GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-1 SECTOR)

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Date of Zero Draft MoM sent to EAC: 29/06/2022
Approval by Chairman: 04/07/2022
Uploading on PARIVESH: 04 /07/2022

MINUTES OF THE 8th EXPERT APPRAISAL COMMITTEE (INDUSTRY-1 SECTOR) MEETING HELD ON JUNE 23-24, 2022

Venue: Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through Video Conferencing (VC)

Time: 10:30 AM onwards

DAY-1: JUNE 23, 2022 [THURSDAY]

(i) Opening Remarks by the Chairman, EAC

Shri. Rajive Kumar, Chairman EAC welcomed the Committee members and opened the EAC meeting for further deliberations.

Shri. Rajive Kumar also appreciated the efforts of the Ministry's Team (Industry 1 Sector) for preparation and uploading the agenda of the EAC meetings and draft record of discussion very scientifically, systematically and timely on Parivesh Portal.

(ii) Details of Proposals and Agenda by the Member Secretary

Dr. R. B. Lal, Scientist 'E' & Member Secretary, EAC (Industry-1 Sector) appraised to the Committee about the details of Agenda items to be discussed during this EAC meeting.

(iii) Confirmation of the Minutes of the 7th Meeting of the EAC (Industry-1 Sector) held during June 13-14, 2022 at MoEF&CC through VC.

The EAC, having taken note that final minutes were issued after incorporating comments offered by the EAC (Industry-1 Sector) members on the minutes of its **7th Meeting of the EAC (Industry-1 Sector) held during June 13-14, 2022** conducted through Video Conferencing (VC), and noted that no request has been received for modifications/factual correction, in the minutes of the 7th EAC meeting for the project/activities, and confirmed the same.

(iv) Conduction of Next EAC Meeting i.e. 9th EAC Meeting through Physical Mode/Hybrid Mode in the Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi

After detailed deliberations and based on request of EAC Members, it has been recommended by the EAC to conduct next EAC Meeting i.e. 9th EAC Meeting through Physical Mode/Hybrid Mode in the Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi.

Details of the proposals considered during the meeting **conducted through Video Conferencing (VC)**, deliberations made and the recommendations of the Committee are explained in the respective agenda items as under:

Consideration of Environmental Clearance Proposals

Agenda No. 8.1

8.1 **Expansion of Integrated Cement Plant (Clinker, Cement, WHRS & D.G. Set) by M/s Dalmia Cement (Bharat) Limited, Located at Village: Yadwad, Taluka: Mudalagi (Earlier Gokak), District: Belagavi, Karnataka – Consideration of Environmental Clearance.**

[Proposal no. IA/KA/IND/2465/2007; File No. J-11011/119/2007-IA.II(I)]
[Name of Consultant: J.M. EnviroNet Pvt. Ltd.; Valid upto: 07.02.2023]

8.1.1 M/s. Dalmia Cement (Bharat) Limited has made an online application *vide* proposal no. IA/KA/IND/2465/2007 dated 04.06.2022 along with copy of EIA/EMP report, Form – 2 and Certified EC compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(b) Cement Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

8.1.2 Name of the EIA consultant: M/s. J.M. EnviroNet Pvt. Ltd., Gurugram [S. No. 42, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2023/RA 0186 valid till 07/02/2023; Rev. 23, May 09, 2022].

Details submitted by Project proponent

8.1.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
14.06.2019	9th meeting of Re - constituted EAC held on 30th -31st July, 2019	Terms of Reference	26.09.2019	25.09.2023

8.1.4 The project of M/s. Dalmia Cement (Bharat) Ltd. (DCBL) located in Village: Yadwad, Taluka: Mudalagi (Earlier Gokak), District: Belagavi, State: Karnataka is for expansion of Integrated Cement Plant in Clinker Production from 2.6 MTPA to 9.1 MTPA, Cement production from 4

MTPA to 9.0 MTPA, DG Set from 2X500 KVA to 3000 KVA along with WHRS of 42 MW. No expansion is proposed in existing CPP of 27 MW.

