Format 1.0/CAC/UAN.No.0000049680/CO- 1911000380 dated 11/11/2019.

45.10.6 Implementation status of the existing EC.

Sl. No.	Facilities	As per EC dated 30/01/2008	As per SEAC dated 29/12/2010	As per EC dated 22/01/2018 and amendment dated 17/09/2019	Implementation Status as on date	Production as per CTO
1	Induction Furnace	1x25 T, 1x30 T	1x25 T 3x30 T	<u>EC - 22/01/2018</u> 1x25 T, 4x30 T  <u>Amend- 17/09/2019</u> 1x40 T 3x30T	Installed	1000TPD
2	Sponge Iron	2 x 500 TPD	Nil	No additional capacity	Not yet installed	-
3	CPP	-	-	50MW (24 MW FBC + 26 MWWHRB)	Not installed	-
4	TMT Bars	1000 TPD	-	1000 TPD	1000 TPD	1000 TPD

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

SNo	Name	Existing Units		Proposed Units		Total (Existing +Proposed)	
		Configuration	Production TPD	Configuration	Production TPD	Configuration	Production TPD
1	Induction Furnace	1 x 40 T 3 x 30 T	1000 TPD	2 x 40 T & 3 x 60 T by modification of existing 3 x 30 T furnace to 3 x 60 T furnaces &addition of 1	2000 TPD	2 x 40 T 3 x 60 T	3000 TPD

SNo	Name	Existing Units		Proposed Units		Total (Existing +Proposed)	
		Configuration	Production TPD	Configuration	Production TPD	Configuration	Production TPD
				x 40 T Furnace			
2	Sponge Iron	2 x 500 TPD	1000 TPD	-	-	2 x 500 TPD	1000 TPD
3	CPP	50 MW (24 MW FBC + 26 MW WHRB)	50MW	-	-	50 MW (24 MW FBC + 26 MW WHRB)	50MW
4	TMT Bars	1000 TPD	1000 TPD	2000 TPD	2000TPD	3000 TPD	3000 TPD

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

Raw Materials (TPD)	Existing Raw Material Consumption (in TPA)	Additional Requirement (in TPA)	Total Requirement (in TPA) for proposed expansion	Mode of Transportation	Distance from Site in Km	Source
Iron Ore Pellets	478500	0	478500	Road	400	Bellari
Indian Coal	0	33700	33700	Road	800	Chandrapur
DRI Grade Coal (B Gr)	396000	0	396000	Road	700	Raigarh
Iron Scrap	184600	440800	625400	Road	100	Mumbai and Local Sources
Pig Iron	70000	35000	105000	Road	400	Raipur, Bellari
Dolomite	16500	0	16500	Road	700	Bhilwara
Silico Manganese	10000	16650	26650	Road	800	Raipur, Bellari
<b>Total Quantity</b>	<b>1,155,600</b>	<b>526150</b>	<b>1,681,750</b>	<b>Road</b>	<b>400</b>	

45.10.9 The water requirement for the project is 832 m<sup>3</sup>/day which will be obtained from Maharashtra Industrial Development Corporation (MIDC).

45.10.10 The power requirement for the project is estimated as 58 MW, which will be obtained from the captive Power Plant (50 MW) and balance 8 MW shall be from Maharashtra State Electricity Development Corporation Limited (MSEDCL). Two Dg set of 750 KVA shall be installed for standby.

45.10.11 Baseline Environmental Studies:

Period	December 2018 to February, 2019
AAQ parameters at 8 locations (Min -Max)	PM <sub>2.5</sub> = 18.9 to 27.9µg/m <sup>3</sup> PM <sub>10</sub> = 42.4 to 62.2µg/m <sup>3</sup> SO <sub>2</sub> = 10 to 18.6µg/m <sup>3</sup> NO <sub>2</sub> = 11.0 to 28.4 µg/m <sup>3</sup> CO= 0.1 – 0.4µg/m <sup>3</sup>

AAQ modelling (Incremental GLC)	PM <sub>10</sub> = 0.04µg/m <sup>3</sup> PM <sub>2.5</sub> = 0.01 µg/m <sup>3</sup> SO <sub>2</sub> = 0.3µg/m <sup>3</sup> NO <sub>x</sub> = 0.03 µg/m <sup>3</sup>
Groundwater quality at 5 different locations	pH: 7.2-7.8; TDS: 652 to 686 mg/l; Chlorides: 152 to 173 mg/l; Fluorides: 0.28 to 0.62 mg/l; Total Hardness: 265 to 284.2 mg/l. Heavy metals are within the limits.  Ground Water Analysis interprets typically the TDS is higher in all the bore wells and has some salinity reflected in the fluoride concentration and does not have any kind of heavy metal or iron concentration, but presence of total coliform in some of the bore wells indicate some kind of contamination due to surrounding domestic sewage septic tanks or seepage from open drains.
Surface water quality at 7 different locations	pH: 7.3 to 7.8 DO: 2.7 to 3.8 mg/l COD: 9.8 to 11.2 mg/l BOD: 2.1 to 3.1 mg/l
Noise levels at 5 locations	Night: 36.4 to 56.4 Leq Day: 40.4 to 72.6 Leq
Traffic assessment study findings	The maximum daily average traffic will be 2242 PCU/day on NH 36, and hence is well within the design load for the road conditions.
Flora and fauna	No endangered species found in the study area and there is no Schedule-I fauna within the study area

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

**Hazardous Waste**

S No	Type of Waste	Source Name	Quantity (TPA)			Treatment before disposal	Mode of disposal
			Existing	Proposed	Total		
1	Spent/ Used Oil	From all motors and machineries	1.2KL/Annum	0.6 KL/Annum	1.8 KL/Annum	Collected from source and Stored in Closed Drums	Sold to Authorized Vendor
2	Used Cotton	Handling the machineries	2Kg /annum	2 Kg/Annum	14 Kg/Annum	Stored in a separate closed drum	Sold to Authorized Vendor
3	Resins	DM Plant	0	0.015 TPA	0.015 TPA	Shall be disposed off through Authorized Vendor	Sold to Authorized Vendor

**Solid Waste**

S No	Waste	Source	Quantity(TPA)	Disposal	Remark
1	STP Sludge	STP Sludge	0.33	Used as manure in Green belt	Own garden
2	Office Waste Containing papers, stationeries	Office	1.65	Sales	Dry waste mainly paper, other office stationery waste
3	Packing Material	Material Handling Area	16.50	Collected and Sale	Packing Material like bag, sealing etc
4	Spent Refractory	Process	144.00	Collected and Sale	Shall be stored at earmarked area
5	Dolchar	DRI	2,47,000	Reuse	Will be used in FBC of on plant
6	Ash	CPP	1,70,937	Reuse	Sold to Cement Plants and use for manufacturing fly ash bricks
7	Slag	SMS	80,400	Can be used as alternative building material	Sale to outsiders for using as alternative building material after due TCLP test.
8	Mill scale and Scraps from Rolling Mill	Rolling Mill	39600	Recycle	Recycled in Rolling Mill of own plant
9	DRI Dust	DRI	19200	Reused	Will be sent to brick manufacturer
10	GCP Sludge	GCP	1.65	Can be used as alternative building material	Sale to outsiders for using as alternative building material
11	SMS Slag	SMS	16.5	building material along with slag	Sale to outsiders for using as alternative building material or tile making

45.10.13 Public Consultation:

<b>Details of advertisement given</b>	Published in Times of India (English) and Sakala (Marathi daily newspaper) on 08/01/2020
<b>Date of public consultation</b>	10/02/2020
<b>Venue</b>	Project Area (Plot No.1,2,3,8,9,10, Add. MIDC Phase II and Gut No. 46 & 63 at Village Daregaon, District Jalna, Maharashtra)
<b>Presiding Officer</b>	Additional District Magistrate
<b>Major issues raised</b>	i. Environmental Pollution ii. Employment iii. Rain Water Harvesting iv. CSR

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

S No	Description	Activities to carryout	Capital Cost, Rs. Lakhs	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Remark
1	Emission Engineering / Pollution Control System	Installation of GCP at IF,ESP at CPP, Fixed sprinkler at Material handling site and Road side.	1140.00	900.00	240.00	0.00	Includes the budget earmarked for

S No	Description	Activities to carryout	Capital Cost, Rs. Lakhs	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Remark
							public hearing Observation
2	Water & waste water management	Installation STP of 40 KLD, Water Treatment facility for recycle water at CPP	65.00	40.00	15.00	10.00	Includes the budget earmarked for public hearing Observation
3	Solid Waste	Construction of waste yard for storing	22.50	8.00	6.00	8.5	
4	Greening Belt Development(3 years)	Plantation at Plant Boundary, Road side, Avenue Plantation	16.5	5.5	5.5	5.5	Includes the budget earmarked for public hearing Observation
5	Environmental Monitoring	Installation of online continuous monitoring system at stacks and one continuous Ambient air quality station inside plant premise.	42.00	33.00	9.00	0.00	
6	Rain water harvesting	Construction of Roof top Rainwater Harvesting system, construction of Settling pits and drainage system for channelization to same	22.00	8.00	10.00	4.00	Includes the budget earmarked for public hearing Observation
7	Safety & Occupational Health	Construction of First Aid Center, IME for each Employee	28.00	14.00	10.00	4.00	
8	Road development(Addressable of Public Consultation concerns)	Road construction/maintenance from Daregaon to MIDC,	32.00	16.00	8.00	8.00	Includes the budget earmarked for public hearing Observation
<b>Total</b>			<b>1368.00</b>	<b>1024.50</b>	<b>303.50</b>	<b>40.00</b>	

- 45.10.14 The capital cost of the project is **Rs. 107.15 Crore** [Expansion] and the capital cost for environmental protection measures including budget for complying public hearing commitment is proposed as **Rs. 13.68 Crore**. The annual recurring cost towards the environmental protection measures is proposed as **Rs 4.85 Crores**. The employment generation from the proposed project/ expansion is 610 nos. The details of cost for environmental protection measures are as follows:

SNo	Description of Item	Existing (Rs. In lakhs)	
		Capital Cost	Recurring Cost
i.	Air Pollution Control/Noise	1140.00	388.00
ii.	Water Pollution Control	65.00	36.00
iii.	Environmental Monitoring and Management	42.00	20.00
iv.	Green Belt Development	19.5	2.00
v.	Addressing Public Consultation concerns	101.5	39.4

- 45.10.15 Greenbelt will be developed in 2.74 ha which is about 40 % of the total project area. A 2.5 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 8200 saplings will be planted and nurtured in 2.74 hectares.

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

- 45.10.17 Name of the EIA consultant: The baseline data was collected by M/s. Green Envirosafe Engineers & Consultant Pvt. Ltd. Pune, Maharashtra. Initially, the EIA report was prepared by M/s. Pollution & Ecology Control Service, Nagpur. Thereafter, the proponent has changed the EIA consultant namely M/s. Ardra Consulting Services Pvt. Ltd, Bhubaneswar. Presently, the EIA report has been submitted by M/s. Ardra Consulting Services Pvt. Ltd, Bhubaneswar [S. No.92, List of ACOs with their Certificate / Extension Letter no. Rev. 14, September 15, 2021].

### **Certified Compliance report from the regional Office**

- 45.10.18 The Status of compliance of earlier EC was obtained from Regional Office, MOEF&CC vide letter no EC-409/RON/2017-NGP/7549 dated 07/12/2020 in the name of M/s Om Sairam Steel & Alloys Private Limited. PP vide letter dated 14/06/2021 requested Regional Office, MOEF&CC that the certified compliance report dated 07/12/2020 was discussed by EAC (Industry-I) during 34<sup>th</sup> meeting held on 15/04/2021 and EAC desired that a fresh status report needs to be obtained from RO on the partial/non compliances raised in the monitoring report dated 07/12/2020. Regional officer MoEF&CC inspected the project site on 09/07/2021 and has issued the report dated 01/09/2021. The details of the observations made by RO in the report dated 01/09/2021 along with its re-assessment / present status as furnished by the PP is given as below:

S No	Non- compliances details	Observation of IRO Report dated 01/09/2021	Condition no.			Response by PP
			EC date	Specific	General	
1	Continuous Emission Monitoring Stations (CEMS) shall be installed within 3 months from the date	Complied for project in operation. • Continuous Emission Monitoring Station	22/01/2018	i		Shall continue compliance for additional

S No	Non- compliances details	Observation of IRO Report dated 01/09/2021	Condition no.			Response by PP
			EC date	Specific	General	
	of issue of EC.	(CEMS) was established for the stack of the induction furnace.  • PP submitted that the CEMS will be installed for the stacks of the Power Plant and Sponge Iron Plant after setting up of both the plants.				units
2	A dedicated environmental cell with qualified personnel shall be established within 3 months from the date of issue of EC and shall report the compliance to the Ministry. The head of the environment cell shall report directly to the head of the Organization.	Complied	22/01/2018	ii		Shall continue compliance.
3	An Amount of Rs.1307 Lakhs proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion estimated on the basis of Scheduled Rates.	<b>Compliance is in progress.</b> RO reported the following: During the site inspection, it was observed that the Sponge Iron Plant and Power Plant are yet to be established. Only the expansion of billet manufacturing facility has been carried out from 528 TPD to 1000 TPD. The capital cost of the expansion carried out was Rs.27.06 Crores. As per the MoEF&CC OM dated 01.05.2018, the project (being Brownfield) was to spend 1% (Rs. 27 lakhs) of additional capital investment (Rs. 27.06 Crores) on activities under Corporate Environment Responsibility (CER). As per the details submitted, PP spent Rs. 159 lakhs on the CSR activities from 2018-19 to 2020-21. PP submitted that CSR activities will be carried out every year. Additional expenditure based on the capital investment of Sponge	22/01/2018	iii		Shall continue complying

S No	Non- compliances details	Observation of IRO Report dated 01/09/2021	Condition no.			Response by PP
			EC date	Specific	General	
		Iron Plant and Power Plant will be made once both the plants are established.				
4	The Capital cost Rs.1300 lakhs and annual recurring cost Rs.504 Lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted or any other purpose.	As per the information provided, annual budget is being allocated for measures to be taken up for the protection of environment. Additional budget will be allocated once the Sponge Iron Plant and Power Plant are established.	22/01/2018	v		Shall continue complying
5	Kitchen waste shall be composted or converted to biogas for further use	Presently no kitchen is installed in the project. PP submitted that workers bring their food from their home. It was also submitted that Organic Waste Convertor will be provided once the kitchen is established in the project.	22/01/2018	vi		Shall comply ,if kitchen will be installed in future
6	Inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF& CC) at <a href="http://envfor.nic.in">http://envfor.nic.in</a>	Advertisement has been made, however the clause of seven days was not followed. PP submitted that care will be taken to make the advertisement as per the stipulation in future ECs.	22/01/2018		23 (iii)	Shall comply in future
7	Submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored	Complying with.	22/01/2018		23 (vi)	Shall continue

S No	Non- compliances details	Observation of IRO Report dated 01/09/2021	Condition no.			Response by PP
			EC date	Specific	General	
	data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB					

45.10.19 M/s. Om Sairam Steels and Alloys private Limited has made earlier online application IA/MH/IND/195309/2015 dated 29/01/2021 and Re-constituted EAC considered the proposal in 30<sup>th</sup> meeting held during 10-11<sup>th</sup> February, 2021. The Observation and recommendation of EAC is given below:

**Observations of the Committee held during 10-11<sup>th</sup> February, 2021**

45.10.20 The Committee noted the following:

- i. The issues raised during public consultation have not been adequately addressed in the EIA report in the form of an action plan with physical targets as per the MoEF&CC O.M. dated 30/09/2020.
- ii. TOR point # 9 pertaining to Corporate Environment Policy is not addressed in EIA.
- iii. Format used for EIA team declaration is not as per NABET requirement.
- iv. EIA report is generic. Impacts and mitigation measures have not been quantified and EMP chapter does not describe administrative measures to be taken to implement the EMPs. Quantified EMPs have also not been furnished

**Recommendations of the Committee held during 10-11<sup>th</sup> February, 2021**

45.10.21 In view of the foregoing observations and deliberations, the committee recommended for return the proposal in present form.

45.10.22 The project proponent has made again online application vide proposal no IA/MH/IND/205502/2015 dated 25/03/2021. The proposal was considered by the EAC (Industry 1) in its 34<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held on 15- 16<sup>th</sup> April, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee held during 15-16<sup>th</sup> April, 2021**

45.10.23 The Committee noted the following:

- i. The existing and proposed unit configuration and production capacities of Sponge Iron, Billets and TMT stated in the ToR accorded, Form 2, EIA report and presentation made before the EAC are not matching with each other.
- ii. Action plan with physical targets to address the issues raised during public hearing given at page 197-201 of EIA report is not in line with the MoEF&CC Office Memorandum dated 30/09/2020. It is further observed that the said action plan reported to be addressed in Chapter 8, section 8.5, Table 8.1 of EIA is not available in the document. There is no table 8.1 under section 8.5.
- iii. TOR point #9 pertaining to Corporate Environment Policy not addressed as per the requirement furnished in the text for TOR (section 10.4 page 215-217 of EIA report).
- iv. The text of Chapter 9 in the revised EIA report is irrelevant.

- v. Action taken report on the observations stated in the RO report dated 07/12/2020 has not been furnished.
- vi. Slide # 48 of PPT submitted reads as, “Measures to control fugitive emission are reported as Periodic cleaning of ESP and Bag houses, online stack monitoring of ESP, bag change over and regular health checkup of the employees”. These are not the measures to control fugitive emissions.
- vii. Only 15 % land is available for green belt development inside the plant premises. Additional land of 1.7078 ha is said to have been given by MIDC outside the plant does not belong to PP and MIDC has not provided any assurance to not to disturb this green belt or cut it whenever needed. This needs to be revisited.
- viii. Stack details of the DRI plant has not been considered for the purpose of emission calculation and AAQ modeling.
- ix. Chimney design needs to be revisited as the flue gas temperature is indicated as 80°C and at this temperature there will be corrosion of chimney and heat exchanger making it unsafe.
- x. The quality of the EIA report was not found up to the mark with respect to Appendix III of the EIA Notification, 2006 and most of the sections in Form 2 was found be not filled in properly.

**Recommendations of the Committee held during 15-16<sup>th</sup> April, 2021**

- 45.10.24 In view of the foregoing observations, the committee recommended the following:
- i. Proposal is recommended to be returned in its present form to address the shortcomings mentioned above.
  - ii. Show Cause Notice is recommended to be issued to the EIA consultant -M/s.Ardr Consulting Services Pvt. Ltd, Bhubaneswar as the consultant has repeatedly submitted the EIA report on 29/01/2021 and 25/03/2021 with several deficiencies and no tangible efforts are made to improve upon the same.
- 45.10.25 It was apprised to the EAC that SCN was issued to the EIA consultant by the Ministry and subsequently, the SCN was closed with a stern warning to the EIA consultant.
- 45.10.26 M/s. Om Sairam Steels and Alloys has again made an online application vide proposal no. IA/MH/IND/228546/2015 dated 19/09/2021. The proposal was considered by the EAC (Industry 1) in its 45<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held on 28-29<sup>th</sup> September, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee**

- 45.10.27 The Committee observed that additional information is required with respect to the green belt development, water balance, traffic assessment data, ETP details, addressal of issues pertaining to Corporate Environment Policy and action plan as per MoEF&CC O.M. dated 30/09/2020 to address the issues raised during the public consultation.

**Recommendations of the Committee**

- 45.10.28 In view of foregoing and after deliberations, the Committee deferred the consideration of the proposal and sought for following additional information.

- i. PP shall acquire additional land of 1.5127 ha and revised action plan for green belt development shall be submitted with a tree density of 2500 trees per hectare.
- ii. Action plan with physical targets to address the issues raised during public hearing shall be submitted as per the MoEF&CC O.M. dated 30/09/2020.
- iii. Details regarding the proposed STP and ETP shall be provided and the same shall be shown on the plant layout.
- iv. Revised water balance table shall be submitted.
- v. Compliance to the generic ToR no ix pertaining to Corporate Environment Policy shall be addressed.
- vi. Performance monitoring of pollution control devices shall be included in monitoring schedule.
- vii. Clarification regarding reporting of abnormal values of DO, BOD and COD in the water samples shall be furnished.

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

45.11.1 M/s Bharat Aluminum Company Limited (BALCO) has made an online application vide proposal no. IA/CG/IND/2536/2007 dated 20/09/2021 along with copy of EIA/EMP report, Form-2 and copy of certified EC Compliance report 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**

45.11.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
20/08/2017	22 <sup>nd</sup> EAC Meeting held during 11-13 <sup>th</sup> September 2017	Terms of Reference	19/09/2017

45.11.3 The project of M/s. Bharat Aluminum Company Limited (BALCO) located at Risda Village, Korba Tehsil, Korba District, Chhattisgarhis for expansion of Aluminum Smelter production capacity from 5.75 LTPA to 10.85 LTPA. BALCO intends to install 5.10 LTPA aluminium smelter based on 500 KA cell technology and associated facilities in the factory premises at BALCO plant where in the general plant layout, it is designated as “Brownfield Smelter” with associated facilities. It is proposed to produce billet (120 KTPA), wire rod (100 KTPA), alloy ingot (180 KTPA), rolled product (206 KTPA) & ingot (300 KTPA).

45.11.4 Environmental Site Settings:

SNo	Particulars	Details	Remarks
i.	Total land	Total land: 383.63 ha (948 acres)  Land required for the proposed smelter expansion is about 39.66 ha and is part of	Land use: Industrial land

SNo	Particulars	Details	Remarks
		383.96 ha (948acres) of integrated aluminium complex.	
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	The complete land of 383.63 ha is already in possession of BALCO in existing project area. No additional land is required for proposed expansion.	-
iii.	Existence of habitation & Involvement of R&R, if any.	The land is already in possession of BALCO so there is no R&R in this project.	-
iv.	Latitude and Longitude of the project site	<p><b><u>BALCO Complex</u></b>  a) Latitude: 22°23'25.49"N to 22°24'11.57"N  b) Longitude: 82°43'33.55"E to 82°44'58.01"E</p> <p><b><u>Township</u></b>  a) Latitude: 22°24'11.29"N to 22°24'47.39"N  b) Longitude: 82°44'47.70"E to 82°46'22.52"E</p> <p><b><u>Ash Pond</u></b>  a) Latitude: 22°24'22.79"N to 22°24'50.21"N  b) Longitude: 82°43'43.18"E to 82°44'54.78"E</p> <p><b><u>Proposed Aluminium Smelter Plant:</u></b>  a) Latitude: 22°23'24.5"N to 22°23'49.4"N  b) Longitude: 82°43'32.9"E to 82°44'09.5"E</p>	-
v.	Elevation of the project site	295 m - 300 m above MSL	-
vi	Involvement of Forest land if any.	No forest land is involved in proposed project	-
vii.	Water body exists within the project site as well as study area	<p><b><u>Study Area</u></b></p> <ul style="list-style-type: none"> <li>• Belgari nala (0.1 km, NW)</li> <li>• Dhengunala (0.1 km, S)</li> <li>• Hasdeo river (1.5 km, NW)</li> </ul>	-
viii.	Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area	Presently Nil.  However, 5 no. of protected forests are located in study area and Lemru Wildlife sanctuary is under proposal stage by Govt. of Chhattisgarh PF near Bhalumara (6.5 km, SSE) PF near Naktikhar (6.6 km, SE) PF near Rampakharra (7.2 km, S) PF near Bhargaon (7.2 km, N) PF near Bundeli (9.7 km, SE)	-

45.11.5 The existing project was accorded environmental clearance for expansion of Aluminium smelter plant from (3.5 to 9.0 LTPA) and captive power plant of (300 MW) vide MOEF&CC Letter No. J-11011/123/2007-IA.II.(I) dated 16/09/2008. Existing consent approvals are as follows:

S No	CTE Details	Current CTO Validity	Remarks
<b>A Smelter Plant</b>			
1	Smelter Production Capacity upto 4 LTPA Ltr. No. 4332/TS/CECB/2003 dated 25.11.2003	Smelter 2.7 LTPA Ltr. No. 7806/TS/CECB/ 2020 dated 03.12.2020 valid up to 31.12.2021.	Expansion done from 3.5 LTPA to 5.75 LTPA,
2	Smelter Capacity 9.0 LTPA (additional smelter capacity of 5.5 LTPA) and 300 MW TPP Ltr. No. 4567/TS/CECB/2010 dated 12.11.2010	Smelter 3.25 LTPA + 2.7 LTPA Ltr. No. 7806/TS/CECB/ 2020 dated 03.12.2020 valid up to 31.12.2021	300 MW TPP was not established.
<b>B Power Plants</b>			
1	TPP-2 675 MW (5 x 135 MW) coal based Ltr. No. 3359/CECB/2004 dated 26.08.2004	TPP-2 540 MW (4 x 135 MW) Ltr. No. 363/TS/CECB/ 2021 dated 12.05.2021 valid up to 31.05.2022	4 x 135 MW (540 MW) TPP established.
2	TPP-3 1200 MW (4 x 300 MW) coal based Ltr. No. 5303/TS/CECB/2007 dated 25.09.2007	TPP-3 1200 MW (4 x 300 MW) coal based Ltr. No. 363/TS/CECB/ 2021 dated 12.05.2021 valid up to 31.05.2022.	4 x 300 MW (1200 MW) TPP established.

CECB granted authorization under the Hazardous and Other Wastes (Management & Trans boundary Movement) Rules, 2016 vide letter dated 05/01/2021 and amendment dated 01/06/2021 valid upto 23/10/2021.

45.11.6 Implementation status of the existing EC.

SNo	Facilities	Units	Letter No	Implementation Status as on 21.09.2021	Production as per CTO
1	Refinery - 2.0 Smelter - 1.0 CPP - 270	LTPA LTPA MW	-	Implemented prior to Water Act, Air Act, and EIA Notification (EP Act).	Refinery closed from 2009. Smelter 1.0 LTPA closed and dismantled
2	Refinery - 8 Smelter - 4	LTPA LTPA	EC dated 05 <sup>th</sup> November 2003.	2.5 LTPA Smelter (Balance capacity plant was not established)	Refinery closed from 2009. Smelter- 2.5 LTPA
3	TPP- 5 x 135	MW	EC dated 23 <sup>rd</sup> June	Power Plant- 540	4 x 135 MW

SNo	Facilities	Units	Letter No	Implementation Status as on 21.09.2021	Production as per CTO
			2004.	MW (4x135 MW) (Balance capacity plant was not established)	
4	TPP - 4x300	MW	EC dated 14 <sup>th</sup> August 2007 and amended for Change in configuration from 2x600 MW to 4 x 300 MW on 27.04.2011 and Extension of validity on 18/09/2014.	Power Plant: 1200 MW (4x300 MW)	4 x 300 MW
5	Smelter – 9.0	LTPA	EC No J-11011-/123/2007-IA-II (I) dated 16 <sup>th</sup> September 2008.	Implemented 5.75 LTPA (Existing - 2.5 LTPA + additional -3.25 LTPA). Soderberg smelter plant of 1 LTPA decommissioned and 2 LTPA Alumina Refinery operation was stopped since 2009.	3.25 LTPA

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

SNo	Name	Existing Units		Proposed Units		Total (Existing +Proposed)	
		Configuration	Production	Configuration	Production	Configuration	Production
1	Aluminium Smelter	2.5 LTPA 3.25 LTPA	5.75 LTPA	5.1 LTPA	5.1 LTPA	10.85 LTPA	10.85 LTPA
2	TPP 1740	540 MW (4 x 135) 1200 MW (4 x 300)	540 MW 1200 MW	NIL NIL	NIL NIL	540 MW 1200 MW	540 MW 1200 MW

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

Sr. No.	Description	Existing Quantity	Proposed Quantity	After Expansion	Mode of Transport	Source
1	Alumina	10,10,000 TPA	9,89,000 TPA	19,99,000 TPA	Rail-BTAP wagon/ Bulkers	Captive- Lanjigarh Refinery (Major)-424 km, Domestic- Utkal Alumina -483 km Import -Kakinada port-891 km (from port to site)
2	Calcined Petroleum Coke	2,04,000 TPA	1,82,000 TPA	3,86,000 TPA	Rail	Domestic –Rain Calciner, Sanbhera etc., Visakhapatnam: 725 km Import via Visakhapatnam- 725 km (from port to site)
3	Aluminium Fluoride	12,000 TPA	7,650 TPA	19,650 TPA	Road Trucks	Domestic: 725 km, Import through via Visakhapatnam port: 725 km
4	Coal Tar Pitch	51,600 TPA	39,500 TPA	91,100 TPA	Road Trucks – Insulated Tankers	Domestic:HimadriKorba: 15 km NPTar, EpsilonBhilai: 250 km
5	Fuel requirement: Heavy Fuel Oil (HFO)-being phased out with LSHS in 6 months.	25,000 KLPA	15,000 KLPA	40,000 KLPA	Road Trucks – Special Tankers	Domestic: Terminal located in Raipur, Transportation by Road - 235 km

45.11.9 The existing water requirement for the project is 2500 m<sup>3</sup> /day and the additional water requirement for the proposed expansion is estimated as 2400 m<sup>3</sup> /day, out of which 1400 m<sup>3</sup>/day of freshwater requirement will be obtained from the existing allocation of water drawl from Hasdeo river and the remaining requirement of 1000 m<sup>3</sup> /day will be met from the recycled/ treated wastewater from ETP. The following permissions for surface water drawl is obtained from Water Resource Department, Chhattisgarh.

- 35616 KLD Permitted quantity vide Lr.No. 4699/194/WRD/TECH/OPERS/01/D-4/Raipur dated: 07/10/2004
- 68493 KLD Permitted quantity vide Lr.No. 5994/194/WRD/TECH/OPERS/01/D-4/Raipur dated: 18/10/2007
- 9863 KLD Permitted quantity vide Lr.No. 2559/194/WRD/TECH/OPERS/01/D-4/Raipur dated: 29/03/2011

45.11.10 The total power requirement of the project is 1750 MW. The power requirement of the proposed expansion project is about 800 MW (790 MW required for proposed expansion project will be sourced from the existing TPP of BALCO and 10 MW of power will be sourced from the grid). The power requirement will be met (including auxiliary power) based on average 12,500 Kwh/tonne (DCPower) for potline from the existing TPP of BALCO.

S No	Smelter Plant	Plant Capacity (LTPA)	Power Requirement (MW)	Year of Commissioning
1	Potline-1	2.50	420	2005

S No	Smelter Plant	Plant Capacity (LTPA)	Power Requirement (MW)	Year of Commissioning
2	Potline-2	3.25	530	2013
3	Proposed Expansion	5.10	800	-
<b>Total</b>		<b>10.85</b>	<b>1750</b>	<b>-</b>

45.11.11 Baseline Environmental Studies:

Period	1 <sup>st</sup> December 2019 to 29 <sup>th</sup> February 2020
AAQ parameters at 8 locations	PM <sub>10</sub> = 31.9-78.4µg/m <sup>3</sup> PM <sub>2.5</sub> = 23.9-45.9µg/m <sup>3</sup> SO <sub>2</sub> = 20.7-42.5µg/m <sup>3</sup> NO <sub>2</sub> = 24.8-50.2µg/m <sup>3</sup> CO = 344-959µg/m <sup>3</sup>
AAQ modeling (Incremental GLC)	<p><u>Scenario-I: Proposed smelter expansion</u></p> <p>PM<sub>10</sub> = 4.60 µg/m<sup>3</sup> PM<sub>2.5</sub> = 1.37µg/m<sup>3</sup> SO<sub>2</sub> = 13.6µg/m<sup>3</sup> NO<sub>x</sub> = 5.27µg/m<sup>3</sup></p> <p><u>Scenario-II: Contribution from the existing smelter complex and Power Plants</u></p> <p>PM<sub>10</sub> = 5.20µg/m<sup>3</sup> PM<sub>2.5</sub> = 1.53µg/m<sup>3</sup> SO<sub>2</sub> = 17.9µg/m<sup>3</sup> NO<sub>x</sub> = 11.73µg/m<sup>3</sup> Fluoride = 0.06µg/m<sup>3</sup></p> <p><u>Scenario-III: Cumulative Incremental GLC's from the Balco Complex after proposed expansion</u></p> <p>PM<sub>10</sub> = 9.80µg/m<sup>3</sup> PM<sub>2.5</sub> = 2.90µg/m<sup>3</sup> SO<sub>2</sub> = 31.5µg/m<sup>3</sup> NO<sub>x</sub> = 16.9 µg/m<sup>3</sup> Fluoride-0.1 µg/m<sup>3</sup></p> <p><u>Scenario-IV: Proposed expansion + existing Industries within 10 km radius (Cumulative)</u></p> <p>PM<sub>10</sub> = 70.2µg/m<sup>3</sup> PM<sub>2.5</sub> = 26.1µg/m<sup>3</sup> SO<sub>2</sub> = 40.7µg/m<sup>3</sup> NO<sub>x</sub> = 33.6µg/m<sup>3</sup> Hg = 0.0025 µg/m<sup>3</sup></p>
Ground water quality at 8 locations	pH: 6.89-7.65 Total Hardness: 70.3-345.5 mg/l, Chlorides: 27.2-413.6 mg/l, Fluoride: 0.3-1.1 mg/l. Heavy metals are within the limits.

Surface water quality at 9 locations	pH: 6.98-7.9; DO: 4.8-5.6 mg/l and BOD: <3.0mg/l. COD: < 5 mg/l
Noise levels	49.0 to 60.3 dB(A) for the day time and 45.7 dB (A) to 56.9 dB (A) for the night time.
Traffic assessment study findings	The present level of traffic has been converted to Passenger Car Units (PCU) at all location as per the conversion factors stipulated by Indian Road Congress (IRC). The Passenger Car Unit (PCU) recorded at the selected traffic locations about 8,713 PCU.  Additional truck traffic due to existing & proposed project: 22 Trucks per day  <b>Incremental Concentrations:</b> PM <sub>10</sub> = 1.47µg/m <sup>3</sup> PM <sub>2.5</sub> = 0.88µg/m <sup>3</sup> NO <sub>x</sub> = 16.30µg/m <sup>3</sup> CO =7.33µg/m <sup>3</sup> HC=3.29µg/m <sup>3</sup>
Flora and fauna	There are 7 Schedule-I species found in the study area which are Elephant, Indian Peafowl, Python, Sloth Bear, Monitor Lizard, Panther and Crimson Rose Butterfly. Wildlife conservation plan along timeline budget allocation for schedule-I is approved by PCCF vide letter dated 02/08/2021.

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

S No	Name of the Residue/ Waste	Brief Composition	Source	Existing Plant Generation (per annum)	Proposed Expansion Generation (per annum)	Total after Expansion Generation (per annum)	Mode of Disposal
1	Spent pot Lining/other cathode residues	Carbon, ammonia, sodium fluoride	Pot room	12,000 T	10,000 T	22,000 T	Co-processing/SLF/ Detoxification
2	Anode Butt	Carbon	Carbon Plant	1,00,000 T	70,000 T	1,70,000 T	Recycled in GAP
3	Dross	Aluminium, Bath, Fluoride	Fabrication Unit	10,000 T	10,000 T	20,000 T	Disposed to authorized recyclers / Metal recovery through Dross processing.
4	Flue gas dust (Shot Blast Dust)	Carbon, Metal Shots, Fluoride	Carbon Plant	5000 T	5000 MT	10000 T	Secured storage
5	Rejected Filter bags (FTP)	Fabric, Fluoride	Pot Room - FTP	50 T	50 MT	100 T	Incineration in Smelter Pots

S No	Name of the Residue/ Waste	Brief Composition	Source	Existing Plant Generation (per annum)	Proposed Expansion Generation (per annum)	Total after Expansion Generation (per annum)	Mode of Disposal
6	Asbestos waste	Asbestos	(Ladle cleaning and other units)	100 T	-	100 T	Disposal in SLF
7	Spent resin	Resins	Rectifier & DM plant	60 T in 5 years	-	60 T in 5 years	Disposal through incineration in boiler of TPP.
8	Glass Wool	Glass Wool	Power Plants	150 T	-	150 T	SLF
9	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	Chemical & Oil Drums/ Containers	Metal & Power area	300 T	100 T	400 T	Disposal to authorized recyclers
10	Spent oil	-	-	300 T	-	-	Disposal to authorized recyclers
11	Waste or Residue containing oil (Cotton jute)	-	-	7 T	3 T	10 T	Incineration/ disposal to authorised recyclers
12	Chemical sludge from Wastewater treatment	Wastewater	ETP	20 T	10 T	30 T	Co-processing/ disposal in SLF
13	Oil and grease skimming	-	-	1 KL	-	-	SLF/ disposal to authorised recyclers
14	Flammable chemical waste	-	-	0.4 KL/year	0.6 KL/year	1 KL/year	Incineration/ Authorised recyclers
15	Fly ash	Stack	Power Plants	9000 TPD	-	-	As per Fly ash notification

45.11.13 Public Consultation:

<b>Details of advertisement given</b>	Public hearing was published in the national English daily of "The Times of India" and in the Chhattisgarh daily "DainikBhaskar" on 16 <sup>th</sup> January, 2021.
<b>Date of public consultation</b>	17/02/2021
<b>Venue</b>	Dr.Ambedkar Stadium, Balconagar, Korba, Chhattisgarh.
<b>Presiding Officer</b>	Additional District Magistrate
<b>Major issues raised</b>	Employment opportunities, Health and Infra facilities in community around BALCO etc. Environment conservation and protection (Emission of gas & fumes problem; Road dust problem due to transport of ash; Avenue plantation and other afforestation)

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

S No	Issues/ Concerns Raised by public / Stakeholder	Physical Activity & Action Plan (as per MoEF&CC O.M. dated 30.09.2020)	Budget (inRs.)	Time Schedule for Implementation
1	Air/ water pollution	<ul style="list-style-type: none"> <li>➤ The capital investment of about Rs. 471 Crores is proposed for pollution control, treatment and monitoring systems for proposed expansion of aluminium smelter plant.</li> <li>➤ The capital investment is proposed for Fume Treatment Plant/ Gas Treatment center (pot line and bake oven) includes: 1) Stacks for wider dispersion of pollutants; 2) Continuous gas analyzer in stacks; and 3) dry scrubber for the proposed expansion of aluminium smelter plant, Pot Controller and feeding system.</li> <li>➤ Filter Bags of bag filters will be replaced as and when required and adequate stock of spares will be maintained.</li> <li>➤ Dust Extraction &amp; Suppression system are being utilized and ensured operational at all the times at raw material handling locations for control of fugitive emissions.</li> <li>➤ A budget of Rs. 35 Crores is allocated for STP &amp; ETP construction for proposed expansion of aluminium smelter project.</li> <li>➤ Installation of latest technology pot controller system in the existing smelter for achieving reduction in Fluoride consumption through enhanced suction and reutilization of Fluoride fumes in Alumina enrichment at FTP.</li> <li>➤ Purchasing low sodium alumina to reduce fluoride consumption.</li> </ul>	531 Cr  35 Cr  101 Cr  35 Cr	March 2023   March 2022 to June 2023 Dec 2021
2	Occupational health	<ul style="list-style-type: none"> <li>➤ All the potential occupational hazardous work places such as pot room areas, bake oven plant area is monitored regularly. The health of employees working in these areas is monitored regularly as per statutory requirement for early detection of any ailment due to exposure to occupational hazards like, noise, respirable dust and hazardous chemicals etc.</li> <li>➤ The audiometry and lung function tests are included in this surveillance program. A budget of around Rs. 2 Crores/annum is allocated for Periodic Medical Examination (PME) for employees and contract workman.</li> <li>➤ Periodic hygiene survey through third party agency for assessment of effect of exposure to noise, heat, radiation, dust etc. if any.</li> </ul>	2 Cr  0.2 Cr	Every Year
3	Road dust problem due to transport of ash	<ul style="list-style-type: none"> <li>➤ Conditioned ash is being transported through properly covered trucks from the site.</li> <li>➤ Water sprinkling is done at regular intervals on the internal &amp; external roads used for ash transportation. Additional water tankers will be deployed during summer months to control fugitive emission</li> <li>➤ Apart from stationary water sprinkling system on the dyke top, there are 20 tankers deployed towards control of fugitive dust suppression/ wind borne dust generation.</li> <li>➤ Wheel wash system is in place at Coal Handling &amp; Ash Handling area of Power Plants.</li> </ul>	1.5 Cr	Every year
4	Plantation and Greenbelt development	<ul style="list-style-type: none"> <li>➤ BALCO has done plantation of about 5,99,800 plants in 575 acres (inside &amp; around the plant complex) from 2002 to 2021. Ongoing plantation of 1,00,00 saplings in 88 acres are being carried out in and around BALCO complex during FY 22.</li> </ul>	1.08 Cr	Sep 2022

S No	Issues/ Concerns Raised by public / Stakeholder	Physical Activity & Action Plan (as per MoEF&CC O.M. dated 30.09.2020)	Budget (inRs.)	Time Schedule for Implementation
		<ul style="list-style-type: none"> <li>➤ It is proposed to reclaim dyke #1 &amp; 5 during 2021-22. It is expected that dyke #1 &amp; 5 will be rehabilitated with around 50,000 plantation.</li> <li>➤ An amount of 0.28 Cr has been earmarked for after care of plantation being carried out to ensure better survival rate for next 2 years.</li> </ul>		
5	Employment for local people	<ul style="list-style-type: none"> <li>➤ There is no additional R&amp;R involved for the proposed expansion.</li> <li>➤ Proposed expansion will create about 200 direct and 2800 Indirect employment opportunities in construction phase and for operation phase the manpower requirement will be around 5050 persons (direct &amp; indirect together)</li> <li>➤ BALCO has provided employment opportunities to 64% of people from Chhattisgarh State in Executive Category, similarly 99% of people from Chhattisgarh State in Workmen category and 88% of people from Chhattisgarh State in Contractual employees category.</li> <li>➤ BALCO has been providing 1st preference to the local people in terms of employment either directly or through business partners.</li> <li>➤ Company will support local youth for enhancing their employability opportunities through various skill development and educational initiatives as a part of CSR.</li> </ul>	-	FY 22
6	Contractual work to local people	<ul style="list-style-type: none"> <li>➤ BALCO has been providing 1st preference to the local people having relevant skills and work experience for employment opportunities.</li> <li>➤ Presently, around 159 no. of Work orders have been awarded as of date during FY 22 to more than 40 local vendors amounting to a value of Rs. 152 Cr.</li> <li>➤ Company will support local youth for enhancing their employability opportunities through various skill development and educational initiatives as a part of CSR.</li> </ul>	-	Continuous as and when required
7	Training and skill development programme for local youth	<ul style="list-style-type: none"> <li>➤ BALCO has created a vocational skills school in Korba district in partnership with Learnet Skills Limited. The center is registered as Vocational Training Provider (VTP) at the State level. The center provides vocational training and placement assistance in 6 disciplines namely, Welder, Electrician, Fitter, Hospitality (F&amp;B), Sewing machine operator and Solar PV technician. A separate amount is allocated for the center each year and so far more than 2 crore rupees has been invested by BALCO in this regard. The skills school now has a training capacity of 700 youth each year and impart job linked training to youth from Chhattisgarh and already more than 8000 local youth have got benefited with this program and continuing.</li> <li>➤ Scaling up Project Land &amp; Water, Vedanta Skill School and other skilling initiatives, Commodity Business for FPO, Training and support to Start Ups.</li> </ul>	12.08 Cr	March 2023
8	Employment for unskilled & illiterate local people	<ul style="list-style-type: none"> <li>➤ BALCO has been providing 1st preference to the local people in terms of employment either directly or through business partners.</li> <li>➤ BALCO will continue to support local illiterate youth from affected villages through various skill development &amp; educational initiatives as a part of CSR. Detailed as above.</li> </ul>	-	-

S No	Issues/ Concerns Raised by public / Stakeholder	Physical Activity & Action Plan (as per MoEF&CC O.M. dated 30.09.2020)	Budget (inRs.)	Time Schedule for Implementation
9	Supply of drinking water	<ul style="list-style-type: none"> <li>➤ Provision of drinking water to the villagers as per requirement during summer months by deploying water tankers (5 tankers for 2 months).</li> <li>➤ Company will also work on establishing Rain Water harvesting Structures as permanent measures</li> </ul>	0.10 Cr	April and May every year
10	Road & peripheral development	<ul style="list-style-type: none"> <li>➤ Road maintenance and up keeping from Dhyanchand Square to Lalghat Circle is being carried out by the Company regularly. Also, water is sprinkled regularly on the roads to ensure that the dust is not getting air borne by deploying tankers as per requirement.</li> <li>➤ New market space will be provided for existing road side hawkers &amp; customers for their safety.</li> <li>➤ Traffic marshals will be deployed on the weekly market days for smooth traffic management.</li> <li>➤ Parking spaces created for Coal trucks near gate to avoid congestion on main road.</li> <li>➤ Construction and maintenance of peripheral road surrounding BALCO for better traffic management, AMC awarded for 5 years.</li> </ul>	0.5 Cr 0.7 Cr 7 Cr	March 2023
11	Health and establishment of medical college and cancer hospital  Community health and community rural infrastructure	<ul style="list-style-type: none"> <li>➤ Scaling up of Project Arogya, Mobile Health Van, Project NayiKiran, Program on Malnutrition Community Toilets, Water Tanks and Pipelines.</li> <li>➤ Setting up of Dialysis ward at BALCO Hospital.</li> <li>➤ BALCO has established a full-fledged hospital in Balco Complex, Korba. BALCO hospital is equipped with 75 beds and adequate infra like Radiology, Pathology, ICU, Pediatrics, General Medicines, ENT, Ophthalmology etc and has adequate number of qualified doctors, paramedics and support staffs as required and catering to the requirement of Company as well as community.</li> <li>➤ Sports, Culture and stakeholder engagement events across locations</li> <li>➤ Streetlights, Community Halls, Children Park &amp; Open Gyms</li> <li>➤ A budget of ~ Rs. 4.2 Crores is allocated for community health initiatives like Health/ Awareness camps, COVID relief &amp; Mobile Health Vans, 100 bedded COVID Hospital and community rural infrastructure development as part of CSR activities for nearby villages in the study area for FY 22.</li> <li>➤ BALCO has established a Cancer hospital at Raipur for benefit of society at large and also recently a 100 bedded COVID hospital has been set up at Raipur and Company has been spending ~ Rs. 24.5 Crores per annum for operating these facilities.</li> </ul>	15.75 Cr 12.47 Cr 34.2 Cr	March 2023 March 2023 March 2022
12	Education	<ul style="list-style-type: none"> <li>➤ A budget of Rs. 0.40 Crores is allocated education initiatives as part of CSR activities for FY 22. Regularly BALCO is providing need based support to 1 nearby schools and also helping nearby community students through 'Project Connect' wherein employees BALCO will be supporting in 5 Govt. Schools for improving the grades of children in Secondary &amp; Senior Secondary classes in Science, English &amp; Maths &amp; building the capacities of teachers. Additionally, career counselling will be done for these children and employees will be volunteering for value based models/education to these</li> </ul>	8.42 Cr	March 2023 -