8.1.5 Environmental Site Settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>Total project area is 179.68 ha;
Proposed expansion will be done within the existing plant premises and additional area.</td><td>Land use of the purchased area of 171.06 ha is non-agricultural land and additional land 8.62 ha private agriculture land; which will be converted to non-agricultural.</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>Total project area is 179.68 ha and out of the total project area; 171.06 ha (95%) is under the possession of the company and 8.62 ha area is in process of purchase by the company. The consent from concerned land owners has been taken.</td><td>-</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Plant Site: No habitation exists within the plant site and R&R is not applicable.
Study Area:
<table>
<tr><th>Habitation</th><th>Distance (km)</th><th>Direction</th></tr>
<tr><td>Manami</td><td>2.0 km</td><td>WSW</td></tr>
<tr><td>Halki</td><td>5.0 km</td><td>NNE</td></tr>
<tr><td>Budnikhurd</td><td>5.0 km</td><td>SE</td></tr>
<tr><td>Yadwad</td><td>5.5 km</td><td>NW</td></tr>
<tr><td>Kunnal</td><td>4.5 km</td><td>SW</td></tr>
</table>
There are approx. 16 villages in 10 km radius study area.</td><td>-</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site</td><td>
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1.</td><td>16°12'38.82" N</td><td>75°12'16.66" E</td></tr>
<tr><td>2.</td><td>16°12'39.12" N</td><td>75°12'23.27" E</td></tr>
<tr><td>3.</td><td>16°12'35.40"N</td><td>75°12'27.68"E</td></tr>
<tr><td>4.</td><td>16°12'33.27" N</td><td>75°12'38.10" E</td></tr>
<tr><td>5.</td><td>16°12'33.60" N</td><td>75°12'46.59" E</td></tr>
<tr><td>6.</td><td>16°12'42.17" N</td><td>75°12'46.14" E</td></tr>
<tr><td>7.</td><td>16°12'42.39" N</td><td>75°12'52.17" E</td></tr>
<tr><td>8.</td><td>16°12'58.53" N</td><td>75°12'50.65" E</td></tr>
<tr><td>9.</td><td>16°12'59.68" N</td><td>75°12'50.23" E</td></tr>
</table>
</td><td>-</td></tr>
</table>

S. No.	Particulars	Details			Remarks
		10.	16°13'01.40" N	75°12'50.10" E	
		11.	16°12'49.11" N	75°13'00.96" E	
		12.	16°12'45.12" N	75°13'00.97" E	
		13.	16°12'42.79" N	75°13'01.51" E	
		14.	16°12'05.50" N	75°13'03.06" E	
		15.	16°12'04.41" N	75°12'54.82" E	
		16.	$16^0$11’53.98” N	$75^0$13’00.95” E	
		17.	$16^0$11’52.35” N	$75^0$12’57.23” E	
		18.	$16^0$11’44.50” N	$75^0$12’45.87” E	
		19.	$16^0$11’58.93” N	$75^0$12’40.53” E	
		20.	$16^0$11’55.74” N	$75^0$12’25.46” E	
		21.	$16^0$12’07.12” N	$75^0$12’23.44” E	
		22.	$16^0$12’14.31” N	$75^0$12’23.27” E	
		23.	$16^0$12’19.71” N	$75^0$12’20.02” E	
		24.	$16^0$12’21.22” N	$75^0$12’19.70” E	
		25.	$16^0$12’21.62” N	$75^0$12’21.73” E	
		26.	$16^0$11’33.15” N	$75^0$12’20.10” E	
		27.	$16^0$11’32.15” N	$75^0$12’12.00” E	
		28.	$16^0$11’42.72” N	$75^0$12’09.57” E	
		29.	$16^0$11’42.56” N	$75^0$12’12.53” E	
		30.	$16^0$11’44.74” N	$75^0$12’19.65” E	
v.	Elevation of the project site	597 m to 610 m above mean sea level			-
vi.	Involvement of Forest land if any.	No Forest Land is involved in the plant site.			-