S No	Issues/ Concerns Raised by public / Stakeholder	Physical Activity & Action Plan (as per MoEF&CC O.M. dated 30.09.2020)	Budget (inRs.)	Time Schedule for Implementation
		<p>children. About 1400 children will be benefitted through this program.</p> <ul style="list-style-type: none"> <li>➤ Project Connect, Support to School (BAL Sadan), Renovation of 20 Schools, Renovation of 55 Aganwadis for NandGhars, Furniture for 10 nearby Schools, Coaching Facilities for engineering and CA field.</li> </ul>		
13	Women empowerment	<ul style="list-style-type: none"> <li>➤ BALCO has currently employed more than 1,200 women professionals including 500 women from local villages through business partners in core functions like Smelter and Power operations, Safety, Security, Infrastructure, Commercial, Marketing, Innovation, Logistics etc.</li> <li>➤ Vedanta Ltd promotes gender diversity in the business and BALCO gender diversity stands at around 13%.</li> <li>➤ Vedanta has also launched V-REACH, a programme that seeks to identify and develop young leaders (including women) from the graduate employees' cadre and map them to significantly elevated roles.</li> <li>➤ A budget of Rs. 1 Cr is allocated for Project Unnati which focuses on formation and strengthening of Self Help Groups. About 3000+ women will be benefitted</li> </ul>	5.57Cr	March 2023
14	Lemru Elephant Reserve	<ul style="list-style-type: none"> <li>➤ The Lemru elephant reserve is yet to be notified, however BALCO has prepared Wild Life Conservation Plan and got approved by the Chief Wild Life Warden, Chhattisgarh</li> </ul>	1.53 Cr	March 2022
15	Red mud pond	<ul style="list-style-type: none"> <li>➤ The old abandoned red mud ponds have been converted into ash ponds as per EC condition and after obtaining necessary permissions in the matter. Any modification to dyke in terms of height rising or strengthening of dykes is carried out only after approval of the SPCB</li> <li>➤ The company ensures that all hazardous wastes including SPL are stored as per the SOP as per government guidelines and captive SLF have been constructed for management of SPL and other hazardous wastes</li> </ul>	-	-
16	CEPI Index	<p>As per CEPI Report published by CPCB during 2018, Korba has been scored with 57.57 from 75 which is, clear indication of reduction in pollution load over the years in Korba region. The proposed smelter will have world class pollution control equipment and zero liquid discharge system meeting the applicable norms. Hence there will not be any pollution beyond the permissible limit.</p>	-	-
17	Land acquisition	<ul style="list-style-type: none"> <li>➤ The land dispute if any by the complainant has to be settled with the local authorities.</li> <li>➤ Allegations of the complainant regarding the land is ongoing at Hon'ble Supreme Court and the matter is subjudice.</li> <li>➤ No land acquisition is required and the proposed expansion of aluminium smelter will be installed within the existing premises of BALCO complex</li> </ul>	-	-
	<b>Total</b>		<b>805.10 Cr</b>	

45.11.14 The capital cost of the project is Rs. 6387 Crores and the capital cost for environmental protection measures is proposed as Rs. 712.78 crores. The annual recurring cost towards

the environmental protection measures is proposed as Rs. 47.28 crores. The employment generation from the proposed expansion is 1050 (Direct) and 4000 (Indirect-contractual). The details of cost for environmental protection measures are as follows:

Sl. No	Particulars	Capital cost (in Cr)	Recurring cost (in Cr)
1	Air/ Noise Pollution Control Measures	676.7	43.5
2	Water pollution	35.0	3.5
3	Greenbelt development	1.08	0.28
	<b>Total</b>	<b>712.78</b>	<b>47.28</b>

- 45.11.15 Greenbelt has been developed in an area of 268.79 ha which is about 33.33 % of the total project area. As reported, the project proponent has planted 5,99,800 trees including the avenue trees and trees in public places. A total of 575 acres within the BALCO Aluminium Smelters, BALCO Captive Power plants, Ash ponds have been brought under tree cover.
- 45.11.16 The proponent has reported that there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.
- 45.11.17 Name of the EIA consultant: M/s. Vimta Labs Limited [S. No. 140, List of ACOs with their Certificate / Extension Letter no. Rev. 14, September 15, 2021].

#### **Certified Compliance report from the regional Office**

- 45.11.18 The Status of compliance of earlier EC was obtained from Regional Office, Raipur (Integrated RO) vide letter no. 4-23/20007(ENV)/100 dated 24/05/2021 in the name of M/s. Bharat Aluminum Company Ltd (BALCO). The Action taken report regarding the partially/non-complied condition was submitted to Integrated Regional officer(IRO)MoEF&CC, Raipur vide letter dated 11/06/2021 and 18/08/2021.MoEF&CC IRO, Raipur evaluated the same and has issued letter dated 09/09/2021. The details of the observations made by IRO in the report dated 09/09/2021 along with its re-assessment / present status as furnished by the PP is given as below:

S No	Condition as per EC	Condition no.	Observation of RO dated 24/05/2021	Reply of PP dated 28/08/2021	RO Analysis dated 09/09/2021
1	Anode butts generated from the pots shall be cleaned and recycled to the Anode Plant. The spent pot lining generated from the smelter shall be properly treated in spent pot lining treatment plant to remove fluoride and cyanide and disposed off to the Cement/Steel plants and as minimum as possible to secured landfill. The location and design of the landfill site shall be approved by the CECB as per Hazardous Wastes (Management and Handling) Rules 1989 and amended in 2003. Leachate collection facilities shall be provided to the secured landfill	SC (x)	Partially complied: Details of leachate collection facilities. Provided for the secured land fill facility, have not been made available by the PA.	The secured Land fill site was designed by M/s Ramky Ltd as per CPCB guidelines and the same has been constructed based on approval obtained from CEO.PP has shown the Secured Land fill site along with the	PP has submitted the copy of approval document pertaining to setting up captive secured land fill.

S No	Condition as per EC	Condition no.	Observation of RO dated 24/05/2021	Reply of PP dated 28/08/2021	RO Analysis dated 09/09/2021
	facility (SLF). The dross shall be recycled in the casthouse. STP sludgeshall be utilized asmanure for green belt development. All the used oil and batteries shall be sold to the authorized recyclers/re-processors.			leachate collection facility' and solar evaporation pond during the site inspection on 03- 05 Feb. 2021 and also provided the approval document pertaining to secured landfill site However for convenience, details of Leachate collection facility along with photographs is also submitted.	
2	The company shall comply with all the commitment made during public hearing public consultation held on the16th November 2007. The company shall prepare the action plan for implementation of the commitments and same shall be submitted to the Ministry and its Regional Office at Raipur and Chhattisgarh Environmental Conservation Board Raipur.	SC (xvii)	Partially complied:  The project authorities have consented to this condition however, action plan for implementation of the commitments and their present status has not been made available bythe PA.	PP submitted the response to the concerns raised during public hearing as part of final EIA report submitted to MOEF for obtaining EC.  Also, action plan was made and implemented during the course of time. Company has been implementing CSR initiatives in 65 villages inand around BALCO. A glimpse of the overall CSR approach, outreach and the beneficiaries have already been submitted	PP submitted the photographs depicting the overall CSR approach, outreach and the beneficiaries.

S No	Condition as per EC	Condition no.	Observation of RO dated 24/05/2021	Reply of PP dated 28/08/2021	RO Analysis dated 09/09/2021
				to RO MoEF&CC office.	
3	The overall noise levels in and around the plant area should be kept well within the standards (85dBA) by providing noise controlmeasured includingacoustic hoods, silencers, enclosurestc. on all sources of noise generation. The ambient noise levels should conform to the standardsprescribed under Rules. 1989viz.75 dBA (daytime) and 70 dBANight time)	GC(vi)	Partially Complied: It was informed that equipments have been designed to ensure that noise level at plant boundary area is within the stipulated level of 85 dB. Details of monitoring report are not made available during the inspection.	PP has been monitoring noise level at plant boundary and maintaining records of Ambient Noise levels as per requirement of EC condition. The Noise monitoring report of last 3 months is submitted to RO Office.	PP has submitted the Noise level monitoring report of 3 months (November 2020 to January 2021)
4	Fluoride consumption shall be less than 10 kg/ton of Aluminium produced as specified in the CREP guidelines.	SC(v)	Not Complied. The PA has informed that at present Fluoride consumption is 13 kg/ton of Aluminium produced. The PA has further informed that they are putting best efforts to bring down fluoride consumption by process optimization. The PA has also informed that they have represented in the Ministry on 8.10.2014 and 3.08.2016 for seeking amendment in the condition.	BALCO's smelter is based on GAMI technology and is designed for an AIF3 consumption of 20 kg/MT of Aluminium produced. The present Fluoride consumption is 13 kg/ MT of Aluminium produced. PP is making all efforts to bring down fluoride consumption by process optimization by Aug 2022.	PP has submitted the Copy of correspondence letters to Aluminium Association of India and MoEF&CC regarding CREP recommendation on Fluoride consumption.
5	Prior permission from the State Forest Department shall be obtained due to likely impact of transport of raw material and end product and gaseous emissions	SC(xviii)	Not complied. The PA has informed that they have applied for the	BALCO applied for the prior permission from the state	PP has submitted the copy of letter from state Forest department

S No	Condition as per EC	Condition no.	Observation of RO dated 24/05/2021	Reply of PP dated 28/08/2021	RO Analysis dated 09/09/2021
	from the smelter on the surrounding reserve forests and wildlife. Recommendations regarding mitigative measures suggested by the State Forest department and Chief Wildlife Warden, Govt. of Chhattisgarh shall be strictly followed.		prior permission from the State Forest Department on 18.11.2015. However, status of approval if any obtained from the State Forest Department has not been made available by the PA. Further, financial details pertaining to the implementation of the Wildlife Management Plan have not been made available by the PA.	forest department on 18/11/2015 and the same is awaited. <b>(Subsequent reply on 05/08/2021)</b> PP is in receipt of Wildlife Conservation plan submitted by PP duly approved by the state forest department, copy of which is submitted to RO office.	regarding depositing Rs. 153 lakhs for Wildlife conservation plan.
<b>Findings with respect to Environmental Clearance dated 05/11/2003 accorded for their Alumina refinery and aluminium smelter plant, Korba Chhattisgarh.</b>					
6	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measured including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under Rules, 1989 viz.75 dBA (day time) and 70 dBA (Night time).	GC(v)	Partially complied: It was informed that equipments have been designed to ensure that noise level at plant boundary area is within the stipulated level of 85db(A). Details of monitoring report are not made available during the inspection.	PP has been monitoring noise level at plant boundary and maintaining records of Ambient Noise levels as per requirement of EC condition. The Noise monitoring report of last 3 months is submitted to RO Office.	PP has submitted the Noise level monitoring report of 3 months (November 2020 to January 2021).
7	The spent pot lining generated from the smelter should be utilized for cement/steel manufacturing alternatively to the disposed off in a secured landfill constructed as per the design of CPCB. The location of the landfill	SC(vii)	Partially Complied: Details of leachate collection facilities, provided for	The secured landfill site was designed by M/s.Ramky Ltd. As per CPCB guidelines and	PP has submitted the copy of approval document pertaining to setting up captive secured

S No	Condition as per EC	Condition no.	Observation of RO dated 24/05/2021	Reply of PP dated 28/08/2021	RO Analysis dated 09/09/2021
	site should be approved by the Chhattisgarh Environment Conservation Board.		the secured land fill facility have not been made available by the PA.	the same has been constructed based on approval obtained from CECB. PP has shown the secured landfill site along with the leachate collection facility and solar evaporation pond during the site inspection from 3-5 February, 2021 and also provided the approval document pertaining to secured landfill site is submitted to RO office.	land fill.

45.11.19 It was apprised to the EAC that Ministry is in receipt of a public representation stating that expansion EC proposal shall not be considered as the proponent has not obtained the requisite Forest Clearance, unscientific ash disposal and dismantling of alumina refinery etc.

**Observations of the Committee**

45.11.20 The Committee observed the following:

- i. EC is for expansion of Al smelter from 5.75 LTPA to 10.85 LTPA at Risda village in Korba, Chhattisgarh.
- ii. PH was conducted on 17.2.2021. Issues raised were local employment, pollution from the plant, avenue plantation and other afforestation, stacking of ash, health hazards and infrastructure around BALCO.
- iii. green belt. There is no R&R involved
- iv. Hasdeo River flows 1.5 km in W direction of plant site.
- v. It has been reported by the PP that the Chhattisgarh Government is planning to declare Lemru as Elephant Reserve shortly. A plan for Elephan Conservation, duly approved by the Pr.C.C.F., has been submitted by the PP
- vi. There are two TPPs of 540 MW and 1200 MW in operation outside the plant premises of BALCO. These plants do not have the status of CPP but cater to the requirement of the smelter. These plants are not going to have any expansion.
- vii. Soderberg technology based 1 LTPA Al smelter and 2 LTPA Alumina Refinery have been closed.

- viii. HFO used as fuel in the past is going to be phased out with LSHS in next 6 months.
- ix. 2400 KLD water is required for the expanded capacity. Make up water if 1400 KLD shall be obtained from Hasdeo River.
- x. There are 7 Schedule I species in the study area. WLCP was approved on 21.8.2021.
- xi. 22000 TPA Spent Pot Liner and 10000 TPA flue dust , both hazardous waste shall be generated after expansion.
- xii. Asbestos and glass wool waste shall be sent to SLF.
- xiii. RO compliance report of 24<sup>th</sup> Feb 2021 is available. ATR was submitted on 18.8.2021. RO has evaluated the ATR and given his view on 9.9.2021 as under;
  - a. SPL, SLF issues have been partially complied. SLF has been set up (SC-x).
  - b. SC-xvii- Commitments made during PH of 2007 have not been complied so far.
  - c. SC (v)- Fluoride consumption is 13 kg/t of Al against 10 as per EC.
  - d. SC (xviii)- PP has not deposited Rs153 Lakhs towards WLCP budget.
  - e. SPL utilization in steel plants and cement plant has not started as yet.
- xiv. PH related issues raised are;
  - a. 100 m green belt between 1200 MW TPP and Shantinagar has not been developed. Land is yet to be acquired. Houses are 20-50 m away from plant boundary. Rehabilitation is also included.
  - b. 90% employment to locals is yet to be provided as per CG government Rules.
  - c. Pending issues related to compensation are yet to be resolved.
  - d. Fugitive emissions from abandoned Red Mud Pond and ash pond are not controlled.
  - e. Settlement of acquired land is pending.
  - f. 98 Acre land was acquired for expansion earlier. R&R not settled.
- xv. New pot lines being installed shall have AIF<sub>3</sub> consumption less than 10 kg/t of metal.
- xvi. Green belt as seen from plant layout is not uniform around the boundary.
- xvii. Activity wise targets have not been given for EMPs for Socio Economic development in slide Nos 45-53. Out of Rs.805.10 Cr expenditure shown , Rs.471 Cr is a part of project expenditure for pollution control, Rs.55 Cr is for ETP and STPs. These expenses cannot be booked against EMP for Socio Economic development? These slides are to be revised.
- xviii. Plantation is done in 301.49 ha area. Out of this only 7.12 ha area belong to BALCO. Green belt is not uniform around the plant boundary.
- xix. 100 % Fly ash is being utilized for past three years. Pond ash of more than 7 Million Ton to be utilized by FY 2024.
- xx. Land for Ash disposal has been requested in spite of the claim made for 100 utilization of Flyash..
- xxi. Performance monitoring of Air Pollution Control Devices has not been included in the monitoring schedule
- xxii. First order drainage course joining Belgari and Dhenga nallah pass through the plant.
- xxiii. The incremental pollutant increase has been calculated using AEROMOD plain topography model.

#### **Recommendations of the Committee**

- 45.11.21 In view of the foregoing observations and deliberations, the committee deferred the consideration of the proposal and sought for following additional information for further consideration of the proposal:

- i. Point wise reply to the points raised in public representation dated 19<sup>th</sup> Sept 2021 along with the relevant supporting documents shall be submitted.
- ii. Action Plan to control SO<sub>2</sub> and NO<sub>x</sub> emissions from the plant shall be submitted.
- iii. Mass balance for Fluorine distribution and action plan to reduce fluorine levels in forage shall be submitted.
- iv. Action Plan for tree plantation on Ash Pond subsequent to its closure in 2024-25 shall be submitted.
- v. Action plan to achieve 33 % green belt inside the smelter complex by 2024 with plant density of 2500 trees per ha shall be submitted.
- vi. Recheck of NO<sub>x</sub> dispersion modelling data for traffic flow for Scenario 3 shall be carried out and submitted.
- vii. Reevaluation of Incremental pollutant increase for Scenario 3 using appropriate model considering the undulated topography.
- viii. Action plan to preserve the natural catchment regime and flow of natural drainage courses passing through the plant.
- ix. Scheme for detoxification and utilization of SPL and Flue dust from Pot Line in Steel plant and Cement plants.
- x. Scheme for utilization of flue dust from shot blasting and rodding plant.
- xi. Scheme for treatment of Leachate from SLF for Fluoride and Cyanide pollutants.
- xii. Action plan for time bound compliance to the issues addressed in RO letter of 9.9.2021, regarding SPL disposal, Commitments made in Public Hearing of 2007, Fluoride consumption, Payment towards funds for WLCP and SPL utilization in cement and Steel plants.
- xiii. Scheme for supply of piped potable water supply to villagers in place of tanker supply.
- xiv. Revised action plan with physical targets to address the issues raised during public as per MoEF&CC O.M. dated 30/9/2020.
- xv. Landscaping plan to protect natural drainage patter of two nallah passing through the property.
- xvi. Action plant to utilize Legacy ash stocks by the year 2024.
- xvii. Action Plan to stop overflow of ash pond into nallah.
- xviii. Action plan to manage waste oil and grease shall be submitted.

45.12 Expansion of Integrated Steel Plant (16 MTPA to 18 MTPA) and captive power Plant 1490 MW by **M/s. JSW Steel Limited** located at Vijayanagar Works Toranagallu Village, **Ballari District, Karnataka**. [Online Proposal No. IA/KA/IND/229388/2018, File No. J-11011/489/2009-IA.II(I)] –**Environment Clearance**– regarding.

45.12.1 M/s. JSW Steel Limited has made an online application vide proposal no. IA/KA/IND/229388/2018 dated 20/09/2021 along with copy of EIA/EMP report and Form-2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no.3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006 and is appraised at the Central level.

**Details submitted by Project proponent**

45.12.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
22/06/2018	35 <sup>th</sup> meeting held during 17 <sup>th</sup> to 18 <sup>th</sup> September, 2018	Terms of Reference	09/10/2018

45.12.3 The project of M/s. JSW Steel Limited located in Toranagallu Village Ballari District, Karnataka is for enhancement of production capacity of its Integrated Steel Plant from 16 MTPA to 18 MTPA.

45.12.4 Environmental Site Settings:

SNo	Particulars	Details	Remarks																																																																														
i.	Total land	3134 ha [Private: 3134 ha]	Land use: Industrial																																																																														
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014.	Proposed Expansion will take place in the existing land over an area of about 182.1ha (450 acres). No additional land is required for proposed expansion.																																																																															
iii.	Existence of habitation & involvement of R&R, if any.	No R&R is required.																																																																															
iv.	Latitude and Longitude of the project site.	Latitudes (North) – From 15° 10' 0.12" To 15° 12' 0" Longitudes (East) – From 76° 37' 58.8" To 76° 40' 0.12" <b>GPS COORDINATES OF THE PROPOSED UNITS</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Units</th> <th>Point</th> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr> <td rowspan="5">BF5, SMS4, HSM3 and Oxygen Plant Area</td> <td>A</td> <td>15° 11' 14.70" N</td> <td>76° 40' 32.97" E</td> </tr> <tr> <td>B</td> <td>15° 11' 14.69" N</td> <td>76° 41' 8.08" E</td> </tr> <tr> <td>C</td> <td>15° 11' 8.20" N</td> <td>76° 41' 19.85" E</td> </tr> <tr> <td>D</td> <td>15° 10' 32.84" N</td> <td>76° 41' 0.64" E</td> </tr> <tr> <td>E</td> <td>15° 10' 52.70" N</td> <td>76° 40' 19.91" E</td> </tr> <tr> <td rowspan="7">SMS3 Expansion</td> <td>F</td> <td>15° 10' 55.40" N</td> <td>76° 40' 0.99" E</td> </tr> <tr> <td>G</td> <td>15° 10' 53.84" N</td> <td>76° 40' 4.04" E</td> </tr> <tr> <td>H</td> <td>15° 10' 49.95" N</td> <td>76° 40' 1.69" E</td> </tr> <tr> <td>I</td> <td>15° 10' 48.00" N</td> <td>76° 40' 5.36" E</td> </tr> <tr> <td>J</td> <td>15° 10' 45.50" N</td> <td>76° 40' 3.90" E</td> </tr> <tr> <td>K</td> <td>15° 10' 47.44" N</td> <td>76° 40' 0.27" E</td> </tr> <tr> <td>L</td> <td>15° 10' 48.89" N</td> <td>76° 40' 1.10" E</td> </tr> <tr> <td rowspan="3">Pellet Plant 3</td> <td>M</td> <td>15° 10' 50.46" N</td> <td>76° 39' 58.26" E</td> </tr> <tr> <td>N</td> <td>15° 10' 22.61" N</td> <td>76° 41' 3.25" E</td> </tr> <tr> <td>O</td> <td>15° 10' 14.20" N</td> <td>76° 41' 17.61" E</td> </tr> <tr> <td rowspan="5">CRM 3</td> <td>P</td> <td>15° 10' 7.60" N</td> <td>76° 41' 6.66" E</td> </tr> <tr> <td>Q</td> <td>15° 10' 12.85" N</td> <td>76° 40' 57.28" E</td> </tr> <tr> <td>R</td> <td>15° 11' 58.95" N</td> <td>76° 39' 7.94" E</td> </tr> <tr> <td>S</td> <td>15° 11' 48.39" N</td> <td>76° 39' 28.10" E</td> </tr> <tr> <td>T</td> <td>15° 11' 37.61" N</td> <td>76° 39' 21.98" E</td> </tr> <tr> <td rowspan="3"></td> <td>U</td> <td>15° 11' 48.49" N</td> <td>76° 39' 1.43" E</td> </tr> <tr> <td>V</td> <td>15° 10' 56.82" N</td> <td>76° 37' 55.13" E</td> </tr> <tr> <td>W</td> <td>15° 10' 47.85" N</td> <td>76° 38' 11.27" E</td> </tr> </tbody> </table>	Units	Point	Latitude	Longitude	BF5, SMS4, HSM3 and Oxygen Plant Area	A	15° 11' 14.70" N	76° 40' 32.97" E	B	15° 11' 14.69" N	76° 41' 8.08" E	C	15° 11' 8.20" N	76° 41' 19.85" E	D	15° 10' 32.84" N	76° 41' 0.64" E	E	15° 10' 52.70" N	76° 40' 19.91" E	SMS3 Expansion	F	15° 10' 55.40" N	76° 40' 0.99" E	G	15° 10' 53.84" N	76° 40' 4.04" E	H	15° 10' 49.95" N	76° 40' 1.69" E	I	15° 10' 48.00" N	76° 40' 5.36" E	J	15° 10' 45.50" N	76° 40' 3.90" E	K	15° 10' 47.44" N	76° 40' 0.27" E	L	15° 10' 48.89" N	76° 40' 1.10" E	Pellet Plant 3	M	15° 10' 50.46" N	76° 39' 58.26" E	N	15° 10' 22.61" N	76° 41' 3.25" E	O	15° 10' 14.20" N	76° 41' 17.61" E	CRM 3	P	15° 10' 7.60" N	76° 41' 6.66" E	Q	15° 10' 12.85" N	76° 40' 57.28" E	R	15° 11' 58.95" N	76° 39' 7.94" E	S	15° 11' 48.39" N	76° 39' 28.10" E	T	15° 11' 37.61" N	76° 39' 21.98" E		U	15° 11' 48.49" N	76° 39' 1.43" E	V	15° 10' 56.82" N	76° 37' 55.13" E	W	15° 10' 47.85" N	76° 38' 11.27" E	-
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v.	Elevation of the project site.	540 m above msl	-																															
vi.	Involvement of Forest land if any	No Forest Land Involved	-																															
vii.	Water body exists within the project site as well as study area	<p><b>Project site:</b> Nil</p> <p><b>Study area:</b> Daroji Kere 3.2 Km NE of the plant Taranagar Dam 7 Km SW of the plant JSW's reservoir near Gonahal 4 Km NW</p>	-																															
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	<p><b>Study area:</b> <u>Daroji Bear Sanctuary and its Eco-sensitive Zone</u></p> <p>Daroji Bear Sanctuary is located at a distance of 6.7 Km from the main expansion area and at a distance of 3.8 Km from existing JSW Plant Boundary.</p> <p>As per Supreme Court Order dated 04/12/2006, NBWL recommendation for the previous expansion over the same land area was obtained from standing committee of NBWL vide letter no 6-79/2015 WL (35th Meeting) dated 24/08/2015.</p> <p>The proposed expansion of 16-18 MTPA will be carried out within the land area for which SC NBWL Clearance and Environment Clearance was obtained. In the meantime, ESZ for Daroji Bear Sanctuary was notified SO 3528 (E) dated 25.09.2019. The distance of boundary of the plant from ESC boundary is reported to be 2.35 Kms. JSW has applied for the authentication of maps indicating the distance from ESZ.</p>	On 25 <sup>th</sup> September 2019, Gazette Notification S.O. 3528 (E) regarding Daroji Bear Sanctuary Eco Sensitive Zone came into effect. An area to an extent varying from 1.0 kilometer to 4.7 kilometer around the boundary of Daroji Bear Sanctuary in Ballari district in the State of Karnataka was notified as Daroji Bear Sanctuary Eco Sensitive Zone.																															

45.12.5 The existing project was accorded environmental clearance vide Ir.no. J-11011/489/2009 1A-II(I) dated 01<sup>st</sup> October 2015 and amendments dated 9<sup>th</sup> June 2016, 22<sup>nd</sup> January, 2018

and 29<sup>th</sup> May 2018. Consent to Operate for the existing plant was accorded by Karnataka State Pollution Control Board project vide Ir.no. 126/PCB/MIN/CFO/2016-17/OB/318 dated 20/06/2016 and vide KSPCB OM No. KSPCB/Corp Cell/2021/644 dated 02/06/2021, the validity of CTO is extended up to 30/09/2021.

45.12.6 Implementation status of the existing EC:

S No	Facility	Units	Capacity		
			As per EC	Implementation Status as on date	As per CTO
1	Ore beneficiation Plant	OBP-1	1 x 4.5 MTPA	1 x 4.5 MTPA	1 x 4.5 MTPA
		OBP-2	1x 2.5 MTPA	1x 2.5 MTPA	1x 2.5 MTPA
			1x 5.0 MTPA	1x 5.0 MTPA	1x 5.0 MTPA
			1 x 7.5 MTPA	1 x 7.5 MTPA	1 x 7.5 MTPA
2	Coke Oven	CO1 (NR)	0.64 MTPA	-	0.64 MTPA
		CO2 (NR)	0.64 MTPA	-	0.64 MTPA
		CO3	1.5 MTPA	1.5 MTPA	1.5 MTPA
		CO4	2 MTPA	2 MTPA	2 MTPA
		CO5	3 MTPA	-	-
		CO6	1.5 MTPA	-	-
3	Sinter Plants	SP1	2.3 MTPA	2.3 MTPA	2.3 MTPA
		SP2	2.3 MTPA	2.3 MTPA	2.3 MTPA
		SP3	5.75 MTPA	5.75 MTPA	5.75 MTPA
		SP4	2.3 MTPA	2.3 MTPA	2.3 MTPA
		SP5	1.75 MTPA	-	-
		SP6	5.75 MTPA	-	-
4	Pellet Plants	PP1	5 MTPA	5 MTPA	5 MTPA
		PP2	5 MTPA	5 MTPA	5 MTPA
5	Hot Metal- COREX	COREX 1	0.8 MTPA	0.8 MTPA	0.8 MTPA
		COREX 2	0.8 MTPA	0.8 MTPA	0.8 MTPA
6	Hot Metal- Blast Furnace	BF1	2.5 MTPA	1.88 MTPA	1.88 MTPA
		BF2	2.17 MTPA	2.16 MTPA	2.16 MTPA
		BF3	4.4 MTPA	3 MTPA	3 MTPA
		BF4	3 MTPA	3 MTPA	3 MTPA
		BF5	3 MTPA	-	-
7	DRI Plant	-	1.2 MTPA	1.2 MTPA	
8	Pig Caster	-	1x1200 TPD +3x3600 TPD	1x1200 TPD +2x3600 TPD	1x1200 TPD +2x3600 TPD
9	Crude steel	SMS1	3.8 MTPA	3.8 MTPA	4 MTPA
		SMS2	6.4 MTPA	6 MTPA	6 MTPA
		SMS3	2x1.2 MTPA (EAF)	1x1.2 MTPA (EAF)	1x1.2 MTPA (EAF)
		SMS4	2x200 T converter (BOF)	-	-
10	Lime Kilns	LCP1	4x300 TPD	4x300 TPD	4x300 TPD
		LCP2	4x300 TPD + 4x600 TPD	4x300 TPD + 3x600 TPD	4x300 TPD+ 3x600 TPD
		LCP3	2x600 TPD	1x600	1 x600
		LCP4	3x600 TPD	-	-
11	Casters	Slab Caster 1	3.2 MTPA	3.2 MTPA	4 MTPA
		Slab Caster 2	6.4 MTPA	6.4 MTPA	6.4 MTPA
		Slab Caster 3	1.6 MTPA	1.6 MTPA	1.6 MTPA
		Slab Caster 4	3.6 MTPA	-	-
		Billet Caster 1	1.5 MTPA	0.5 MTPA	0.5 MTPA

S No	Facility	Units	Capacity		
			As per EC	Implementation Status as on date	As per CTO
		Billet Caster 2	3.0 MTPA	3.0	3.0
12	Hot Strip Mills	HSM1	4.0 MTPA	3.2 MTPA	3.2 MTPA
		HSM2	5.2 MTPA	5.0 MTPA	5.0 MTPA
		HSM3	3.6 MTPA	-	-
13	Pipe Mill	-	0.4 MTPA	-	-
14	Wire Rod Mill	WRM1	0.6 MTPA	0.6 MTPA	0.6 MTPA
		WRM2	1.2 MTPA	-	-
15	Rebar & Section Mills	BRM1	1.0 MTPA	1.0 MTPA	1.0 MTPA
		BRM2	-	-	-
16	Cold Rolling Mills	CRM1	1.8 MTPA	1.0 MTPA	1.0 MTPA
		CRM2	2.3 MTPA	2.0 MTPA	2.0 MTPA
17	Galvanizing Lines	CGL1	4x0.25 MTPA	0.4 MTPA	0.4 MTPA
		CGL2	2x0.45 MTPA	-	-
18	Colour Coating Line	-	0.5 MTPA	-	-
19	Captive Power Plants	CPP1 – Gas based	100 MW	100 MW	100 MW
		CPP2 – Gas based	130 MW	130 MW	130 MW
		CPP3 – Coal + Gas	300 MW	300 MW	300 MW
		CPP4 – Coal + Gas	300 MW	300 MW	300 MW
		CPP5	660 MW	-	-
20	Incinerator	-	1000 kg/h	250 kg/h	250 kg/h
21	Slag Grinding and mixing unit	CP1	0.2 MTPA	0.2 MTPA	0.2 MTPA
		CP2	2.0 MTPA	2.0 MTPA	2.0 MTPA
22	Oxygen Plant (Out sourced)	-	1x2500 TPD	1x2500 TPD	1x2500 TPD
		-	4x1800 TPD	4x1800 TPD	4x1800 TPD
		-	1x900 TPD	1x900 TPD	1x900 TPD
23	Township	-	6 Nos	4 Nos	4 Nos

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

Sl no	Name of the Unit	Facilities at various stages of expansion in MTPA				Total Capacity (at 16 MTPA)	Facilities Proposed (at 18 MTPA)	Total Capacity (at 18 MTPA)
		4 -MTPA	4-10 MTPA	10-16 MTPA	At 16 MTPA			
1	Ore Beneficiation Plant - product	OBP-11 x 4.5	OBP-2 1x 2.5, 1x 5.0 & 1 x 7.5,	Nil	1 x 4.5 1x 2.5 1x 5.0 1 x 7.5	19.5	OBP-1 facilities to be Relocated to OBP-2	19.5
2	Pellet Plants	PP1- 1-5.0	PP-2-5.0	Nil	PP 1 & 2 2 x 5.0	10	PP-3 6.8	16.8
3	Sinter Plants	SP1	SP 2 -2.3 SP 3- 7.5	SP4 -2.3 SP5 -1.75 SP6 -5.75	SP1-6 3x 2.3 2 x 5.75 1 x 1.75	20.15	SP-5: 2.3 SP-6: deferred in lieu of PP-3	14.95
4	Coke Oven – NR	CO 1 & 2 2 x 0.64 1.28	Nil	Dismantling of Existing NR Coke Oven	0	0	No addition	0

Sl no	Name of the Unit	Facilities at various stages of expansion in MTPA				Total Capacity (at 16 MTPA)	Facilities Proposed (at 18 MTPA)	Total Capacity (at 18 MTPA)
		4 -MTPA	4-10 MTPA	10-16 MTPA	At 16 MTPA			
5	Coke Oven – Recovery type	Nil	Coke 3 - 1.5	CO 1&2 - 1.5	CO 1-5 2x1.5 1x2.0 1x3.0	8.0	No addition	8.0
6	Hot metal – Corex	Corex 1 & 2(2x0.8)	Nil	Nil	Corex 1- 2 2 x 0.8	1.6	No addition	1.6
7	Hot metal- Blast Furnace	BF-1-2.5 BF-2-2.17	BF 3 & 4 2 x 3.0	BF-3- 4.4 BF-5- 3.0	BF 1 -5 1x 2.5 1x 2.17 1x4.4 2x 3.0	15.07	BF-5 of 3.0 MTPA to be built as 4.5 MTPA	16.57
8	Pig Casting Machines (TPD)	1200	7200	3600	12000	12000	MGP-5000 TPD	17000 TPD
9	Crude steel - BOF, EAF & auxiliaries	SMS1 3.80	SMS2 6.0	SMS2 -6.4 SMS 3 & 4- 5.6 2x200T BOF +2x1.2 EAF	SMS1-4 1x3.8 1x6.4 1x3.0 1x2.6	15.8	SMS-3: In place of 1 EAF, 1 ZPF is considered SMS-4 will be changed from 2 x 200T to 2 x 350T & will operate at 4.8 MTPA	18
10	Lime Kiln (TPD)	LCP-1 4x300	LCP-2 4x300 4x600	LCP-3 4 x 600	LCP 1- 4 8 x 300 8 x 600	7200	No addition	7200 TPD
11	Slab Caster	SMS-1 3.2	SMS2 6.4	SMS-3- 1 x1.6 SMS-4- 1x3.6	Slab Caster 1- 4 14.8	14.8	SMS-4 slab caster changed from 1 x 3.6 MTPA to 2 x 2.5 MTPA	16.2
12	Billet caster	Nil	SMS-2 1.5	SMS-3 3.0	4.5	4.5		4.5
13	HSM	HSM 1 1x4.0	HSM-2 1x5.2	HSM-3 1x3.6	HSM1-3 12.8	12.8	HSM-3 upgraded to 5.0	14.2
14	Plate Mill	Nil	Nil	Nil	Nil	Nil	No addition	Nil
15	Pipe Mill	Nil	0.4	Nil	1x 0.4	0.4	No addition	0.4
16	Wire rod mill	Nil	WRM-1 1x0.6	WRM-2 1.2	WRM 1-2 1x0.6, 1x1.2	1.8	No addition	1.8
17	Rebar & Section mill	Nil	BRM-1 1x1.0	Nil	BRM-1 1.0	1	New BRM-2 of 1.2 MTPA	2.2
18	Cold Rolling Mill Complex		CRM-1- 1.8 CRM-2- 2.3	Nil	CRM1&2 4.1	4.1	CRM-3 of 2.3 MTPA	6.4
19	Galvanizing Lines	Nil	Nil	CGL-1-	CGL 1&2 4x0.25	1.9	No addition	1.9

Sl no	Name of the Unit	Facilities at various stages of expansion in MTPA				Total Capacity (at 16 MTPA)	Facilities Proposed (at 18 MTPA)	Total Capacity (at 18 MTPA)
		4 -MTPA	4-10 MTPA	10-16 MTPA	At 16 MTPA			
				4x0.25 CGL-2- 2x0.45 -	2x0.45			
20	Color Coating Line	Nil	0.5	Nil	0.5	0.5	No addition	0.5
21	Power Plant and process steam boilers in MW	CPP 1X100 CPP-2 1x130 all gas	CPP 3 & 4 2x300 gas+coal	CPP5- 1X660 coal	CPP 1-5 1X100, 1X130, 2x300,1x660	1490	No addition	1490 MW
22	Incinerator (kg/hr)	Nil	2 x 250kg/h	250kg/h	2 x 250kg/h	1000kg/h	No addition	1000kg/h
23	Slag Grinding and mixing unit	CP-1 1x 0.2	Nil	CP-2 1x2.0	CP-1&2 1x0.2 1x2.0	2.2	No addition	2.2
24	Oxygen Plant	1x2500 TPD=2500 TPD	2x1800 TPD + 1x900 TPD	2X1800 TPD	1 x 2500 TPD 4 x1800 TPD 1 x 900 TPD	10600 TPD	1 x 2060(TP) 1 x 2200	14860 TPD

45.12.8 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 materials	Quantity Required ton/annum			Source and location		Distance of Domestic sources from Plant (km)	Mode of Transport
		Existing (at 16 MTPA)	Expansion (add. for 18 MTPA)	Total (After Expansion)	Import Source	Domestic Source		
1	Iron ore fines	2,16,77,778	27,09,722	2,43,87,500	Australia, Brazil	Bannihatti, Sandur, Hospet, Chitradurga, Orissa & Goa	30 30 35 125 1294 349	Pipe conveyer Pipe conveyer Rail/Road Rail Rail Rail
2	Iron ore lumps	12,53,333	1,56,667	14,10,000	South Africa, Australia	Bannihatti, Sandur, Hospet,	30 30 35	Rail/Road
3	Coking coal	96,00,000	12,00,000	1,08,00,000	Australia, Canada, USA, Mozambique	-	-	Sea/Rail
4	COREX coal	11,20,000	0	11,20,000	Australia, Russia, South Africa	-	-	Sea/Rail
5	PCI coal	30,34,000	2,80,000	33,14,000	Australia, Russia	-	-	Sea/Rail
6	Anthracite coal	3,82,222	47,778	4,30,000	Russia, Finland, Latvia	-	-	Sea/Rail
7	Limestone LCP	40,15,665	5,01,958	45,17,623	UAE, Oman	-	-	Sea/Rail
8	Limestone Agg	8,51,766	1,06,470	958236	UAE, Oman	-	-	Sea/Rail
9	Dolomite Agg	6,47,420	80,927	7,28,347	Thailand, UAE, Oman	Bagalkot-Karnataka, Karnool-AP, Kadapa-AP	210 267 205	Sea/Rail/Road
10	Ind. limestone	71,644	-37,308	34336	-	Bagalkot-Karnataka	210	Sea/Rail
11	Ind.	10,36,428	78,998	11,15,426	-	Bagalkot-	210	Sea/Rail

	dolomite					Karnataka		
12	Dolomite LCP	16,69,322	2,08,665	1877987	-	Bagalkot-Karnataka, Karnool-AP, Kadapa-AP	210 267 205	Sea/Rail/Road
13	Ind. quartz	6,87,098	59,855	7,46,953	-	Dhone-Kurnool	205	Rail/Road
14	Bentonite	88,889	47,957	1,00,000	-	Andhra/K'taka		Rail/Road
15	Thermal Coal	47,50,000	0	47,50,000	-	Open Market	-	Rail
	<b>Total</b>	<b>5,08,85,565</b>	<b>54,04,843</b>	<b>5,62,90,408</b>				-

45.12.9 The water requirement for the entire JSW complex is estimated as 3,01,000 m<sup>3</sup>/day which is being sourced from two sources, viz Tungabhadra Dam (32.8 MGD through pipeline of 35 KM) and Alamatti dam (40 MGD through a pipeline of 178 Km). Out of this total, around 1,44,000 m<sup>3</sup>/day of fresh water is required for steel plant. Additionally, around 30,000 m<sup>3</sup>/day waste water is also being recycled and used in plant process. The permission for drawl of raw water is obtained from Govt. of Karnataka vide Ltr. dated 09/11/2009.

45.12.10 The power requirement for the project is estimated as 1434 MW, which will be generated in the Captive Power Plants. The net available captive power generation capacity of JSW shall be 1051 MW (excluding future CPP5 of 660 MW). Power Purchase agreement has been signed with JSWEL for supply of balance power on 30/03/2019.

45.12.11 Baseline Environmental Studies:

Period	December 2018 to Feb 2019
AAQ parameters at 10 locations (min and max)	PM <sub>2.5</sub> = 31 to 59 µg/m <sup>3</sup> PM <sub>10</sub> = 50 to 95 µg/m <sup>3</sup> SO <sub>2</sub> = 9.24 to 35.6 µg/m <sup>3</sup> NO <sub>2</sub> = 9.96 to 26.88 µg/m <sup>3</sup> CO = 234 to 4259 µg/m <sup>3</sup>
AAQ modelling (Max Incremental GLC)	PM <sub>10</sub> = 15.01 µg/m <sup>3</sup> PM <sub>2.5</sub> = 4.46 µg/m <sup>3</sup> SO <sub>2</sub> = 14.75 µg/m <sup>3</sup> NO <sub>x</sub> = 10.36µg/m <sup>3</sup>
Ground water quality at 15 locations	pH: 7.32 to 8.97, Total Hardness: 96 to 816 mg/l, Chlorides: 37 to 558 mg/l, Fluoride: 0.1 to 1.5 mg/l. Heavy metals are within the limits.
Surface water quality at 5 locations	pH: 7.91 to 8.72, DO: 4.8 to 6.4 mg/l, BOD: 2 to 4 mg/l,
Noise levels (min and max)	45.5 to 53.7 dBA for the day time; 35.6 to 46.4 dBA for the Night time.
Traffic assessment study findings	The existing traffic density for different types of vehicles was counted at 03 locations during the study on a particular day for 24 hours:  • T1 – Toranagallu-Kudithini Road, JSW Steel Plant– This is located on the road to Bellary. Most of the trucks carrying finished products from the plant use this road.