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td>Project site: No water body exists within the plant site except artificial Rainwater Harvestings Ponds/reservoir created by the company.
Study area: Following water bodies falls within 10 km radius:
<table>
<tr><th>Water body</th><th>Distance (km)</th><th>Direction</th></tr>
<tr><td>Dodda Halla</td><td>1.5</td><td>West</td></tr>
<tr><td>Kullur Halla</td><td>4.0</td><td>South</td></tr>
<tr><td>Aqueduct</td><td>4.5</td><td>West</td></tr>
<tr><td>Simmi Halla</td><td>5.0</td><td>NNE</td></tr>
<tr><td>Halpana Halla</td><td>5.5</td><td>NW</td></tr>
<tr><td>Kanni Halla</td><td>6.5</td><td>NNE</td></tr>
<tr><td>Hulkund Halla</td><td>7.0</td><td>SW</td></tr>
<tr><td>Kallumatti Halla</td><td>7.0</td><td>SSW</td></tr>
<tr><td>Jalimatti Halla</td><td>7.5</td><td>SSW</td></tr>
<tr><td>Yadawad Halla</td><td>8.0</td><td>NNW</td></tr>
<tr><td>Timmapur Halla</td><td>9.0</td><td>WNW</td></tr>
</table></td><td>-</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area.</td><td>Nil.

Details of Forests are as follows:
<table>
<tr><th>Forest</th><th>Distance (km)</th><th>Direction</th></tr>
<tr><td>Budni RF</td><td>4.0</td><td>NE</td></tr>
<tr><td>Reserve Forest</td><td>5.5</td><td>NNE</td></tr>
<tr><td>Reserve Forest</td><td>7.0</td><td>SSW</td></tr>
<tr><td>Reserve Forest</td><td>7.5</td><td>ENE</td></tr>
<tr><td>Ranjanagi & Uttur RF</td><td>8.0</td><td>North</td></tr>
<tr><td>Reserve Forest</td><td>8.0</td><td>NE</td></tr>
<tr><td>Jaliber RF</td><td>8.5</td><td>NNE</td></tr>
<tr><td>Chippal Katti RF</td><td>8.5</td><td>SSW</td></tr>
</table></td><td>-</td></tr>
</table>

8.1.6 The existing project was accorded Environmental Clearance from MoEF&CC, New Delhi for Cement- 4.0 MTPA, Clinker- 2.6 MTPA and Captive Power Plant-40 MW *vide* File no. J-

11011/119/2007-IA (II)-I dated 24th June, 2008; validity extended for three years *vide* letter dated 11th August 2014. Renewal of Consent for Operate for the existing unit was accorded by Karnataka State Pollution Control Board vide letter no. AW-326365 dated 24th Aug., 2021 and valid till 30th June, 2026.

8.1.7 Implementation status of the existing EC:

S. No.	Facilities	Units	As per EC dated 24th June, 2008	Implementation Status as on date	Production
1.	Clinker	Million TPA	2.6	Implemented	2.6
2.	Cement	Million TPA	4.0	Partially Implemented	2.5*
3.	CPP	MW	40	Partially Implemented	27
**Due to technical/ design flaw observed during operation of roller press circuit, the maximum cement output is restricted to about 2.5 MTPA.*					

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

S. No.	Plant Equipment / Facility	Existing Facilities as per EC dated 24th June, 2008.								Proposed Unit* In all Line		Final (Existing + Proposed)	
		Total (A + B)		Implemented (A)		Un - implemented (B)		As per CTO					
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity
1.	Clinker	Kiln: 1 x 8000 TPD	2.6 Million TPA	Kiln: 1 x 8000 TPD	2.6 Million TPA	Nil	Nil	Kiln: 1 x 8000 TPD	2.6 Million TPA	Kiln: 2 x 10000, TPD Only for Line – II & III	6.5 Million TPA	Kiln: 1 x 8000 + 2 x 10000, TPD	9.1 Million TPA
2.	Cement	Mill: 550 TPH	4.0 Million TPA	Mill: 360 TPH	2.5 Million TPA	190 TPH	1.5 Million TPA	Mill: 550 TPH	4.0 Million TPA	Line I- 1x 200 TPH + Mill: 2 x 350 TPH for Line II & III	6.5 Million TPA	Mill: 1 x 360 + 1x 200 + 2 x 350 TPH for Line II & III	9.0 Million TPA
3.	CPP	Boiler capacity 2 x 125 TPH	40 MW	Boiler capacity 1 x 125 TPH	27 MW	Boiler capacity 1 x 125 TPH	13 MW	Boiler capacity 1 x 125 TPH	27 MW	Nil	Nil	Boiler capacity 1 x 125 TPH	27 MW
4.	WHRS**	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	12 MW with Line I + 2 x 15 MW with Line II & III	42 MW	12 MW with Line I + 2 x 15 MW with Line II & III	42 MW
5.	D.G. Set	2 x 500 KVA	1000 KVA	2 x 500 KVA	1000 KVA	Nil	Nil	2 x 500 KVA	1000 KVA	2 x 1000 KVA	2000 KVA	2 x 500 + 2 x 1000	3000

** Note: Part of Clinker will be dispatched to split Grinding Units of DCBL.*

*** Company is in process of installing Waste Heat Recovery System (WHRS 12 MW) in existing Line - I. Consent to Establish for construction of WHRS has been obtained from Karnataka State Pollution Control Board vide letter No. CTE-323251, dated 29th Jan., 2021*

8.1.9 Baseline Environmental Studies:

<table>
<tr><th>Period</th><th>Summer Season (March to May, 2019)</th></tr>
<tr><td>AAQ parameters at 08 locations</td><td>PM_{10} - 42.6 to 93.5 μg/m^3
$PM_{2.5}$ - 18.4 to 48.7 μg/m^3
SO_2 – 5.0 to 21.8 μg/m^3
NO_2 - 7.6 to 26.2 μg/m^3
CO - 0.23 to 0.81 mg/m^3</td></tr>
<tr><td>Incremental GLC level</td><td>PM = 2.56 μg/m^3 (0.5 km in East direction)
SO_2 = 4.36 μg/m^3 (1.0 km in East direction)
NOx = 8.12 μg/m^3 (1.0 km in East direction)</td></tr>
<tr><td>Ground Water Quality at 12 locations</td><td>pH - 6.82 to 7.56
Total Hardness - 112 to 594 mg/l
Chloride - 13.90 to 645.19 mg/l
Fluoride - 0.22 to 1.46 mg/l
TDS - 236 to 1960 mg/l</td></tr>
<tr><td>Surface Water Quality at 01 location</td><td>pH - 7.21
TDS - 1254.0 mg/l
BOD - 2.8 mg/l
COD - 18.0 mg/l</td></tr>
<tr><td>Noise Levels Leq
(Day and Night)</td><td>During Day Time - 50.2 to 68.1 Leq dB (A)
During Night Time – 41.6 to 62.4 Leq dB (A)</td></tr>
<tr><td>Traffic assessment study findings</td><td>▪ Traffic study has been conducted at SH- 44 (1.5 km in North) from the Plant site.
▪ Transportation of raw material, fuel and finished product is being done by road. Limestone is being transported by dedicated road owned by company to Crusher at plant site and crushed limestone is transported via covered conveyor belt to Stacker/Reclaimer. However, in compliance of Specific TOR condition, it is proposed to transport the limestone by covered conveyor belt / and by road (only in case of emergency/breakdown) from captive limestone mine. The additional crusher required for expansion along with conveyer belt will be installed in captive limestone mine while installation of Line- II.
▪ Existing PCU is 156.27 PCU/hr on SH - 44 and existing Level of Service (LOS) is:
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>SH – 44</td><td>156.27</td><td>625</td><td>0.25</td><td>B</td></tr>
</table>
▪ PCU load after proposed expansion project will be 156.27 (Existing) + 170.75 (Additional) PCU/hr. on SH - 44 and existing Level of Service (LOS) is:</td></tr>
</table>

<table>
<tr><td>Period</td><td>Summer Season (March to May, 2019)</td></tr>
<tr><td></td><td>
<table>
<tr><th>S. No.</th><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>1.</td><td>SH-44</td><td>156.27 + 170.75 = 327.02</td><td>625</td><td>0.52</td><td>C</td></tr>
</table>
*Note: Capacity as per IRC - 64- 1990 Guideline for capacity for roads
Conclusion: The level of service of present road will become “C” i.e., Good enough to bear the increased traffic load after proposed expansion project.
</td></tr>
<tr><td>Flora & Fauna</td><td>No schedule - I species were recorded in the study area.</td></tr>
</table>