	<ul style="list-style-type: none"> <li>• T2 – Toranagallu - Sandur Road, Near Vidyanagar Gate. - This is located where most of the JSW employees enter the plant.</li> <li>• T3 – Toranagallu - Hospet Road, near adjoining Toranagallu By-pass and old road- This is located on the road from Toranagallu to Sandur; trucks carrying iron ore to the steel plant usually use this road.</li> </ul> <p><u>Study Assessment:</u></p> <ul style="list-style-type: none"> <li>• At T1- Toranagallu-Kudithini Road, the maximum traffic volume has reached 3542 PCUs per hour. The traffic on this road has still spare capacity. It may become necessary to regulate heavy vehicle movement to ensure that the traffic volumes do not exceed the design limits.</li> <li>• At T2– Toranagallu - Sandur Road, Near Vidyanagar Gate the maximum traffic volume was 2716 PCUs per hour. This road is a public road and is also used by vehicles going towards Sandur – an important town of the region.</li> <li>• At T3- Toranagallu - Hospet Road, near adjoining Toranagallu By-pass and old road is on the road leading to Bellary and Hospet, the maximum traffic volume was 1850 PCUs per hour. This is also a public road. However, the traffic on this road has still spare capacity.</li> </ul>
<p>Flora and fauna</p>	<p>Leopard, Sloth Bear, Indian Pangolin, Python, Common Indian Monitor, Pea Fowl, Steppe Eagle, Short Toed Snake Eagle are present in 10 Km Study Area. The species are mostly confined within the Daroji sanctuary.</p> <p>As per specific condition no (iii) of the existing EC for expansion from 10 MTPA to 16 MTPA, JSW has to participate in the Wildlife Conservation Plan for Sloth Bears and other Schedule-I Fauna found in the study area and in the Daroji Bear Sanctuary.</p> <p>In 2011, Karnataka Forest Department had prepared the Management Plan for Daroji Sloth Bear Sanctuary with assistance from JSWSL and other industries in the area which includes measures for conservation and protection of Faunal species found in the sanctuary along with financial outlay for implementation of the same.</p> <p>With reference to PCCF and CWW Karnataka’s letter no. PCCF(WL)/D /CR-64 /2020-21 dated 29/01/2021, the Management Plan of Daroji Sloth Bear Sanctuary for the period from 2020-21 to 2029-30 has been approved. JSW shall be participating in the same in the coming years. For the future, an amount of Rs 3 Crores has been earmarked for the same.</p>

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

**Non- Hazardous Solid Wastes**

S No	Type of Waste	Generation (TPD)	Mode of Utilization/ Disposal
<b>Blast Furnace (BF)</b>			
1	Blast Furnace Air Cooled Slag	1589	For Road making purpose as a sub base material. Currently it is used for bund construction.
2	Blast Furnace Granulated slag	16570	Selling to Cement Making Plants and as slag sand, an alternate of river sand.
3	Blast Furnace Flue Dust	817	Re-used in waste to wealth to recover Fe & C
4	Blast Furnace Sludge	272	
5	Blast furnace bag filter dust	409	Reused in micro pellet plant, further to sinter making
<b>COREX</b>			
6	Corex Slag(Dry Pit Slag)	150	For Road making purpose as a sub base material. Currently it is used for bund construction.
7	Corex Granulated slag	1600	Selling to Cement Making Plants and as slag sand, an alternate of river sand.
8	Corex Coal Drying Plant Coal Dust	270	Re-used in Blast Furnace for Pulverized Coal Injection (PCI).
9	Corex GCP Sludge	260	Re-used in waste to wealth to recover Fe & C
10	Corex classifier sludge	50	Reused in micro pellet plant, further to sinter making
11	Corex bag house dust	15	
<b>Direct Reduced Iron (DRI)</b>			
12	DRI sludge	234	Re-used in base mix further to Sinter plant.
13	Product fines	150	
14	Oxide fines	240	
<b>Steel Melting Shop – 1,2 &amp; 4 (BOF)</b>			
15	Fume Extraction System(FES) Dust	67	Re-used in micro pellet plant further to sinter making
16	Mill Scale	160	Used for mill scale briquetting for further use in BOF as coolant
17	GCP sludge	979	Re-used in micro pellet plant further to sinter making
18	Ladle Furnace(LF) Slag	890	
19	BOF slag	10688	Used in micro pellet plant, blast furnace and sinter as source of flux, as scrap in BOF and bund construction
<b>Steel Melting Shop - 3 (EAF &amp; ZPF)</b>			
20	Fume Extraction System(FES) Dust	118	Used in mill scale briquetting plant further in SMS

S No	Type of Waste	Generation (TPD)	Mode of Utilization/ Disposal
21	EAF/ZPF slag	2397	Used as scrap in BOF and For Road making purpose as a sub base material & for making sub base of Inter plant railway network.
22	Ladle Furnace(LF) Slag	148	Re-used in micro pellet plant further to sinter making
23	Mill scale	20	Used for mill scale briquetting for further use in BOF as coolant
24	Combustion Chamber Dust	50	
<b>Hot Strip Mill- 1,2 &amp;3</b>			
25	Mill Scale	700	Used for mill scale briquetting for further use in BOF as coolant
26	Sludge	29	
<b>Wire Rod mills</b>			
27	Mill scale	69	Used for mill scale briquetting for further use in BOF as coolant
28	Sludge	7	Re-used in micro pellet plant further to sinter making
<b>Bar rod mills</b>			
29	Mill scale	102	Used for mill scale briquetting for further use in BOF as coolant
30	sludge	8	Re-used in micro pellet plant further to sinter making
<b>Lime calcinations Plants</b>			
31	Dolo (Dolime) Fines	288	Re-used in CRM, Corex, and Sinter Plant.
32	Lime Fines	480	
33	Bag house Fines (Lime/Dolo dust)	180	Re-used in micro pellet plant further to sinter making
<b>Refractory:</b>			
34	Used Refractory Bricks	170	Sold to authorized recycler
35	Refractory Dust	110	Used in bund construction
<b>Cold Rolling Mill (CRM-1,2&amp;3)</b>			
36	Iron Oxide from Acid Regeneration Plant(ARP)	88	Re-used in Mill Scale Briquetting Plant & PP-2.
37	Grinding Sludge	15	Re-used in Sinter plant / Selling to Authorized Recyclers / Re-processors.
38	Magnetic Separator Sludge	11	Burning in Incinerator
39	Zinc dross	24	Selling to Authorized Recyclers/Re processor
40	Effluent Treatment Plant (ETP) Sludge	23	Re-used in micro pellet plant further to sinter making
<b>Coke Ovens</b>			
41	CDQ dust	241	Re-used in micro pellet plant further to sinter making

S No	Type of Waste	Generation (TPD)	Mode of Utilization/ Disposal
42	Coke breeze	526	Re-used in sinter making
43	Tar	767	Sold
44	Decanter tank sludge	3	Reused in coke oven
45	BOD sludge	6	
<b>Captive Power Plants</b>			
46	Bottom Ash	33	Used for bricks manufacturing
47	Fly Ash	163	Sold to Cement Making

#### Hazardous Solid Wastes

S No	Category	Quantity (TPA)	Proposed disposal
1	Used oil	73	Disposed to auth. Reprocessor
2	Waste oil	479	Disposed to auth. Reprocessor
3	Oil soaked cotton waste	57	Incinerate
4	Waste pickled liquor	180248	Reprocessing own
5	Acid residue	490735	To be treated in ETP
6	Alkali Residue	1783051	To be treated in ETP
7	Decanter tank sludge	827	Used back in Coke oven
8	ETP Sludge	5589	Used back in PP
9	Impure sulphur	217	Disposed to TSDF
10	Oil & grease skimming residue	1944	Incinerate
11	Filter & filter material having organic compound	34	Incinerate
12	Ash from incinerator	407	used in bund
13	Discarded plastics containers	48	Disposed to auth. Reprocessor
14	Discarded MS containers	385	Disposed to auth. Reprocessor
15	Used Batteries	1740	Disposed to auth. Reprocessor
16	BOD sludge	1829	Used back in Coke oven
17	ZLD salt	504	Disposed to TSDF
18	Chrome sludge	147	Disposed to TSDF
19	Zinc dross	1395	Disposed to auth. Reprocessor

#### 45.12.13 Public Consultation:

Details of advertisement given	<ul style="list-style-type: none"> <li>Prajavani (Kannada) on 07/12/2020</li> <li>The New Indian Express (English) on 07/12/2020</li> <li>E Namma Kannada Nadu (Daily local) on 10/12/2020</li> </ul>
Date of public consultation	08 <sup>th</sup> January, 2021 (11 am)
Venue	Proposed Project Site
Presiding Officer	Additional Deputy Commissioner & Additional District Magistrate, Ballari District
Major issues raised	<ul style="list-style-type: none"> <li>Generation of Employment to Locals</li> </ul>

	<ul style="list-style-type: none"> <li>• Improvement in Health Care Facilities</li> <li>• Improving Educational Facilities</li> <li>• Improving the quality of life of farmers.</li> <li>• Development of Greenery around plant</li> </ul>
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**Action plan as per MoEF&CC O.M. dated 30/09/2020**

S No	PROJECT/ PROGRAM	PHYSICAL TARGET	YEAR WISE PROGRESS		
			2021-22	2022-23	2023-24
<b>MEDICAL FACILITIES (TENTATIVE BUDGET – RS 35.48 CR)</b>					
1	Upgradation of facilities at Sanjeevani Hospital				
1.1	<u>Phase 1</u> <ul style="list-style-type: none"> <li>• Construction of New block</li> <li>• Construction of Café, Kitchen, Burns ICU Block</li> <li>• Construction of Service Block</li> </ul>	Sq. feet	48768	0	0
1.2	Renovation / Redoing of Existing Block: <u>Phase 1</u>	Sq. feet	13575	0	0
1.3	<u>Phase 2</u> Construction of OPD & Pharmacy Block and Development of Roads and Pathways	Sq. feet	0	20283	0
<b>Education (Tentative Budget – Rs 0.9 Cr)</b>					
2	<ul style="list-style-type: none"> <li>• Face lift and improve the facilities of the Anganwadies in 8 DIZ villages namely Vaddu, Toranagallu, Kurekuppa, Talur, Bannihatti, Joga, DoddaAnantapur and Taranagar</li> <li>• Painting for Anganwadies</li> <li>• Repairs for building as required</li> <li>• Providing Teaching &amp; Learning material</li> <li>• Providing play equipment as required</li> </ul>	No. of Anganwadies	10	10	10
3	<ul style="list-style-type: none"> <li>• Improving the existing 8 Government Schools (Shuseelanagar Higher Primary School, Lakshmipura High School Lakshmipura Higher Primary School, Sandur Government girls high school, Sandur Government PU college girls, BhujanganagarYashavantnagarTaranagaraAshraya) into model schools is being planned and approved. Need based Interventions Proposed</li> <li>• Renovation of School Toilets</li> <li>• Renovation of School building</li> </ul>	Schools	4	2	2
<b>ENVIRONMENT (Tentative Budget – Rs 4 Cr)</b>					
4	Development of greenery around Sultanpur village ( nos of trees to be planted)	No. of trees	5000	0	0
5	Development of greenery in surrounding 12 villages	No. of trees lakhs	2	2	2
6	Installation of CAAQMS station at Sultanpur – shared by 3 industries (nos), over and above 5 CAAQMS stations installed by JSW steel.	Nos.	1	0	0
<b>Agri Livelihoods (Tentative Budget – Rs 0.6 Cr)</b>					
7	Excavation of farm ponds in farmer’s fields for irrigation requirements in following 52 surrounding villages- Vaddu, Basapur, Talur, Joga, Kurekuppa, Toranagallu Station, Toranagallu Village, Sultanpur, Taranagara, Bannihatti, Gangalapura, Gadiganur, Buvanahalli, Kotaginahal, DoddaAnthapura, ChikkaAnthapura, Kodalu, Lingadahalli, HosaDaroji, HosaMadapura, Hale	No. of farm ponds	60	80	100

S No	PROJECT/ PROGRAM	PHYSICAL TARGET	YEAR WISE PROGRESS		
			2021-22	2022-23	2023-24
	Daroji, Hale Madapura, Krishnanagara, Muraripura, Daulatpura, Bailuvaddigere, Kaakubalu, Gundluvaddigere Dharmasagar, Papinayanakanahalli, Sandur, Bhujanganagar, Laksmipura, Nagalapura, Nandihalli, Kamattur, Yashavantnagar, Garaga, Sushilanagar, Ramghad, Siddapura, Jayasinghapura, Venkatagiri, U Rajapura, Ubbalagandi, Ranjithapur, Seenabasappa camp, Mallapura, Naulatti, Vittalapur, Devagiri, Narayanapur, Gunda Dharmapura, Subbarayanahalli camp (size of farm ponds (Max Size) : 100 ft x 100 ft x 12 ft				

45.12.14 The capital cost of the project is Rs. 2857 Crores and the capital cost for environmental protection measures is proposed as Rs 324.5 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 74.8 Crores. The employment generation from the proposed project / expansion is about 3700. The details of cost for environmental protection measures is as follows:

S No	Description	Cost (Rs. in Crores)	
		Capital	Recurring
1.	Air Pollution Control/ Noise	154	48
2.	Water Pollution Control	52	12
3.	Solid Waste Management	9	2
4.	Environmental Monitoring and Management	2.5	0.6
5.	Occupational Health (Existing Facilities will be utilized)	0	0
6.	Rainwater Harvesting	0	1.5
7.	Energy Conservation	105	10.5
8.	Green Belt Development	2	0.2
9.	Addressal of Public Consultation concerns	40.97	0

45.12.15 Existing Greenbelt cover is 910.75 ha (2250 Acre which is 29 % of the plant area. Further Greenbelt will be developed in 150-acre land within plant boundary & 90 acres of land owned by JSW close to plant Boundary which is 3.1 % of the plant area. Gap filling plantation shall be carried out over existing greenbelt area to increase the existing plantations density. A 2m - 20m wide greenbelt, consisting of at least 3 tiers around plant boundary is 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. Additionally, 434 acres of Forest area over nearby hillock shall also be developed in consultation with Forest Department. Total of 6,90,000Nos of saplings in the plant area and JSW acquired areas and 40,000 Nos saplings over the hillocks will be planted and nurtured.

45.12.16 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.

45.12.17 Name of the EIA consultant: M/s MECON Limited [Sl. No. 51, List of ACOs with their Certificate / Extension Letter no. Rev. 14, September 15, 2021].

**Certified compliance report from Regional Office**

45.12.18 The Status of compliance of earlier EC was obtained from Regional Office, Bangalore vide letter no. EP/12.1/2015-16/16/Kar dated 09/08/2021 in the name of M/s. JSW Steel Limited. The site visit was carried out on 28/07/2021. The Action taken report on the observations made during the visit was submitted to Regional officer MoEF&CC, Bangalore vide letter dated 02/08/2021. MoEF&CC (RO), Bangalore evaluated the same and incorporated the action plan in the Final Certified Compliance report dated 09/08/2021. The details of the observations made by RO in the report dated 09/08/2021 along with its re-assessment / present status as furnished by the PP is given as below:

S No	Observation of RO (Visit dated 28/07/2021 / Report dated 09/08/2021)	Response by PP to RO, MoEF&CC dated 02/08/2021		Response by PP as on date
		Compliance / Action Plan by M/s. JSW Steel Limited	Schedule of Completion	
1.	Spillages and accumulation of materials along the conveyor/junction houses which causes dust pollution.	<p>To address the issue of spillages &amp; emission control &amp; management formed a committee in the month of August 2020.</p> <p>The team had audited the all Junction Houses and Conveyor Transfer Points. As per audit findings of the Committee, the major reasons are attributed to improper Sealing's &amp; Material carry back. To address this issue,</p> <ul style="list-style-type: none"> <li>• Conveyor seal points was implemented in 52 Junction houses (Completed)</li> <li>• Proposed to implement seal points in balance 24 junctions by 31/10/2021</li> <li>• To address the issue of Spillages, by eliminating carry back, completed modification of 5 critical chutes at Raw Material Handling area, Blast Furnace-3 &amp; Lime calcination Plant-2. (Completed)</li> <li>• Proposed to modify 5 junction houses by 31/03/2022.</li> </ul>	<p>30/06/2021</p> <p>31/10/2021</p> <p>30/06/2021</p> <p>31/03/2022</p> <p>Continuously on monthly basis</p>	<p>JSW Steel handles large volume of raw materials for steel production. In the process of transferring the materials fugitive emissions are generated from Junction houses, where the material is transferred from one conveyor to another.</p> <p>At JSW Steel, there are more than 600 Junction houses, which are provided with either bag filters or water spray to suppress dust. A dedicated team of specially trained personnel has been formed who audit all the Junction houses regularly. The audits include monitoring of spillage control; efficiency of bag filters; closing of openings; material build up in Junction houses etc. JSW has also introduced a 5-STAR RATING for critical junction house to sustain and motivate the departmental maintenance personnel</p> <p>During the visit on 28.07.2021, emissions/spillages were seen in 24 Junction houses. While the spillages have been cleared, five Junction houses need major modifications to avoid spillage and the modification will be completed by <b>31.03.2022</b>.</p>

S No	Observation of RO (Visit dated 28/07/2021 / Report dated 09/08/2021)	Response by PP to RO, MoEF&CC dated 02/08/2021		Response by PP as on date
		Compliance / Action Plan by M/s. JSW Steel Limited	Schedule of Completion	
		<ul style="list-style-type: none"> <li>To sustain above standard operating practice, had implemented 5 star rating for critical junction house through scheduled Internal Auditing.</li> </ul>		
2.	Damage of internal road and fugitive emission due to truck movement	<p>To control fugitive emission and to reduce the no of trucks carrying the iron ore o\to plant-</p> <ul style="list-style-type: none"> <li>JSW Steel had put up Railway line (11 KM) from Nandi Halli Stock Yard to Plant.</li> <li>Also implemented Pipe Conveyor from NandhiHalli Stock yard to Plant 24 KM (Present capacity is 5 MTPA due to restriction of 12 hour operation)</li> <li>Proposed to enhance to 25 MTPA once approved by Forest Department. After complete commissioning of 36 MTPA, the 3000 trucks will be eliminated completely. By 31/12/2023.</li> </ul>	<p>31/03/2014</p> <p>27/05/2019</p> <p>31/12/2023</p>	<p>To control fugitive emission and to reduce the no of trucks carrying the iron ore o\to plant-</p> <ul style="list-style-type: none"> <li>JSW Steel had put up Railway line (11 KM) from Nandi Halli Stock Yard to Plant.</li> <li>Also implemented Pipe Conveyor from NandhiHalli Stock yard to Plant 24 KM (Present capacity is 5 MTPA due to restriction of 12 hour operation)</li> <li>Proposed to enhance to 25 MTPA once approved by Forest Department. After complete commissioning of 36 MTPA, the 3000 trucks will be eliminated completely. By 31/12/2023.</li> </ul>
3.	Occasional Lateral/ Roof Top emission from Steel Melting Shop 1 & 2	<p>To control emissions from SMS 1 &amp; 2 Converter Primary Venturi Scrubbers and Secondary Dedusting along with Dog house were provided. Due to Process disturbance instantaneous fugitive emissions were observed from Converters.</p> <p>Following are the action plan to control Roof Top emissions-</p>	31/03/2022	<p>JSW Steel has implemented a comprehensive system of primary and secondary fume extraction systems in SMS 1&amp;2 to control process dust emissions. However, due to changes in raw material quality, upsets in operating systems, a part of transient emissions are not captured by the secondary emission control and eventually are seen from the roof top for small periods of time.</p> <p>To take care of these</p>

S No	Observation of RO (Visit dated 28/07/2021 / Report dated 09/08/2021)	Response by PP to RO, MoEF&CC dated 02/08/2021		Response by PP as on date
		Compliance / Action Plan by M/s. JSW Steel Limited	Schedule of Completion	
		<ul style="list-style-type: none"> <li>• SMS-1: Augmentation of Primary &amp; Secondary dedusting system by 31/03/2022.</li> <li>• SMS-2: Implementation of Secondary Dedusting. (Completed)</li> <li>• Proposed to maximize usage of Mill scale Briquetting as coolant in SMS-1 &amp; 2 Converter from 570 t/day 700 t/day to reduce Roof top emissions. By 30.11.2021</li> <li>• In SMS-2, Gas Cleaning Assistant (GCA) as a part of Primary Dedusting to control Roof Top emissions will be implemented by 31/03/2022</li> <li>• Augmentation of Primary dedusting systems will be implemented by 31/03/2023.</li> </ul>	<p>Completed</p> <p>30/11/2021</p> <p>31/03/2022</p> <p>31/03/2022</p>	<p>emissions, as a part of continuous improvements, augmentation of fume extraction facilities has been proposed and is under implementation at an estimated cost of Rs 195 Cr and the details are given below:</p> <p>a) Maximise use of Mill scale Briquetting as coolant in SMS-1 &amp; 2 Converter from 570 t/day 700 t/day: <b>30.11.2021</b></p> <p>b) SMS-1: Augmentation of Primary &amp; Secondary dedusting system by enhancing the capacity of bag filters: by <b>31.03.2022</b> linked with Converter shutdowns.</p> <p>c) SMS-2:</p> <ol style="list-style-type: none"> <li>i. Augmentation of Secondary Dedusting: <b>Completed and is in regular operations.</b></li> <li>ii. Implementing of Gas Cleaning Assistant (GCA), a proprietary software in the secondary gas cleaning system to monitor the suction volumes as per the requirement: <b>By 31.03.2022</b></li> <li>iii. Augmentation of primary dedusting systems, requiring periodic shutdowns for implementation: <b>By 31.10.2022</b></li> </ol>
4.	Fugitive emissions from Coke Oven	This Incidence was occurred due to tripping of Compressor of Bag House during Pulsing due to problem in Instruments. Corrective action initiated and Bag House Operation was restored on the same day.	Completed on the same day.	This incidence occurred due to tripping of air compressor connected to the Bag House: <b>Corrective action taken and Bag House Operation was restored. Completed</b>

S No	Observation of RO (Visit dated 28/07/2021 / Report dated 09/08/2021)	Response by PP to RO, MoEF&CC dated 02/08/2021		Response by PP as on date
		Compliance / Action Plan by M/s. JSW Steel Limited	Schedule of Completion	
5.	<p>Suggestions</p> <ul style="list-style-type: none"> <li>• PA should take necessary action /correction measures for prevention of spillages from conveyor and junction houses within two months</li> <li>• All the accumulated dust materials due to spillage shall be removed within two months</li> <li>• All the damages of internal roads shall be rectified within three months. Further, the transport through trucks be gradually reduced by enhancing of capacity of pipe conveyor transport and rail transport.</li> <li>• Shall take required corrective measures as proposed such as primary/secondary de-dusting, Gas cleaning assistant, maximizing the usage of coolant etc at SMS within four months.</li> </ul>	-	-	Shall be complied.

45.12.19 M/s JSW Steel Limited has earlier made an online application vide proposal no. IA/KA/IND/31502/2010 dated 10/08/2021. The proposal was considered by the EAC (Industry 1) in its 43<sup>rd</sup> meeting of the Re-constituted EAC (Industry-I) held on 26-27<sup>th</sup> August, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee held on 26-27<sup>th</sup> August, 2021**

45.12.20 The Committee observed the following:

- Expansion will be carried out in the existing complex. 450 acres of land required for expansion is available within the complex, hence no additional land has been sought for the same. The capacity of fly ash pond and Gypsum storage area is also proposed to be increased. However, no details have been furnished in this regard.

- ii. As per the existing EC dated 1/10/2015, PP was supposed to develop 33% of total area as green belt. Subsequently, PP has approached the Ministry seeking amendment in the said EC to reduce the green belt to 29% of the area due to non-availability of land within the project area and requested to develop the green belt outside the project area. In this regard, Ministry is yet to take a final view in the matter as informed by the Member Secretary. Now, project proponent is proposing for expansion of steel plant in 450 acres of land available within the project area and no land has been earmarked for developing green belt in order to achieve 33% of green belt development within the project area. Further, the tree density adopted in the 29% of the green belt developed area is reported to be less than 800 saplings per acre. In view of this, first PP should rework and optimize the project layout including the expansion project area in order to achieve 33% green belt development within project area itself with a tree density of 1000 trees per acre (or) 2500 trees per hectare. Further, PP is required to submit an action plan in this regard.
- iii. RO Compliance has been received on 9/8/2021. The non-compliances that have not been complied are related to fugitive emission control on internal roads due to spillage and installation of dedusting system in SMS 2. Action plan to comply with the said non-compliances shall be submitted.
- iv. Post expansion, the PM<sub>10</sub> and SO<sub>2</sub> level in the ambient is very high. Control measures to be adopted in this regard has not been enumerated in the EIA report.
- v. Authenticated map of Chief Wildlife Warden indicating the distance between the plant boundary and ESZ boundary of Daroji Bear Sanctuary has not been submitted.
- vi. Action plan to address the issues raised during the public hearing with physical target as per MoEF&CC O.M. dated 30/09/2020 has not been submitted.
- vii. As per the baseline data collected, high fluoride level is reported in ground water sample. No explanation is available in this regard and control measures to be adopted to contain the fluoride level has not been submitted.
- viii. Permission of surface water withdrawal is much higher than requirement, PP need to clarify the same.
- ix. 4 AAQ stations have been installed and one more is to be installed near Sultanpur village.

#### **Recommendations of the Committee held on 26-27<sup>th</sup> August, 2021**

- 45.12.21 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 45.12.20.
- 45.12.22 M/s. JSW Steel Limited has again made an online application vide proposal no. IA/KA/IND/229388/2018 dated 20/09/2021. The proposal was considered by the EAC (Industry 1) in its 45<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held on 28-29<sup>th</sup> September, 2021. The observations and recommendations of EAC is given as below:

#### **Observations of the Committee**

- 45.12.23 The Committee observed the following:
- i. PP proposed the green belt developed about 31.01% inside the plant premises and the remaining outside the plant premises which the EAC has not accepted.
  - ii. The internal and connecting road shall be upgraded/developed to meet the load imposed due to proposed project in term of MSA as per IRC norms.

- iii. Action plan submitted for control of fugitive emissions was not satisfactory.
- iv. PP also proposed enhancement of township facility by adding one more unit. No details have been made available by the PP neither in the presentation nor during deliberations. EAC was of the view that such proposals are to be dealt in at State level.
- v. Authenticated map of Chief Wildlife Warden indicating the distance between the plant boundary and ESZ boundary of Daroji Bear Sanctuary has not been submitted.
- vi. Action plant to address the PH issues found to be not in conformity with the MoEF&CC O.M. dated 30/9/2020.

#### **Recommendations of the Committee**

45.12.24 In view of foregoing and after deliberations, the Committee deferred the consideration of the proposal and sought following additional information from the proponent.

- i. Revised action plan or fugitive dust control in raw material handling sections shall be submitted.
- ii. Scheme for completion of pipe conveyor of 84 Km length by FY 2024 shall be submitted.
- iii. Action plan for green belt development covering 33% of the project area with a tree density of 2500 trees per hectare within a time frame of three years shall be submitted.
- iv. Estimated impacts on Ambient air quality i.e. reduction in PM, SO<sub>2</sub> & NO<sub>x</sub> levels on implementation of measures for noise reduction, control of fugitive dust emissions, etc; proposed in the EIA report, along with the revised time targets shall be submitted.
- v. Revised action plan with physical targets to address the issues raised during public hearing as per MoEF&CC O.M. dated 30/09/2020 shall be submitted.
- vi. Undertaking from PP that requisite environment clearance for the township expansion will be obtained from SEIAA shall be submitted.

45.13 Greenfield project comprising of Establishment of DRI Kilns (Sponge Iron - 2,10,000 TPA), Induction Furnace with LRF & CCM (Hot Billets / MS Billets / Ingots -1,80,000 TPA), Rolling Mill (TMT Bars / Structural Steel - 1,80,000 TPA), Ferro Alloy Unit (FeSi-7,000 TPA / FeMn-25,200 TPA / SiMn-14,400 TPA / FeCr-15,000 TPA), WHRB based Power Plant – 14 MW, CFBC based Power Plant - 15 MW, Briquetting plant -100 Kg/Hr& Brick Manufacturing unit (30,000 Bricks / Day)] by **M/s. Balajee Sponge & Power Pvt. Ltd.** located at Chourenga Village, Simga Tehsil, **BalodabazarBhatapara District, Chhattisgarh.** [Online Proposal No. IA/CG/IND/230172/2021; File No.: IA-J-11011/292/2021-IA-II(I)] – **Prescribing for Terms of Reference** – regarding.

45.13.1 M/s. Balajee Sponge & Power Pvt. Ltd has made an application online vide proposal no. IA/CG/IND/230172/2021 dated 19<sup>th</sup> 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 Plant under Category “A” of the schedule of the EIA Notification, 2006 and appraised at central level.

**Details submitted by Project proponent**

45.13.2 The project of M/s. Balajee Sponge & Power Pvt. Ltd is located at Chourenga Village, Simga Tehsil, Balodabazar - Bhatapara District, Chhattisgarh for setting up of new Steel Plant for production of 0.18 MTPA of TMT bars / Structural Steels. The greenfield project comprises of establishment of DRI Kilns (Sponge Iron - 2,10,000 TPA), Induction Furnace with LRF & CCM (Hot Billets / MS Billets / Ingots -1,80,000 TPA), Rolling Mill (TMT Bars / Structural Steel - 1,80,000 TPA), Ferro Alloy Unit (FeSi7,000 TPA / FeMn-25,200 TPA / SiMn-14,400 TPA / FeCr-15,000 TPA), WHRB based Power Plant – 14 MW, CFBC based Power Plant - 15 MW, Briquetting plant -100 Kg/Hr& Brick Manufacturing unit (30,000 Bricks / Day)].

45.13.3 Environmental site settings:

SNo	Particulars	Details	Remarks																																																						
i.	Total Land	16.92 ha. (41.8 Acres) [Private Land]	<b>Land Use:</b> Private Uncultivated Agriculture land Agreement have been entered with Land owners for Total 16.92 ha. (41.8 Acres)of land.																																																						
ii.	Existence of habitation & involvement of R & R, if any	No habitation exists in project site; Hence no R & R is involved.	---																																																						
iii.	Latitude and Longitude of the project site	Latitude and Longitude of the project site: <table border="1"> <thead> <tr> <th>SNo</th> <th>LATITUDE</th> <th>LONGITUDE</th> </tr> </thead> <tbody> <tr><td>1</td><td>21°40'40.50"N</td><td>81°49'1.20"E</td></tr> <tr><td>2</td><td>21°40'41.70"N</td><td>81°49'10.62"E</td></tr> <tr><td>3</td><td>21°40'39.06"N</td><td>81°49'11.52"E</td></tr> <tr><td>4</td><td>21°40'31.14"N</td><td>81°49'3.30"E</td></tr> <tr><td>5</td><td>21°40'30.78"N</td><td>81°49'4.74"E</td></tr> <tr><td>6</td><td>21°40'22.26"N</td><td>81°49'2.70"E</td></tr> <tr><td>7</td><td>21°40'17.94"N</td><td>81°49'3.00"E</td></tr> <tr><td>8</td><td>21°40'17.04"N</td><td>81°48'58.44"E</td></tr> <tr><td>9</td><td>21°40'16.26"N</td><td>81°48'56.70"E</td></tr> <tr><td>10</td><td>21°40'25.98"N</td><td>81°48'56.94"E</td></tr> <tr><td>11</td><td>21°40'30.78"N</td><td>81°48'57.36"E</td></tr> <tr><td>12</td><td>21°40'34.20"N</td><td>81°49'0.48"E</td></tr> <tr><td>13</td><td>21°40'45.42"N</td><td>81°49'9.00"E</td></tr> <tr><td>14</td><td>21°40'45.36"N</td><td>81°49'16.68"E</td></tr> <tr><td>15</td><td>21°40'44.04"N</td><td>81°49'16.50"E</td></tr> <tr><td>16</td><td>21°40'43.68"N</td><td>81°49'13.14"E</td></tr> <tr><td>17</td><td>21°40'43.68"N</td><td>81°49'13.14"E</td></tr> </tbody> </table>	SNo	LATITUDE	LONGITUDE	1	21°40'40.50"N	81°49'1.20"E	2	21°40'41.70"N	81°49'10.62"E	3	21°40'39.06"N	81°49'11.52"E	4	21°40'31.14"N	81°49'3.30"E	5	21°40'30.78"N	81°49'4.74"E	6	21°40'22.26"N	81°49'2.70"E	7	21°40'17.94"N	81°49'3.00"E	8	21°40'17.04"N	81°48'58.44"E	9	21°40'16.26"N	81°48'56.70"E	10	21°40'25.98"N	81°48'56.94"E	11	21°40'30.78"N	81°48'57.36"E	12	21°40'34.20"N	81°49'0.48"E	13	21°40'45.42"N	81°49'9.00"E	14	21°40'45.36"N	81°49'16.68"E	15	21°40'44.04"N	81°49'16.50"E	16	21°40'43.68"N	81°49'13.14"E	17	21°40'43.68"N	81°49'13.14"E	---
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SNo	Particulars	Details			Remarks
		18	21°40'22.56"N	81°48'55.14"E	
		19	21°40'18.42"N	81°48'56.10"E	
		20	21°40'19.08"N	81°48'53.58"E	
		21	21°40'22.47"N	81°48'53.10"E	
iv.	Elevation of the project site	MSL of the Project area – 279 m to 286 m			---
v.	Involvement of Forest land, if any	<b>Project Site:</b> Nil			---
vi.	Water body exists within the project site as well as study area	<b>Project site:</b> Nil			---
		<b>Study area:</b>			
		<b>Water Body</b>	<b>Distance</b>		
		Unnamed Govt. Canal	0.04 Km/South		
		Bahatapara Branch Mahanadi Canal	2.7 Km/South		
		Shivnath River	8.6Km/North		
vii.	Existence of ESZ/ESA/National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. if any within the study area	Nil. However, the following forest are located within study area: BilariGhughua RF (6.5 Kms. – SW direction)			---

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

SNo	Units (Products)	Plant Configuration (Production Capacity)
1.	DRI Kilns (Sponge Iron)	2 x 200 TPD & 3 x 100 TPD (2,10,000 TPA)
2.	Induction Furnaces (Hot Billets / MS Billets / Ingots)	5 x 12 T (1,80,000 TPA)
3.	Rolling Mills (TMT bars / Structural Steel) (85 % Hot charging with Hot Billets and remaining 15% through RHF with LDO as fuel)	2 x 300 TPD (1,80,000 TPA)
4.	Ferro Alloys Unit (FeSi / FeMn / SiMn / FeCr)	1 x 9 MVA (FeSi-7,000 TPA / FeMn-25,200 TPA / SiMn-14,400 TPA / FeCr-15,000 TPA)
5.	Power Plant (Electricity)	29 MW (14 MW WHRB + 15 MW CFBC)
6.	Briquetting plant	100 Kg/Hr
7.	Brick Manufacturing Unit	30,000 Bricks / Day

45.13.5 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 Kms.)	Mode of Transport	
<b>1. For DRI Kilns (Sponge Iron) – 2,10,000 TPA</b>						
a)	Iron ore	3,36,000	Barbil, Orissa NMDC, Chhattisgarh	~ 500 Kms.	By rail & road (through covered trucks)	
b)	Coal	Indian	2,73,000	SECL Chhattisgarh /MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
		(OR)				
		Imported	1,74,720	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
c)	Dolomite	10,500	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)	
<b>2. For Steel Melting Shop (Billets/ Ingots/Hot Billets) – 1,80,000 TPA</b>						
a)	Sponge Iron	1,82,000	Own generation	---	Through covered conveyers	
b)	MS Scrap / Pig Iron	27,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)	
c)	Ferro alloys	9,000	Own generation	---	By road (through covered trucks)	
<b>3. For Rolling Mill through Hot charging (Rolled Products) – 1,80,000 TPA</b>						
a)	Hot Billets (85% Hot Charging)	1,53,000	Own generation	---	----	
b)	MS Billets / Ingots	28,000	Own generation & Purchased from Outside	~ 100 Kms.	By road (through covered trucks)	
c)	LDO / LSHS	1800 KI/annum	Nearby IOCL Depot	~ 100 Kms.	By road (through Tankers)	
<b>4. For CFBC Boiler [Power Generation - 1 x 15 MW]</b>						
a)	Indian Coal (100 %)	96,300	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)	
<b>OR</b>						
b)	Imported Coal (100 %)	62,000	Indonesia / South Africa / Australia	~ 600 Kms. (from	Through sea route, rail route & by road	

SNo	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport	
				Vizag Port)	(through covered trucks)	
<b>OR</b>						
c)	Dolochar + Indian Coal	Dolochar	42,000	In plant generation	---	through covered conveyors
		Indian Coal	75,200	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
<b>OR</b>						
d)	Dolochar + Imported Coal	Dolochar	42,000	In plant generation	---	through covered conveyors
		Imported coal	41,000	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
<b>5.</b>	<b>For Ferro Alloys (1 x 9 MVA)</b>					
<b>5 (i)</b>	<b>For Ferro Silicon – 7000 TPA</b>					
a)	Quartz	12,150	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)	
b)	LAM coke	9,450	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)	
c)	MS Scrap / Mill scales	2,115	In house Generation	---	By road (through covered trucks)	
d)	Electrode paste	180	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)	
e)	Bagfilter dust	100	Own generation	---	---	
<b>5 (ii)</b>	<b>For Ferro Manganese – 25200TPA</b>					
a)	Manganese Ore	34,200	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)	
b)	LAM coke	9,900	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)	
c)	Dolomite	4,050	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)	
d)	MS Scrap / Mill scales	3,600	In house Generation	---	By road (through covered trucks)	

SNo	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
e)	Electrode Paste	315	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Bagfilter dust	500	Own generation	---	---
5 (iii)	<i>For Silico Manganese –14,400TPA</i>				
a)	Manganese Ore	24,300	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	LAM Coke	8,100	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	FeMn. Slag	15,147	In house generation	---	----
d)	Dolomite	3,690	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
e)	Electrode paste	315	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Quartz	3,870	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
g)	Bagfilter dust	100	Own generation	---	---
5 (iv)	<i>For Ferro Chrome – 15000 TPA</i>				
a)	Chrome Ore	28,350	Sukinda, Odisha Import, South Africa	~ 500 Kms. ~ 600 Kms. (from Vizag Port)	By road (through covered trucks) From Port By Road (through covered Trucks)
b)	LAM Coke	9,900	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Quartz	4,050	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS Scrap / Mill Scale	1,350	In house Generation	---	By road (through covered trucks)
e)	Magnetite / Bauxite	2,700	Chhattisgarh / Maharashtra	~ 500 Kms.	By road

SNo	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
					(through covered trucks)
f)	Electrode Paste	270	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
g)	Bag filter dust	600	Own generation	---	---

45.13.6 Water required for the proposed project will be 1140 KLD, Water required for proposed project will be sourced from Shivanth River (which is at a distance of 8.6 Kms. from the project site). Water drawl permission Water Resource Department, Chhattisgarh will be obtained. There will be no effluent discharge in the Sponge Iron, Induction Furnaces, Ferro Alloys unit as closed circuit cooling system will be adopted. Effluent from Rolling Mill will be sent to settling tank & will be recycled through closed circuit cooling system. Effluent from power plant will be treated in ETP and after ensuring compliance with SPCB norms, it will be utilized for dust suppression, ash conditioning and for greenbelt development. Sanitary waste water will be treated in STP.

45.13.7 Power required for the proposed project will be 34.0 MW and same will be sourced from Captive Power Plant (29.0 MW) and remaining (5.0 MW) from State Grid.

45.13.8 The capital cost of the project is Rs. 235 Crores and capital cost for environment protection measures is proposed as Rs. 35.25 Crores. The employment generation from proposed project will be 350 nos. through direct employment and 500 nos. through indirect employment.

45.13.9 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.

45.13.10 Name of the EIA Consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S. No. 134, List of ACOs with their Certificate / Extension Letter no. Rev. 14, September 15, 2021].

45.13.11 Proposed Terms of Reference (**Baseline data collection period: 1<sup>st</sup>October 2021 to 31<sup>st</sup> December 2021**):

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
<b>A. Air</b>			
a. Meteorological parameters	1	On hourly basis for one season	Wind Speed Wind Direction Temperature Relative Humidity Rainfall

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
b. AAQ parameters	8	24 hourly Twice a week for 3 months (One Season)	Parameters to be Monitored: PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO
<b>B. Noise</b>	8	On hourly basis for 24 Hrs. at each station	Parameters to be Monitored: Day equivalent Night equivalent
<b>C. Water</b>			
a. Ground Water	8	One sample at each of the locations	Parameters will be Monitored: as per IS: 10500
b. Surface Water	8	One sample at each of the locations	Parameters will be Monitored: as per BIS: 2296
<b>D. Land</b>			
a. Soil quality	8	One sample at each of the locations	Parameters will be Monitored: Texture, infiltration rate, SAR bulk density, CEC, pH, Ca, Mg, Na, K, Zn, Mn
b. Land use	--	--	LU map will be prepared by concerned FAE for study area
<b>E. Biological</b>			
a. Aquatic	--	Once in Season	---
b. Terrestrial	--	Once in Season	---
<b>F. Socio economic parameters</b>	--	Once in Season	Social Impact Assessment will be carried out by concerned FAE for study area
<b>G. Traffic Density</b>	--	Once in Season	Vehicular traffic study will be carried out at Transportation route.

#### Observations of the Committee

45.13.12 The EAC noted the following:

- i. The instant proposal is for seeking terms of reference for undertaking EIA study for the greenfield steel plant at Chourenga Village, Simga Tehsil, Balodabazar Bhatapara District, Chhattisgarh.
- ii. Total water requirement is 1140 KLD and power requirement is 34 MW.
- iii. Capital cost of the project is Rs. 235 Crores, the employment generation from project will be 350 persons.

#### Recommendations of the Committee

45.13.13 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. Action plan to limit the dust emission from all the stacks below 30 mg/Nm<sup>3</sup> shall be furnished.
- ii. Action plan for fugitive emission control in the plant premises shall be provided.
- iii. Action plan for green belt development covering 33% of the project area all along the periphery of the project site with a density of 2500 trees per hectare shall be submitted. This shall include 30-meter-wide green belt development within the project area towards the Manohara village located at 440m away from the project area.
- iv. Action plan for 100 % solid waste utilization shall be submitted.
- v. Action plan for rain water harvesting shall be submitted.
- vi. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
- vii. Air Cooled condensers shall be used in Captive Power Plant.
- viii. 1140 KLD water shall be drawn from Sheonath river located at 8.6 km distance from the project area.
- ix. Jigging and briquetting plants shall be provided in FeCr Circuit.

45.14 Establishment of Greenfield Steel Plant [Sponge Iron – 0.33 MTPA; Steel Melting Shop EOF-LRF with slab caster - 1.1 MTPA; Hot Strip Mill, Flat Products (HR Coil/MS Plate) – 1.0 MTPA; WHRB – 20 MW & AFBC/CFBC – 45 MW; Oxygen Plant- 250 TPD and Fly Ash Brick Plant – 2 crore bricks per annum] by **M/s. Shri Bajrang Steel Corporate Ltd.** located at Kh. No. 445/21 and other at Village Jalso, Tehsil Tilda, **District Raipur, Chhattisgarh.** [Online Proposal No. IA/CG/IND/230119/2021; File No.: IA-J-11011/304/2021-IA-II(IND-I)] – **Prescribing for Terms of Reference**– regarding.

45.14.1 M/s. Shri Bajrang Steel Corporate Limited (SBSCL) has made an online application vide proposal no. IA/CG/IND/230119/2021 dated 18/09/2021 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) 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**

45.14.2 The project of M/s Shri Bajrang Steel Corporate Limited (SBSCL) located in Jalso Village, Tilda Tehsil, Raipur District, Chhattisgarh State is for setting up of a Greenfield Steel Plant [Sponge Iron – 0.33 MTPA; Steel Melting Shop EOF-LRF with slab caster - 1.1 MTPA; Hot Strip Mill, Flat Products (HR Coil/MS Plate) – 1.0 MTPA; WHRB – 20 MW & AFBC/CFBC – 45 MW; Oxygen Plant- 250 TPD and Fly Ash Brick Plant – 2 crore bricks per annum].

45.14.3 Environmental site settings:

SNo	Particulars	Details
i.	Total land	60.71 ha [Private: 44.68 ha; Govt. 16.03 ha; Agriculture Land : 44.68 ha and Grazing Land: 16.03 ha]

SNo	Particulars	Details		
		Type	Area (ha)	Status
		Govt.	16.03	Applied for allotment of Govt. land
		Own	15.17	In possession, applied for conversion of land for industrial purpose
		Private	29.51	Purchase in progress on mutual agreement basis.
		<b>Total</b>	<b>60.71</b>	
ii.	Existence of habitation & involvement of R&R, if any.	Nil		
iii.	Latitude and Longitude of the project site	A. 21°28'20.66"N 81°47'46.55"E B. 21°28'45.00"N 81°48'1.93"E C. 21°28'46.97"N 81°48'23.44"E D. 21°28'25.14"N 81°48'30.18"E E. 21°28'10.67"N 81°48'21.40"E F. 21°28'20.14"N 81°48'21.96"E		
iv.	Elevation of the project site	290 m (avg) above msl		
v.	Involvement of Forest land if any.	No forest land involved		
vi.	Water body exists within the project site as well as study area	<p><b>Projectsite:</b>None</p> <p><b>Study area</b>                      Kirna tank: 1.0 Km (SSW)                      JamuniyaNadi: 3.5 Km (ENE)                      DhummaNala: 1.5 Km (W)                      Pindraon Tank: 7.0 Km (SE)                      Mahanadi Canal: 1.0 Km (NW)                      Krishna Irrigation Chennal – 1.1 km (WNW)                      Shivnath River -15.5 Km (NW)</p>		
vii.	Existence of ESZ/ESA/nationalpark/wildlifesanctuary/biosphere reserve/tigerreserve/elephant reserve etc. If any within the study area	Nil		
viii	<b>Interlinked Project</b>	This is an interlinked project of proposed project of Parent Company Shri Bajrang Power &Ispat Limited at Village Jalso Tehsil Tilda, Dist.- Raipur adjacent to location. The hot metal produced in Shri Bajrang Power &Ispat Limited (SBPIL) will be Transferred Through Ladle by a dedicated rail corridor of distance of 0.6 Km to EOF. Surplus Blast Furnace gas will be supplied to Reheating furnace of Hot strip Mill through MS pipeline from blast furnace. The phenolic water which will be generated in coal gasifier of Shri Bajrang Power and		

SNo	Particulars	Details
		Ispat Limited will be disposed in ABC of proposed 2x500 TPD Sponge Iron plant of this present proposal i.e. Shri Bajrang Steel Corporate Limited at adjacent land through closed pipeline.