8.1.10 Public Consultation:

Details of advertisement given	Prajavani” (Kannada) on 27th July, 2021, “The Hindu” (English) on 27th July, 2021
Date of public consultation	27th August, 2021
Venue	M/s. Dalmia Cement (Bharat) Ltd. at Village - Yadwad, Mudalagi Taluk, Belagavi District, Karnataka.
Presiding Officer	Additional Deputy Commissioner & Additional Dist. Magistrate
Major issues raised	i. Employment ii. Establishment of new industries iii.Dust suppression iv.Safety equipment v. Maintenance of gaushalas and primary schools

8.1.11 Existing capital cost of the project was Rs. 1625 Crores. The capital cost of the proposed project is 4200 Crores and the Capital cost for Environmental Protection Measures is proposed as approximately Rs. 336 Crores (Rs. @ 168 Crores For each line). The annual recurring cost towards the environmental protection measures for proposed expansion is Rs. 34 Crores/annum (Rs. @ 17 Crores/ annum for each additional unit). The employment generation from the Expansion of the project is 200 persons as regular employees and 2920 Persons as Contractual. The details of cost for environment protection measures are as follows:

S. No.	Description of Item	Existing (Rs. In Crores)		Proposed for each line (Rs. In Crores)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
i.	Air Pollution Control/Noise Management	58.27	4	145.5	12.5
ii.	Water Pollution Control	1.12	0.14	15	2.0

S. No.	Description of Item	Existing (Rs. In Crores)		Proposed for each line (Rs. In Crores)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
iii.	Environment monitoring and management	1.06	0.2	7.0	2.0
iv.	Greenbelt Development	1.2	0.26	0.5	0.5
	Sub - Total	**61.64**	**4.6**	168	17
vi.	Addressal of Public Consultation concerns	9.59		10.53	-

8.1.12 Existing green belt has been developed in 39.6 ha area which is about 33% of the total project area of 120 ha with total sapling of 99000 Trees. Proposed greenbelt will be developed in 19.7 ha which is about 33% of the additional project area of 59.68 ha. Thus, total of 59.3 ha area (33% of total project area) will be developed as greenbelt. Out of 19.7 ha proposed greenbelt area, 12.94 ha area has already been covered under greenbelt/plantation and remaining 6.76 ha area proposed to be developed under greenbelt/plantation. A 3-30 m wide greenbelt, consisting of at least 3 tiers around the remaining plant boundary will be developed as greenbelt and green cover as per CPCB / MoEFCC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 16900 saplings will be planted and nurtured in 6.76 hectares in 4 years.

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

Deliberations by the Committee

8.1.14 The Committee noted the following:

1. **The Committee noted that the ToR was granted by the Ministry on 26.09.2019, Baseline data was collected during March to May 2019 and Public Hearing (PH) has been conducted on 27.08.2021. The EAC noted that the PH was conducted based on the Draft EIA/EMP Report and PP has only to add one chapter in the final EIA/EMP Report which can be completed in 15 days, however in this instant proposal the PP has taken almost 10 months for finalization and submission of EC application on Parivesh Portal. It seems that the PP is not serious about the completion of the project on time, however submitted the EC application after expiry of validity of baseline data.**
2. The Committee noted that the baseline data has been collected during March to May, 2019. However, the complete application for grant of EC has been submitted in June 2022, which is beyond 3 years of collection of baseline data. In pursuance to MoEF&CC O.M. vide F. No. IA3-22/10/2022-IA.III, dated 8th June 2022, the baseline data shall not be more than three years old at the time of submission of application for consideration of EC. Also, at the time of application for EC, in case baseline data is older than three years, but less than

five years old in the case of River valley and HEP Projects, or less than four years old in the case of other projects, the same shall be considered, subject to the condition that it is revalidated with one season fresh non-monsoon data collected after three years of the initial baseline data. The Committee suggested to carry out three months' data of additional baseline study as per the Ministry's Guidelines, and accordingly recommended to return the proposal in present form.

3. The presentation of the project could not happen due to inadequate application. EAC has examined the proposal/reports and suggested that the following points may also be checked by the PP while revising the EC application.

(i) In the previous EC dated 24.06.2008, it was recorded in the specific condition no. (v) that required 3100 m^3/day shall be met from River Ghataprabha after obtaining necessary permission form the concerned department. Also, in the existing ToR dated 26.09.2019, it has been recorded that no ground water abstraction is allowed for proposed additional capacity. However, during the meeting, PP has submitted that the existing water requirement is 3100 KLD. Additional 4000 KLD water will be required for the expansion project. Thus, the total water requirement for proposed integrated expansion project will be 7100 KLD; which will be sourced from ground water, Ghatprabha River, Mine sump & RWH ponds in plant premises. Permission (NOC) for withdrawal of 1309 KLD groundwater has been obtained from Karnataka Groundwater Authority *vide* letter dated 28.12.2021. Also, in the certified EC compliance report dated 05.08.2021, IRO has reported the condition w.r.t. ground water usage as partly complied stating that the PA is not utilizing the water from the Ghattaprabha river, instead utilizing the ground water from the pre-existing 15 no. of borewells available in the project site and from rainwater. Project proponent has not obtained the EC amendment w.r.t. water usage. Further, IRO, MoEFCC has also advised to seek amendment to the said EC, if PP do not wish to draw water from the Ghattaprabha River and if their industrial needs are met through harvested rainwater itself. In view of the same, the Committee is of the view that it is non-compliance of EC condition. PP shall accordingly revise the water requirement and source of withdrawal along with the water balance and revised in the EIA/EMP Report. PP;

(ii) The Committee deliberated on the action plan and budget allocation for green belt development and noted that greenbelt development plan shall be revised as per CPCB / MoEFCC, New Delhi guidelines.

(iii) The Committee deliberated upon the certified compliance report of IRO, MoEF&CC as well as action taken report submitted by PP with respect to the observations reported by IRO, MoEF&CC and found it unsatisfactory. The EAC opined that PP shall submit the closure report of IRO, MoEF&CC based on the ATR submitted on the partially complied conditions reported by IRO.

(iv) The IRO, MoEF&CC also reported that condition w.r.t. fly ash utilisation is partly complied. The EAC opined that clarification along with the requisite documents and closure report of IRO, MoEF&CC is required in this regard.

(v) As per EC dated 24.06.2008, the permission for 4.0 MTPA Cement has been granted. The existing installed capacity reported by project proponent is only 2.6 MTPA Cement

i.e. partially implemented. However, CTO dated 24.08.2021 has been obtained for more capacity of 4.0 MTPA Cement production.

(vi) Maximum values of $PM_{2.5}$ and PM_{10} value were found to be close to the critical, the PP shall prepare and submit action plan to minimize the particulate concentration by adopting suitable mitigation measures.

(vii) Total project area is 179.68 ha and out of the total project area; 171.06 ha (95%) is under the possession of the company and 8.62 ha area is in process of purchase by the company. Project Proponent has reported that the said land consent from the concerned land owners is taken. The project proponent shall complete the acquisition of the land and submit the requisite documents.

(viii) The EAC noted that some of the documents enclosed as EIA Annexures are illegible/in regional language. The proponent is required to submit the documents in readable condition with English translation of the documents.

(ix) During operation phase the PP should monitor PM2.5 and PM10 dust exposures at coal dust emissions at coal handling, ball mill, raw material loading areas; try to reduce all fugitive emissions by installing local exhaust ventilation (LEV) systems so that workers are exposed less along with other dust control measures; this will also help in reducing fugitive emissions outside the industry. PP advised to monitor noise monitoring at process plants and identify high noise areas. Audiometry tests for workers to be carried out. Similarly heat stress monitoring is advised to find out extremely hot areas and to facilitate work area with desert coolers at clinker plant and other locations-boilers/furnace areas.

(x) As per ToR specific condition, project proponent had to explore the possibility of railway siding and to submit action plan for laying the railway siding and maximum utilization of the same for transportation. PP has submitted that Escon Technologies (Hubli) have been entrusted with the work of carrying out feasibility study, final location survey and preparation of detailed project report including cost estimates for the proposed rail infrastructure facilities and supervision of construction of siding. However, PP has not submitted the details and action plan in the EIA/EMP report satisfactorily.

Recommendations of the Committee

8.1.15 In view of the foregoing and after detailed deliberations, the committee recommended to return the proposal in its present form **on account of expiry of Baseline Data in pursuance to MoEF&CC O.M. vide F. No. IA3-22/10/2022-IA.III [E 177258] dated 8th June 2022** and advised to submit the revised application with one season fresh non-monsoon data along-with the addressal of shortcomings as per the observations of the EAC stated in para 8.1.14 above for further consideration by the EAC.