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

S No	Name	Configuration	Production
1.	Sponge Iron	2 x 500 TPD	0.33MTPA
2	Steel Melting Shop EOF-LRF with slab caster	1.1 MTPA (2 x 0.55 MTPA) (2x65T EOF with 24.5 heat /per day per EOF, 2x65 T LRF & 2x1 stand slab caster 9 m radius)	1.1 MTPA
3	Hot Strip Mill, Flat Products (HR Coil/MS Plate)	Hot Strip Mill (1.0 MTPA)	1.0MTPA
4	Power Generation (65 MW)	Waste Heat Recovery Based Power Plant (WHRB) Coal based Power plant (AFBC/ CFBC)	20 MW 45 MW 65 MW
5.	Oxygen Plant	Oxygen Plant	250 TPD
6.	Fly Ash Brick plant	Fly Ash Brick plant	2 Crore Bricks per annum

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

S No	Raw Materials (Input)	Quantity (TPA)	Source	Distance KM	Mode of Transportation
<b>Sponge Iron 3,30,000 TPA</b>					
1	Pellet	4,78,000	From Interlink proposed adjacent project of SBPIL (Parent Company)	1.3	Tipplers
2	Coal	2,80,500	SECL/Imported	200	By Rail/Road
3	Dolomite	13,200	Mandla	250	By Road
<b>Steel Melting Shop 11,00,000 TPA</b>					
4	Pig Iron/Hot Metal	10,16,684	From Interlink proposed adjacent project of SBPIL (Parent Company)	0.3	Through Ladle
5	DRI	1,19,610	Captive Plant	-	Conveyor Belts/ Tipplers
6	Scrap	59,804	Captive Plant	-	Tipplers

S No	Raw Materials (Input)	Quantity (TPA)	Source	Distance KM	Mode of Transportation
7	Fluxes	63,118	Open Market	-	By Road
8	Ferro Alloys	15,780	From Interlink proposed adjacent project of SBPIL (Parent Company)	1.2	Tipplers
<b>Hot Strip Mill 10,00,000 TPA</b>					
9	Semi-Finished Product (Slab)	10,30,930	Captive Plant / Open Market	-	Conveyor Belts/Rollers/ Tipplers
10	Furnace Oil (Alternate Fuel)	2164 (KL)	IOCL, Bhilai	50	By Road /By Rail
<b>Power Plant AFBC/CFBC -45 MW</b>					
11	Coal	3,06,500	SECL/Imported	200	By Rail/Road
12	Dolochar	49500	Captive		By Tipplers
<b>Fly Ash Bricks - 2 crore Bricks Per Annum</b>					
13	Fly Ash	42,000	Captive	-	By Road
14	Lime	3,000	Open Market		By Road
15	Gypsum	3,000	Open Market		By Road
16	Bottom Ash	6,000	Captive		By Road
17	Slag	6,000	Captive	-	By Road

- 45.14.6 The total water requirement for the project is estimated as 11756 m<sup>3</sup> /day, will be obtained from the river Shivnath. The application for obtaining permission for withdrawal of surface water has been submitted to Water Resources Department vide Lr. NoWA00054 dated 01/07/2021.
- 45.14.7 The power requirement for the project is estimated as 69 MW, out of which 65 MW will be obtained from the captive power plant and remaining 4 MW will be obtained from CSPDCL.
- 45.14.8 The capital cost of the project is Rs 1,465 Crores and the capital cost for environmental protection measures is proposed as Rs 146.5 Crores. The employment generation from the proposed project is 2500 Nos.
- 45.14.9 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.
- 45.14.10 Name of the EIA consultant: M/s Pollution & Ecology Control Services [S. No.73, List of ACOs with their Certificate / Extension Letter no. Rev. 14, September 15, 2021].
- 45.14.11 Proposed Terms of Reference:  
Baseline data was collected from 1<sup>st</sup>March, 2021 to 26<sup>th</sup>May, 2021 as per TOR issued vide Letter No. J-11011/37/2021-IA.II(I) dated 30<sup>th</sup>March, 2021 for Shri Bajrang Steel

Corporate Limited. The same baseline data has been used for this proposal under consideration. In addition, to this additional one-month data was collected from 15<sup>th</sup> May to 15<sup>th</sup> June, 2021 at project site i.e. for M/s. Shri Bajrang Steel Corporate Limited. The data has been collected as per following plan.

Attributes	Parameter	Sampling		Remarks
		No. of stations	Frequency	
<b>A. Air</b>				
a. Meteorological parameters	Temperature, Relative Humidity, Rainfall, Wind Speed, Wind direction	01	Continuously 24 hrs once for 13 weeks during study period.	-
b. AAQ parameters	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO	09	Continuously 24 hrs once for 13 weeks during study period.	-
<b>B. Noise</b>	L <sub>d</sub> , L <sub>n</sub> &L <sub>dn</sub>	09	Continuously 24 hrs once during study period.	-
<b>C. Water</b>				
Surface water/Ground water quality parameters	Parameters as per IS-10500:2012 and IS-2490:1982	08 Surface Water & 08 Ground Water	Once during study period.	-
<b>D. Land</b>				
a. Soil quality	Parameters as per Indian Agricultural Research Institute Handbook	08	Once during study period.	-
b. Land use	Land use and land Cover	Study Area	Once during study period.	-
<b>E. Biological</b>				
a. Aquatic b. Terrestrial	Flora and Fauna	Random sampling/Quadrat Method	Once during study period.	- -
F. Socio-economic parameters	Socio-economic Status in Study area	Field survey through questionnaire, group discussion and random	Once during study period.	-

Attributes	Parameter	Sampling		Remarks
		No. of stations	Frequency	
		Sampling in the study area.		

### Observations of the Committee

45.14.12 The EAC noted the following:

- i. TOR is for undertaking EIA study for establishment of 1 MT Steel plant and 65 MW CPP greenfield project
- ii. This case was discussed EAC 43 and the following shortcomings were recorded.
  - a. Detailed report on risks associated with inter-company transport of raw materials, semi- finished products, wastes and utilities. transport of raw materials, semi- finished products, wastes and utilities shall be furnished.
  - b. Disaster Management Plan (DMP) for potential interface risks (where no factory manager is responsible) associated.
  - c. Impact on over all Carbon Foot prints compared to ISP proposed in Feb 2021 and the two companies now proposed.
  - d. Impact of Energy Consumption for scenario mentioned in point # 3 above.
  - e. Integrated solid waste management including the area proposed for waste dumping as envisaged in the proposal.
  - f. Detailed Engineering layout of both plants showing roads, gates, width of roads and green belt.
- iii. The response from PP on above issues are furnished below
  - a. 1.0167 MTPA of Hot metal shall be transported 300-400 m in open top ladles on rail. A dedicated rail track shall be constructed. Free board of 1m shall be provided in the ladle to control splashing of hot metal on the track. The track shall be water free. Dedicated corridor without any crossing shall be provided. Inspection at loading and unloading stations shall be strengthened. Pellet and fly ash shall be transported from adjacent unit by trucks covered with tarpaulin. BF Gas shall be transported to 300m by pipeline. During shut down of RHF, BF shall be operated at lower rate to reduce the gas generation. CO detection shall be provided all along the pipeline. Phenolic water shall be treated in DRI. Mill scale and dust shall be transported in closed trucks to other units
  - b. DMP for interface shall be handled by both companies.
  - c. GHG emission due to bifurcation of the plant shall increase by 13.8 lac tons per year.
  - d. Energy consumption will go up from 95 to 154.2 MW
- iv. Trucks plying in the complex shall increase from 22 to 109 numbers per day.

### Recommendations of the Committee

- 45.14.13 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. Guaranteed specific data shall be incorporated in EIA report on; Specific energy consumption, raw material consumption, water consumption and GHG emissions per ton of steel produced.
  - ii. Complete process and equipment details shall be furnished for plant and machinery in Chapter 2 of EIA report.

- iii. Provisions contained in the Ministry O.M. dated 24/12/2020 pertaining to consideration of integrated and interlinked project shall be adhered with.
- iv. Comprehensive risk assessment for the entire complex shall be carried out and submitted along with the EIA/EMP report.
- v. Action plan to limit the dust emission from all the stacks below 30 mg/Nm<sup>3</sup> shall be furnished.
- vi. Action plan for fugitive emission control in the plant premises shall be provided.
- vii. Action plan for green belt development covering 33% of the project area shall be submitted.
- viii. Action plan for 100 % solid waste utilization shall be submitted.
- ix. Action plan for rain water harvesting shall be submitted.
- x. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
- xi. Air Cooled condensers shall be used in Captive Power Plant.

45.15 Proposed Green Field metallurgical unit for Sponge Iron: 1,80,000 TPA (DRI Kiln: 1x550 TPD), Billets or TMT: 2,16,000 TPA along with Captive Power Plant: 20 MW by **M/s. Fuletra Steel LLP** located at Village Khijadiya, Tehsil Wankaner, **District Morbi, Gujarat**. [Online Proposal No. IA/GJ/IND/228739/2021; File No.: IA-J-11011/317/2021-IA-II(IND-I)] – **Prescribing for Terms of Reference** – regarding.

45.15.1 M/s. Fuletra Steel LLP has made an application online vide proposal no. IA/GJ/IND/228739/2021 dated 17/09/2021 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) and 1(d) Thermal Power Plant under Category "A" of the schedule of the EIA Notification, 2006 and was appraised at Central Level.

**Details submitted by the project proponent**

45.15.2 The project of M/s. Fuletra Steel LLP located at Village Khijadiya, Tehsil Wankaner, District Morbi, Gujarat is for establishment of greenfield metallurgical unit for production of Sponge Iron: 1,80,000 TPA (DRI Kiln: 1x550 TPD), Billets or TMT: 2,16,000 TPA along with Captive Power Plant: 20 MW.

45.15.3 Environmental site settings:

S No	Particulars	Details			Remarks
i	Total land	7.6189 ha [Private land] Land is already acquired.			Land use: Industrial Purpose
ii	Existence of habitation & involvement of R&R, if any.	None			-
iii	Latitude and Longitude of the project site	<b>Sr. No.</b>	<b>Latitude</b>	<b>Longitude</b>	
		1	22°30'36.47"N	70°53'43.79"E	
		2	22°30'36.98"N	70°53'49.12"E	

S No	Particulars	Details			Remarks
		3	22°30'32.87"N	70°53'49.80"E	
		4	22°30'34.26"N	70°53'57.11"E	
		5	22°30'39.67"N	70°53'56.44"E	
		6	22°30'39.60"N	70°53'54.99"E	
		7	22°30'41.22"N	70°53'54.99"E	
		8	22°30'41.17"N	70°53'51.82"E	
		9	22°30'42.38"N	70°53'48.02"E	
		10	22°30'42.00"N	70°53'46.33"E	
		11	22°30'42.90"N	70°53'43.01"E	
		12	22°30'41.16"N	70°53'43.16"E	
		13	22°30'39.60"N	70°53'43.92"E	
iv	Elevation of the project site	116m above MSL			
v	Involvement of Forest land if any.	There is no involvement of forest land.			
vi	Water body exists within the project site as well as study area.	<b>Project site:</b> Nil <b>Study area:</b> Machhu River, 11.22 km in East direction			
vii	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Rampara Wildlife Sanctuary is located at 5.0 km in North East direction.			

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

S No	Name	Proposed Units	
		Configuration	Production Capacity
1	Sponge Iron	DRI Kiln (Coal Fired) 1 x 550 TPD	180000 TPA
2	Billets or TMT	Induction Furnace (15 TPDx 2 Nos) LRF (15 TPD x 4 No) Caster 15 T/hr	216000 TPA
3	Captive Power Plant	WHRB 1 x 12 MW AFBC 1 x 8 MW	20 MW

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

S No	Raw Material	Quantity required per annum	Source	Mode of Transportation
1	Iron Ore / Pellet	2,70,000 MT	Karnataka/ Chhattisgarh/ Orissa/ Import	By Rail/ Road/ Sea

S No	Raw Material	Quantity required per annum	Source	Mode of Transportation
2	Coal	1,60,000 MT	Indonesia/ South Africa/ local market	By Rail/ Road/ Sea
3	Metal Scrap	2,40,000 MT	Local Market	By Road

45.15.6 Proponent reported that one time water requirement for the project will be 3966 KLD whereas the makeup water requirement will be 1001 KLD which will be sourced from the surface water source from Khijadiya Panchayat.

45.15.7 The power requirement for the project is estimated as 10 MW, which will be obtained from the proposed captive power plant of 20 MW. In case of emergency, power will be sourced from Paschim Gujarat Vij Company Ltd (PGVCL), if required.

45.15.8 The capital cost of the project is Rs. 740.00 Crores and the capital cost for environmental protection measures is proposed as Rs. 51.50Crores and recurring cost as Rs. 4.635 Crore. The employment generation from the proposed project will be 250 numbers.

45.15.9 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.

45.15.10 Name of the EIA Consultant: M/s. Shree Green Consultants [S. No. 33, List of ACOs with their Certificate / Extension Letter no. Rev. 14, September 15, 2021].

45.15.11 Proposed Terms of Reference (**Baseline data collection period: 1<sup>st</sup> March 2021 to 31<sup>st</sup> May 2021**):

Attributes	Sampling		Remarks
	No. of stations	Frequency	
A. Air			Baseline study is completed during 1 <sup>st</sup> March 2021 to 31 <sup>st</sup> May 2021 and report preparation is ongoing
a. Meteorological parameters	1 (Project Site)	Continuous for three month	
b. AAQ parameters	8 Nos.	Twice a week (24hourly)	
B. Noise	8 Nos.	Once in a study period	
C. Water			
Surface water/Ground water quality parameters	5 Nos. of Surface Water 8 Nos. of Ground Water	Once in a study period Once in a study period	
D. Land			
a. Soil quality b. Land use	8 Nos. 10 km radius study area	Once in a study period	
E. Biological a. Aquatic b. Terrestrial	10 km radius study area	Once in a study period	

Attributes	Sampling		Remarks
	No. of stations	Frequency	
F. Socio-economic parameters	10 km radius study area	Once in a study period	

45.15.12 PP has earlier made application vide proposal no. IA/GJ/IND/222781/2021 dated 11/08/2021. The proposal was considered during 43<sup>rd</sup> meeting of the Re-constituted EAC (Industry-I) held on 26-27<sup>th</sup> August, 2021 wherein REAC opined that the proposed site is not environmentally compatible as it involves thick agriculture lands around the plant, nearly 4000 KLD water shall be drawn from ground in water stressed area and pre-feasibility report not giving adequate information about the project. In view of this, the Committee recommended to return the proposal in its present form.

45.15.13 PP again applied vide proposal no. IA/GJ/IND/228739/2021 dated 17/09/2021. The proposal was considered by the EAC (Industry 1) in its 45<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held on 28-29<sup>th</sup> September, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee**

- 45.15.14 The EAC noted the following:
- i. The proposal is for seeking ToR for undertaking EIA study for the green field metallurgical unit for Sponge Iron (1,80,000 TPA) Billets or TMT (2,16,000 TPA) and CPP (20 MW) at Village Khijadiya, Tehsil Wankaner, District Morbi, Gujarat.
  - ii. Total water requirement of the project will be 3966 KLD and power requirement will be 10 MW.

**Recommendations of the Committee**

- 45.15.15 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:
- i. Prior permission from the Competent Authority shall be obtained for withdrawal of water from Narmada canal. No groundwater abstraction is permitted.
  - ii. Action plan 100% utilization of solid waste and dolochar utilization shall be submitted.
  - iii. Detail traffic assessment study shall be carried out inter-alia for the connecting road width, length and Million Standard Axle (MSA) etc.
  - iv. One-month baseline data shall be taken at new corrected locations as per the wind rose diagram and CPCB guidelines for AAQ, Soil and Noise quality.
  - v. Natural gas shall be used as a fuel. Alternately till such time NG is available, LDO shall be used in RHF. DRI kiln shall run on coal.
  - vi. Action plan to limit the dust emission from all the stacks below 30 mg/Nm<sup>3</sup> shall be furnished.
  - vii. Action plan for fugitive emission control in the plant premises shall be provided.
  - viii. Action plan for green belt development covering 33% of the project area with a tree density of 2500 trees per hectare shall be submitted.
  - ix. Action plan for rain water harvesting shall be submitted.
  - x. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

xi. Air Cooled condensers shall be used in Captive Power Plant.

45.16 Modernization-cum-expansion of Bokaro Steel plant by up-gradation of existing SMS-I (1.306 MTPA), Debottlenecking of SMS-II (3.35 MTPA) & existing CRM complex (1.66 MTPA), installation of new kiln of 450 TPD in Lime plant, a new Sinter Plant (3.7MTPA) and Oxygen plant without increasing the overall production capacity of 5.77 MTPA hot metal by **M/s. SAIL– Bokaro Steel Plant** located at Bokaro Steel City, Tehsil: Chas, **District Bokaro, Jharkhand**. [Online Proposal No. IA/JH/IND/230210/2021; File No.: J-11011/99/2007-IA.II(I)] – **Amendment in Environment Clearance w.r.t. Change in configuration of Oxygen Plant [2000 TPD Oxygen Plant on BOO basis] without increasing the overall capacity** – regarding.

45.16.1 M/s. SAIL – Bokaro Steel Plant has made an online application vide proposal no. IA/JH/IND/230210/2021 dated 20/09/2021 along with Form 4 and addendum EIA report and sought for amendment in Environmental Clearance accorded by the Ministry vide File no. J-11011/99/2007-IA.II(I) dated 17/03/2021. The proposed project activity is listed at S. No. ‘3 (a)’ Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and was appraised at Central Level.

**Details submitted by the project proponent**

45.16.2 The existing project was accorded environmental clearance vide F.No. J-11011/99/2007-IA-II(I) dated 17<sup>th</sup> March, 2021 in the name of M/s. Steel Authority of India Limited – Bokaro Steel Plant for up-gradation of existing SMS-I (1.306 MTPA), Debottlenecking of SMS-II (3.35 MTPA) & existing CRM complex (1.66 MTPA), installation of new kiln of 450 TPD in Lime plant, a new Sinter Plant (3.7MTPA) and Oxygen plant (1250 TPD on BOO basis) without increasing the overall production capacity of 5.77 MTPA hot metal located at Bokaro Steel City, Tehsil: Chas, District Bokaro, Jharkhand.

45.16.3 The proposal is for amendment in EC w.r.t. change in configuration of Oxygen plant. The details of project configuration & capacity as per existing EC vis-à-vis present proposal is given below:

S.no	Units/products	Capacity at 5.77 MTPA hot metal stage as per existing EC	Changes proposed	Final capacity after present proposal for EC Amendment	Remarks
1.	Coke Oven Complex	4.212 MTPA	-	4.212 MTPA	No change
2.	Blast Furnace Complex	5.77 MTPA	-	5.77 MTPA	No change
3.	SMS Complex	SMS-1: 1.306 MTPA SMS-2: 3.35 MTPA Total: <u>4.656 MTPA</u>	-	SMS-1: 1.306 MTPA SMS-2: 3.35 MTPA Total: <u>4.656 MTPA</u>	No change
4.	Slabbing Mill	Slabbing Mill with 7 no. soaking pits	-	Slabbing Mill with 7 no. soaking pits	No change
5.	Sinter Plant Complex	Existing: 5.0 MTPA New plant: 3.7 MTPA Total: <u>8.7 MTPA</u>	-	Existing: 5.0 MTPA New plant: 3.7 MTPA Total: <u>8.7 MTPA</u>	No change

S.no	Units/products	Capacity at 5.77 MTPA hot metal stage as per existing EC	Changes proposed	Final capacity after present proposal for EC Amendment	Remarks
6.	Pellet Plant	2.0 MTPA	-	2.0 MTPA	No change
7.	Lime-Dolo Kiln	Existing: 0.2449 MTPA New kiln: 0.1642 MTPA <u>Total: 0.4091 MTPA</u>	-	Existing: 0.2449 MTPA New kiln: 0.1642 MTPA <u>Total: 0.4091 MTPA</u>	No change
8.	Hot Strip Mill	4.5 MTPA	-	4.5 MTPA	No change
9.	CRM complex	2.86 MTPA	-	2.86 MTPA	No change
10.	Oxygen Plant	<b>Captive: 1450 TPD BOO: 2x1250 TPD Total: 3950 TPD</b>	<b>Replace 1x1250 TPD BOO plant with 1x2000 TPD BOO plant.</b>  <b>Reduction of captive plant capacity from 1450 TPD to 700 TPD</b>	<b>Captive: 700 TPD 1x1250 TPD 1x2000 TPD (new)</b>  <b>Total: 3950 TPD</b>	<b>Replace 1x1250 TPD plant with 1x2000 TPD plant.</b>  <b>Stopping 03 units (250 TPD each) of captive plant to reduce capacity to 700 TPD (3 old units of 250 TPD each i.e. 750 TPD of captive plant will be closed down)</b>

45.16.4 **Reason for the amendment:**

In view of recent Covid-19 crisis & as per operational requirement of Bokaro Steel Plant, it is proposed to change the configuration of Oxygen plant complex at BSL by reducing the captive oxygen plant capacity (3 units of 250 TPD each, out of 5 units of captive plant will be closed down resulting in reduction of overall captive capacity from 1450 TPD to 700 TPD) and install 2000 TPD plant instead of earlier proposed 1250 TPD Oxygen plant, without increasing the overall capacity of 3950 TPD as per existing EC.

Plant	As per existing EC (Capacity)	Proposed amendment (Capacity)	Remarks
Captive	1450 TPD	700 TPD	(3 old units i.e. ASU-I,II &IV of 250 TPD each i.e. 750 TPD of captive plant will be closed down)
Existing	1250 TPD	1250 TPD	No change
New	1250 TPD	2000 TPD	New 2000 TPD plant instead of earlier proposed 1250 TPD plant
<b>Total</b>	<b>3950 TPD</b>	<b>3950 TPD</b>	<b>No change in overall capacity</b>

The proposed change in configuration of the Oxygen plant complex will reduce

dependency on older captive Oxygen plant units for oxygen production which have been deteriorated in performance and higher productivity of oxygen production can be achieved from the BOO based Oxygen plants.

- 45.16.5 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.
- 45.16.6 Name of the EIA consultant: M/s. MECON Limited [S. No. 51, List of ACOs with their Certificate / Extension Letter no. Rev. 14, September 15, 2021].
- 45.16.7 During the course of meeting, PP has submitted written submissions on the following points:
- i. Project proponent has been removed the Build Owned and Operate (BOO) methodology for the oxygen plant for which amendment is sought.

#### **Observations of the Committee**

- 45.16.8 The EAC noted the following:
- i. The original environmental clearance was granted on 17<sup>th</sup> March, 2021 in the name of M/s. Steel Authority of India Limited (Bokaro Steel Plant), now PP has proposed for amendment in captive oxygen complex by closed down 3 old units i.e. ASU-I,II & IV of 250 TPD each (750 TPD) and replacing 1250 TPD unit by 2000 TPD without change the overall capacity of 3950 TPD.
  - ii. Due to the proposed amendment, all the environmental liability of the 5.77 MTPA steel plant inter-alia Oxygen plant will lie with the M/s. SAIL only.