Re-consideration of Environmental Clearance Proposal

Agenda No. 8.2

8.2 **Expansion of existing Integrated steel plant to final capacity of Sponge Iron - 2,054,000 TPA, Billets (Mild & Alloy Steel)- 23,73,566 TPA, Rolled Products - 15,60,000 TPA, Captive Power-308 MW, Pellets - 30,00,000 TPA, Producer Gas Plant-96,450 Nm3/Hr, Sinter Plant- 5,90,625 TPA, Blast Furnace- 3,93,750 TPA by M/s. Shyam Metalics and Energy Limited located at Village - Pandloi, Block-Lapanga, District- Sambalpur, Odisha – Re-Consideration of Environmental Clearance.**

[Proposal no. IA/OR/IND/269835/2020; File no. J-11011/495/2006-IA.II(I)]
[Consultant: M/s. Global Tech Enviro Experts Pvt. Ltd.; valid upto 06/11/2023]

8.2.1 M/s. Shyam Metalics & Energy Ltd., has made an online application vide proposal no. IA/OR/IND/269835/2020 dated 11.05.2022 along with copy of EIA/EMP Report, Form - 2 and Certified EC Compliance Report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (ferrous & non-ferrous), 2(b) Mineral Beneficiation and 1(d) Thermal Power Plantsunder Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

8.2.2 Name of the EIA consultant: M/s Global Tech Enviro Experts Pvt. Limited, Bhubaneswar [Sl. No. 101, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/IA0066; valid upto 06.11.2023, Rev. 23, May 09, 2022].

Details submitted by Project proponent

8.2.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
14.12.2020	27th meeting of REAC held on 30-31th December, 2020	Terms of Reference	14.01.2021	13.01.2025
28.03.2022	3rd meeting of EAC held on 11-12th April, 2022	Amendment in ToR	26.05.2022	

8.2.4 The project of M/s. Shyam Metalics & Energy Ltd. located in Village- Pandloi, Block- Lapanga, Tehsil- Rengali, District- Sambalpur, Odisha is for expansion of existing Integrated steel plant to final capacity of Sponge Iron - 2,054,000 TPA, Billets (Mild & Alloy Steel)- 23,73,566 TPA, Rolled Products - 15,60,000 TPA, Captive Power- 308 MW, Pellets - 30,00,000 TPA, Producer Gas Plant-96,450 Nm3/Hr, Sinter Plant- 5,90,625 TPA, Blast Furnace- 3,93,750 TPA.

8.2.5 Environmental Site Settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>1.</td><td>Total land</td><td>347.058 ha [Forest land: 46.754 ha.; Govt. land: 64.38 ha; Private Land: 235.924 ha]

<table>
<tr><th>Particulars</th><th>Area</th><th>Involvement of Forest Land</th><th>Status</th></tr>
<tr><td>Existing</td><td>166.269 ha</td><td>38.393 ha.
Forest clearance has been obtained vide letter no. 5-ORC-064/2008- BHU dated 27/01/2010.</td><td>Acquired</td></tr>
<tr><td>Proposed</td><td>180.789 ha</td><td>8.361 ha.
Stage-I Forest Clearance has been obtained vide letter No. 82/19769/F&E dated 9/01/2020.
Stage-II Forest Clearance is in Process.</td><td>Land is allotted by IPICOL, acquisition under process</td></tr>
<tr><td>Total Project Area</td><td>347.058 ha</td><td>46.754 ha</td><td>-</td></tr>
</table>
</td></tr>
<tr><td>2.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>Existing plant is running on land area of 166.269 ha already in possession.
Additional Land Area of 180.789 ha for expansion is in the process of acquisition by M/s. Shyam Metalics & Energy Limited, Sambalpur.</td></tr>
<tr><td>3.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>There is no existence of habitants identified within the land under acquisition. Hence no R&R issues</td></tr>
<tr><td>4.</td><td>Latitude and Longitude of all corners of the project site</td><td>
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>21°41'4.78"N</td><td>84°2'28.93"E</td></tr>
<tr><td>B</td><td>21°40'24.71"N</td><td>84°2'49.39"E</td></tr>
<tr><td>C</td><td>21°39'36.36"N</td><td>84°2'42.91"E</td></tr>
<tr><td>D</td><td>21°40'1.30"N</td><td>84°2'38.09"E</td></tr>
<tr><td>E</td><td>21°40'2.10"N</td><td>84°2'26.20"E</td></tr>
<tr><td>F</td><td>21°39'45.21"N</td><td>84°2'14.29"E</td></tr>
<tr><td>G</td><td>21°40'0.70"N</td><td>84°1'43.51"E</td></tr>
<tr><td>H</td><td>21°40'39.58"N</td><td>84° 2'9.19"E</td></tr>
</table>
</td></tr>
<tr><td>5.</td><td>Elevation of the project site</td><td>195-205 m above mean sea level</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>6.</td><td>Involvement of Forest land if any</td><td>Area of the forest land involved:
8.361ha.