#### **Recommendations of the Committee**

- 45.16.9 In view of the foregoing and after deliberations, the Committee recommended for amendment in the EC dated 17<sup>th</sup> March, 2021 as mentioned at paragraph number 45.16.3 above.
- 45.17 Expansion of Integrated Steel Plant from 6 MTPA liquid steel to 25.2 MTPA liquid steel (24.79 MTPA Crude Steel) and 12.5 MTPA Cement plant by **M/s. Jindal Steel & Power Limited** located at Village Kerjang, Tehsil Chhendipada, **District Angul, Odisha**. [Online Proposal No. IA/OR/IND/228087/2021; File No.: J-11011/365/2006-IA.II(I)] – **Amendment in Terms of Reference – regarding.**
- 45.17.1 M/s. Jindal Steel & Power Limited has made an online application vide proposal no. IA/OR/IND/228087/2021 dated 17/09/2021 along with Form 3 and sought for amendment in Terms of Reference accorded by the Ministry vide letter no. J-11011/365/2006-IA.II(I) dated 08/02/2021 and 16/06/2021.

#### **Details submitted by the project proponent**

- 45.17.2 M/s. Jindal Steel and Power Limited was originally accorded environmental clearance vide letter no. J-11011/365/2006 dated 22/02/2007 and amended on 14/11/2008, 08/02/2017, 26/06/2018, 22/01/2019 and 18/01/2021. The EC was accorded for the following product capacities:

S No.	Facilities	Units	Capacity	Implementation status as on 31/12/2020 as reported by the PP
i.	Pellet Plant	MTPA	5.0	Not Implemented
ii.	Coal Gasifier	Nm <sup>3</sup> /year	4000x10 <sup>6</sup>	2100x10 <sup>6</sup>
iii.	DRI plant	MTPA	4.0	2.0
iv.	Blast Furnace	MTPA	4.25	4.25
v.	Coke Oven	MTPA	2.0	2.0
vi.	Sinter Plant	MTPA	5.0	5.0
vii.	SMS	MTPA	6.0	6.0
viii.	Rolling mills	MTPA	6.0	2.9
ix.	Ferro-alloy plant	MTPA	0.08	Not Implemented
x.	Lime Dolime plant	TPD	3000	2200
xi.	Process gas/ pressure recovery turbine	MW	62	30.5
xii.	Coal based Power Plant	MW	810	810

45.17.3 M/s. Jindal Steel & Power Limited had applied for grant of ToR for expansion of Integrated Steel Plant from 6.0 MTPA liquid steel to 25.2 MTPA liquid steel (24.79 MTPA Crude Steel) and 12.5 MTPA Cement plant at Village Kerjang, Tehsil Chhendipada, District Angul, Odisha. The proposal was considered in 28<sup>th</sup> meeting of REAC (Industry- 1) held on 18-20<sup>th</sup> January, 2021. During consideration of the proposal, the EAC observed that the existing project was obtained Environment Clearance during 22/02/2007 for setting up of 6 MTPA ISP. However, as per the implementation status furnished by the PP, only 4.5 MTPA ISP has been commissioned. In view of this, EAC recommended that the instant expansion proposal may be titled as expansion from 4.5 to 25.2 MTPA ISP in place of expansion from 6.0 to 25.2 MTPA ISP. Accordingly, the ToR for the expansion of Integrated Steel Plant from 4.5 MTPA Liquid Steel to 25.2 MTPA Liquid Steel (24.79 MTPA crude steel) and 12.5 MTPA Cement plant at village Kerjang, Tehsil Chhendipada, District Angul, Odisha was accorded by MoEF&CC vide letter no. J-11011/365/2006-IA-II(I) dated 08/02/2021 for undertaking detailed EIA/EMP study.

45.17.4 Subsequently, M/s. JSPL submitted a representation to the Ministry on 29/01/2021 stating that in their EC amendment letter accorded on 08/02/2017, MoEF&CC clarified that validity of EC refers to start of production by the project/activity, it does not say start of full production as per the sanctioned environment clearance capacity. In view of this, the environment clearance gets completed if the project starts the production within the validity period. In view of this, PP claimed that they have started the ISP production within the validity period and the query regarding validity period of EC does not arise. By considering these points, PP has requested ToR may be amended for the capacity of 6 to 25.2 MTPA ISP capacity. In view of this, Ministry has informed the project proponent to apply for ToR amendment. Accordingly, the PP submitted the ToR amendment application vide proposal no. IA/OR/IND/212826/2021 dated 21/05/2021 wherein the PP has included all the unimplemented as well partly implemented portion of the facilities envisaged under the 6

MTPA EC dated 22/02/2007 under the proposed expansion of ISP from 6 MTPA to 25.2 MTPA. Accordingly, ToR amendment was accorded on 16/06/2021 with a title “Expansion of Integrated Steel Plant from 6 MTPA liquid steel to 25.2 MTPA liquid steel (24.79 MTPA Crude Steel) and 12.5 MTPA Cement plant by M/s. Jindal Steel & Power Limited located at Village Kerjang, Tehsil Chhendipada, District Angul, Odisha” along the following configuration:

S No.	Plant	As per ToR dated 8/2/2021		As per ToR amendment dated 16/06/2021		Final configuration in the ToR	
		Configuration	Capacity	Proposed Configuration	Proposed Capacity	Final Configuration	Final Capacity
1.	Coal Gasification plant	7x37500 Nm <sup>3</sup> /hr	2100x10 <sup>6</sup> Nm <sup>3</sup> /year	-	-	7x37500 Nm <sup>3</sup> /hr	2100x10 <sup>6</sup> Nm <sup>3</sup> /year
2.	DRI Plant	2x2 MTPA 2x2.7 MTPA	9.4 MTPA	-	-	2x2 MTPA 2x2.7 MTPA	9.4 MTPA
3.	Coke Oven	4x72 ovens 2x63 ovens 6x54 ovens	7.6 MTPA	-	-	4x72 ovens 2x63 ovens 6x54 ovens	7.6 MTPA
4.	Sinter Plant	2x490.5 m <sup>2</sup>	10.75 MTPA	-	-	2x490.5 m <sup>2</sup>	10.75 MTPA
5.	Blast Furnace	1x4554 m <sup>3</sup> 1x5400 m <sup>3</sup> 2x6000 m <sup>3</sup>	18.75 MTPA	-	-	1x4554 m <sup>3</sup> 1x5400 m <sup>3</sup> 2x6000 m <sup>3</sup>	18.75 MTPA
6.	EAF	3x250 T	7.5 MTPA	-	-	3x250 T	7.5 MTPA
7.	BOF	2x250 T 3x380 T	17.7 MTPA	-	-	2x250 T 3x380 T	17.7 MTPA
8.	Plate mill	1x2.0 MTPA	2.0 MTPA	-	-	1x2.0 MTPA	2.0 MTPA
9.	Bar Mill	1x1.4 MTPA	1.4 MTPA	-	-	1x1.4 MTPA	1.4 MTPA
10.	Wire Rod mill	1x1.2 MTPA	1.2 MTPA	-	-	1x1.2 MTPA	1.2 MTPA
11.	Hot Rolling mill	1x3.6 MTPA 3x6 MTPA	21.6 MTPA	<u>1x3.1 MTPA</u> 3x6 MTPA	21.6 MTPA	1x3.1 MTPA 3x6 MTPA	21.6 MTPA
12.	CRM Complex	3x2.5 MTPA	7.5 MTPA	-	-	3x2.5 MTPA	7.5 MTPA
13.	Calcination plant	15x600 TPD 2x500 TPD	10,000 TPD	-	-	15x600 TPD 2x500 TPD	10,000 TPD
14.	Oxygen plant	2x1200 TPD 3x200 TPD 2x2000 TPD 3x3600 TPD	17,800 TPD	2x1200 TPD 6x200 TPD 1x2000 TPD 1x1710 TPD 3x3600 TPD	18,110 TPD	2x1200 TPD 6x200 TPD 1x2000 TPD 1x1710 TPD 3x3600 TPD	18,110 TPD
15.	Power Plant	6x135 MW (coal based)  1x300 MW, 1x250 MW (Gas based)	1360 MW	6x135 MW (Coal based)  1x350 MW, 1x250 MW (Gas based)	1410 MW	6x135 MW (Coal based)  1x350 MW, 1x250 MW (Gas based)	1410 MW
16.	Ferro-alloy plant	1x18 MVA 1x15 MVA 4x45 MVA 1x15 MVA 1x6 MVA	0.376 MTPA	-	-	1x18 MVA 1x15 MVA 4x45 MVA 1x15 MVA 1x6 MVA	0.376 MTPA
17.	Pellet plant	4x 7 MTPA	28	3x7 MTPA	26	3x7 MTPA	26

S No.	Plant	As per ToR dated 8/2/2021		As per ToR amendment dated 16/06/2021		Final configuration in the ToR	
		Configuration	Capacity	Proposed Configuration	Proposed Capacity	Final Configuration	Final Capacity
			MTPA	1x5 MTPA	MTPA	1x5 MTPA	MTPA
18.	Cement plant	3x3.5 MTPA 1x2 MTPA	12.5 MTPA	-	-	3x3.5 MTPA 1x2 MTPA	12.5 MTPA
19.	Iron ore slurry	2x18 MTPA	36 MTPA	-	-	2x18 MTPA	36 MTPA

45.17.5 The project proponent vide online proposal no. IA/OR/IND/228087/2021 dated 17/09/2021 again sought for following amendments in the ToR accorded on 8/2/2021 and 16/06/2021:

- In the ToR amendment accorded on 16/06/2021, the units which were either partially implemented or yet to be implemented under the existing Environmental Clearance of 6 MTPA Integrated Steel Plant (ISP) were inadvertently indicated under the proposed expansion ISP from 6 to 25.2 MTPA ISP project. In view of this, PP has proposed to shift the said facilities under the EC dated 22/2/2007 in order to go ahead with the implementation of the project activity. Further, the company now proposes minor changes in the configuration in the proposed expansion project without changing the steelmaking capacity as given below:

S No	Plant Equipment/ Facility	As per EC dated 22/02/2007		As per approved TOR dated 08/02/2021 and amendment dated 16/06/2021		Proposed changes in ToR		Final after amendment of TOR		Remarks
		Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	Config-uration	Capacity	
1.	Coal Gasification Plant	4000 Million Nm <sup>3</sup> /year	4000 Million Nm <sup>3</sup> /year	7x37500 Nm <sup>3</sup> /hr	2100x10 <sup>6</sup> Nm <sup>3</sup> /year	Capacity proposed in the ToR to be deleted.		4000 Million Nm <sup>3</sup> /year	4000 Million Nm <sup>3</sup> /year	-
2.	DRI Plant	2x2 MTPA	4 MTPA	2x2 MTPA 2x2.7 MTPA	9.4 MTPA	2x2.7 MTPA + Addition of 0.7 MTPA in 2 MTPA under EC dated 22/02/2007	5.4 MTPA + 0.7 MTPA	1x2 MTPA 3x2.7 MTPA	10.1 MTPA	0.7 MTPA increase within 2 MTPA DRI under EC dated 22/02/07
3.	Coke Oven	4x72 ovens	2 MTPA	4x72 ovens 2x63 ovens 6x54 ovens	7.6 MTPA	2x70 ovens, 4x56 ovens	5.17 MTPA	4x72 ovens, 2x70 ovens, 4x56 ovens	7.17 MTPA	Capacity decrease of 0.43 MTPA
4.	Sinter Plant	1x490 m <sup>2</sup>	5 MTPA	2x490.5 m <sup>2</sup>	10.75 MTPA	2x490 m <sup>2</sup>	11.5 MTPA	3x490 m <sup>2</sup>	16.5 MTPA	Capacity increase of 5.75 MTPA
5.	Blast Furnace	1x4554 m <sup>3</sup>	4.25 MTPA	1x4554 m <sup>3</sup> 1x5400 m <sup>3</sup> 2x6000 m <sup>3</sup>	18.75 MTPA	2x5400 m <sup>3</sup> , 1x6000 m <sup>3</sup>	14 MTPA	1x4554 m <sup>3</sup> , 2x5400 m <sup>3</sup> , 1x6000 m <sup>3</sup>	18.25 MTPA	Capacity decrease of 0.5 MTPA
6.	EAF	1x250 T	3 MTPA	3x250 T	7.5 MTPA	1x250 T, 1x360 T	6 MTPA	2x250 T, 1x360 T	9.0 MTPA	Capacity increase of 1.5 MTPA

S N o	Plant Equipment/ Facility	As per EC dated 22/02/2007		As per approved TOR dated 08/02/2021 and amendment dated 16/06/2021		Proposed changes in ToR		Final after amendment of TOR		Remarks
		Config- uration	Capacity	Config- uration	Capacity	Config- uration	Capacity	Config- uration	Capacity	
7.	BoF	1x250 T	3 MTPA	2x250 T 3x380 T	17.7 MTPA	2x300 T, 2x360 T	13.2 MTPA	1x250 T, 2x300 T, 2x360 T	16.2 MTPA	Capacity decrease of 1.5 MTPA
8.	Plate Mill	1x1.5 MTPA	1.5 MTPA	1x2.0 MTPA	2.0 MTPA	-	0.5 MTPA	1x2.0 MTPA	2.0 MTPA	-
9.	Bar Mill	1x1.4 MTPA	1.4 MTPA	1x1.4 MTPA	1.4 MTPA	-	-	1x1.4 MTPA	1.4 MTPA	-
10.	Wire Rod Mill	-	-	1x1.2 MTPA	1.2 MTPA	1x1.2 MTPA	1.2 MTPA	1x1.2 MTPA	1.2 MTPA	-
11.	Hot Rolling Mill	1x3.1 MTPA	3.1 MTPA	1x3.1 MTPA 3x6 MTPA	21.6 MTPA	3x6 MTPA	18 MTPA	1x3.1 MTPA 3x6 MTPA	21.1 MTPA	-
12.	CRM Complex	-	-	3x2.5 MTPA	7.5 MTPA	3x2.5 MTPA	7.5 MTPA	3x2.5 MTPA	7.5 MTPA	-
13.	Calcination Plant	2x600 TPD, 2x500 TPD, 2x400 TPD	3000 TPD	15x600 TPD 2x500 TPD	10,000 TPD	12x600 TPD	7200 TPD	14x600 TPD, 2x500 TPD, 2x400 TPD	10,200 TPD	Capacity decrease of 600 TPD
14.	<u>Oxygen Plant</u>	<u>2x1200 TPD, 3x200 TPD, 1x1710 TPD, 3x200 TPD</u>	<u>5310</u>	2x1200 TPD 6x200 TPD 1x2000 TPD 1x1710 TPD 3x3600 TPD	18,110 TPD	2x2700 TPD, 2x2800 TPD	11,000 TPD	2x1200 TPD, 6x200 TPD, 1x1710 TPD, 2x2700 TPD, 2x2800 TPD	16310 TPD	Capacity decrease of 1800 TPD
15.	Power Plant	6x135 MW	810 MW (coal based)	6x135 MW (Coal based)  1x350 MW, 1x250 MW (Gas based)	1410 MW	2x275 MW	550 MW	6x135 MW, 2x275 MW	1360 MW	Capacity decrease of 50 MW
16.	Ferro Alloy Plant	3x24 MVA	0.08 MTPA	1x18 MVA 1x15 MVA 4x45 MVA 1x15 MVA 1x6 MVA	0.376 MTPA	0.376 MTPA	0.376 MTPA	3x24 MVA, 1x18 MVA, 2x15 MVA, 4x45 MVA, 1x6 MVA	0.456 MTPA	-
17.	Pellet Plant	1x5 MTPA	5 MTPA	3x7 MTPA 1x5 MTPA	26 MTPA	3x7 MTPA	21 MTPA	1x5 MTPA 3x7 MTPA	26 MTPA	-

S N o	Plant Equipment/ Facility	As per EC dated 22/02/2007		As per approved TOR dated 08/02/2021 and amendment dated 16/06/2021		Proposed changes in ToR		Final after amendment of TOR		Remarks
		Config- uration	Capacity	Config- uration	Capacity	Config- uration	Capacity	Config- uration	Capacity	
18.	Cement Plant	-	-	3x3.5 MTPA 1x2 MTPA	12.5 MTPA	3x3.5 MTPA 1x2 MTPA	12.5 MTPA	3x3.5 MTPA 1x2 MTPA	12.5 MTPA	-
19.	Iron ore slurry	-	-	2x18 MTPA	36 MTPA	2x18 MTPA	36 MTPA	2x18 MTPA	36 MTPA	-

45.17.6 Details of other amendments proposed in the TOR dated 8/2/2021 and 16/06/2021

Reference of approved TOR	As per approved TOR	Proposed amendment	Remarks
3 (i) of letter dated 08/02/2021	2224.96 ha [1416.06 ha (Existing) + 808.902 ha (Additional)]	2398 ha [1416.06 ha (Existing) + 981.94 ha (Additional)]	Addition of plant area 173.04 ha due to avoiding acquisition of Revenue Forest Land, change in land requirement and minor change in layout.
3(v) of letter dated 08/02/2021	Forest land in existing and expansion project – 190.62 hectares	Forest land in existing project 163 ha and no additional forest land involved in expansion proposal.	No additional forest land in the proposed expansion project

45.17.7 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. The proponent has further reported that an original appeal no. 141/2017/EZ before the National Green Tribunal, Kolkata is pending against the land on which the existing plant is set up and the said matter does not have any bearing/ relevance to the land for the proposed expansion project.

**Observations of the Committee**

45.17.8 The Committee noted the following:

- i. The EC was originally granted to the project proponent on 22/02/2007. As per the implementation status furnished by the proponent, the facilities namely pellet plant – 5 MTPA and Ferro Alloy Plant - 0.08 MTPA have not been implemented yet and the facilities namely coal gasification plant, DRI plant, blast furnace, sinter plant, rolling mill, lime/dolime plant and process gas/pressure recovery turbine have been partly implemented.
- ii. Project proponent has applied for expansion of ISP capacity from 6 to 25.2 MTPA. The matter was deliberated upon by the EAC wherein EAC noted that PP has commissioned only 4.5 MTPA against the sanctioned capacity of 6 MTPA. Hence, the EAC has recommended the proposal for grant of ToR from 4.5 to 6.0 MTPA ISP. Accordingly, ToR was accorded on 8/2/2021. Subsequently, PP has sought for amendment in the ToR dated 8/2/2021 for change in title of the project from 6 to 25.2 MTPA ISP based on their EC amendment letter accorded to them on 8/2/2017. In the said application, all the partly implemented/un implemented facilities envisaged under the EC dated 22/02/2007 have been incorporated by the PP under the proposed expansion activity which was considered and recommended by the EAC for

amendment in the ToR dated 8/2/2021. Accordingly, ToR amendment was accorded on 16/06/2021.

- iii. Instant proposal of proponent is for seeking amendment again in the ToR dated 8/2/2021 and 16/06/2021 by shifting all the partly implemented facilities (coal gasification plant, DRI plant, blast furnace, sinter plant, rolling mill, lime/dolime plant) and all the unimplemented facilities (pellet plant – 5 MTPA and Ferro Alloy Plant - 0.08 MTPA) as part of the EC dated 22/2/2007 in order to go ahead with the implementation of the project activity. Besides, ToR amendment is also sought for enhancing the DRI and sinter plant capacity. Further, in the revised production capacities mentioned at table given at para no. 45.17.5, the PP has reported the capacity of the oxygen plant under the EC dated 22/2/2007 as 5310 TPD. The Committee noted that as per the EC accorded on 22/02/2007 and subsequent amendments accorded on 14/11/2008, 8/2/2017, 26/6/2018, 22/1/2019 and 19/01/2021 there is no mention of oxygen plant at all. Further, the capacity of the process gas/pressure recovery turbine has neither been mentioned under the EC dated 22/02/2007 nor in the revised production capacities mentioned under the instant application. In addition to this, the production capacities of the different units envisaged under the EC dated 22/02/2007 as well as production capacities under the proposed expansion submitted by the proponent under the ToR application (IA/OR/IND/190832/2020 dated 13/01/2021) and subsequent ToR amendment applications (IA/OR/IND/212826/2021 dated 21/05/2021 & IA/OR/IND/228087/2021 dated 17/09/2021) are not in consistent with each other at all. In view of this, EAC could not take final view in the matter.
- iv. With respect to other amendment sought by the proponent regarding exclusion of forest land to an extent of 27 ha under the proposed expansion, the EAC was of the considered view that the said land will be land locked in all the three sides and this land is likely to have severe adverse impact due to the proposed expansion. Hence, the Committee felt that comments/views of State Government of Odisha on the proposal of proponent regarding exclusion of 27 ha of forest land and consequential likely impact due to the proposed expansion activity is essentially required for taking appropriate view in the matter.

#### **Recommendations of the Committee**

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

- Project proponent shall submit additional information regarding production capacities of all the different units envisaged under the EC dated 22/02/2007 inter-alia EC obtained for the oxygen plant – 5310 TPD capacity along with the implementation status of all the units envisaged under the EC dated 22/02/2007 for further consideration of the proposal.
- Ministry shall refer the proposal of proponent regarding exclusion of 27 ha of forest land seeking comments/views of the State Government of Odisha on the same along with consequential likely impact due to the proposed expansion. On receipt of the same, the proposal shall be placed before the EAC for consideration.

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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 30<sup>th</sup> 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<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

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

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

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

**8. Occupational health**

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

9. **Corporate Environment Policy**

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. To address the Public Hearing issues, provisions contained under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 30/09/2020 shall be complied.
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

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

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

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

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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<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> 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<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

**ADDITIONAL ToRs FOR CEMENT INDUSTRY**

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

**ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY**

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

**ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY**

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

**ADDITIONAL ToRs FOR COKE OVEN PLANT**

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

**ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS**

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

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

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

## **Executive Summary**

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

- i. Project name and location (Village, Dist, State, Industrial Estate (if applicable))
- ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
- iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)
- iv. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes. Materials balance shall be presented.
- v. Measures for mitigating the impact on the environment and mode of discharge or disposal.
- vi. Capital cost of the project, estimated time of completion
- vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of its acquisition, nearby (in 2-3 km.) water body, population, 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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**From:** cnpandey@iitgn.ac.in

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

**Sent:** Saturday, October 9, 2021 8:21:58 PM

**Subject:** Re: DRAFT MOM OF 45 EAC HELD ON 28 -29TH SEP 2021

Dear Mr. Sundar,

Please find the approved MoM for the 45th EAC held online on 28th and 29th September, 2021. Please take further necessary action regarding putting it on Parivesh.

With best wishes,

C. N. Pandey,

Charman, EAC (Industry I),

MoEFCC, Govt of India.