For land under acquisition
Stage 1 forest Clearance has already been approvedvide letter No. 82/19769/F&E dated 9/01/2020 and Stage 2 Forest Clearance is in Process.</td></tr>
<tr><td>7.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>Project Site:
5 nos. of manmade pits exist in the proposed site for expansion.

Study Area:
<table>
<tr><th>Water body</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Hirakud Reservoir</td><td>0.67 Km</td><td>NW</td></tr>
<tr><td>Matwali Nala</td><td>0.15 km</td><td>NE</td></tr>
<tr><td>Sankri Nadi</td><td>2.8 km</td><td>S</td></tr>
<tr><td>Makarkusha Nala</td><td>4.1 km</td><td>E</td></tr>
<tr><td>Bhedan Nadi</td><td>9.02 km</td><td>NNW</td></tr>
</table></td></tr>
<tr><td>8.</td><td>Existence of ESZ/ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td>Nil

List of Reserved and protected forests:
Ghichamura RF: 4.5km (NE)
Jharghati Garpati RF: 4.6 Km (SE),
Maulabhanja RF: 2.1 Km (W),
Baighara RF: 2.6 Km (SW)
Kilasama RF: 4.7 Km (S)</td></tr>
</table>

8.2.6 The existing project was accorded environmental clearance vide letter no. IA- J-11011/495/2006-IA. II(I) dated 21.05.2019. Consent to operate (CTO) for the existing unit was accorded by Odisha State Pollution Control Board vide letter no. 5128/IND-I-CON-5335; Dt. 26.03.2021 & 13045/IND-I-CON-5335; Dt. 27.08.2021, 7994/IND-I-CON-5335; Dt. 22.06.2021. The validity of all CTO is up to 31.03.2023.

8.2.7 Implementation status of the existing EC

S. No.	Facilities	Units	EC dt. 21.5.2019 & Amendment dt.14.10 2019	Implementation Status	Production as per CTO
1	Sponge Iron	TPA	8,00,000	Implemented	8,00,000

S. No.	Facilities	Units	EC dt. 21.5.2019 & Amendment dt.14.10 2019	Implementation Status	Production as per CTO
2	Billet Caster	TPA	2,00,000	Implemented	2,00,000
3	Rolling Mill	TPA	6,60,000	4,10,000 Implemented and 2,50,000 under implementation	4,10,000
4	Sinter Plant	TPA	8,82,000	Not Implemented	Dropped
5	MBF	TPA	7,42,500	Not Implemented	Dropped
6	Ferro Alloys	TPA	2,50,000	1,33,000 Implemented & 1,17,000 under implementation	1,33,000
7	SMS	TPA	14,44,286	6,33,080 Implemented & 8,11,206 under implementation (CTO Applied)	6,20,080
8	Coke Oven	TPA	5,50,000	Not Implemented	Dropped
9	Beneficiation & Pelletization	TPA	12,00,000	Implemented	12,00,000
10	Coal Washery	TPA	10,00,000	3,00,000 Implemented and 7,00,000 under implementation	3,00,000
11.	Power Plant	MW	158	Implemented	158
12.	Bloom Caster	TPA	3,53,500	Implemented	3,53,500
13.	Lime Plant	TPA	60,000	Under implementation	NA
14.	Producer Gas Plant	$Nm^3/hr.$	48,450	Implemented	48,450

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

Sl. No.	Plant Equipment /Facility	Existing Facilities as per EC dated 21.5.2019 & and subsequent amendment dated 14.10 2019								Proposed Units		Final (Existing +Proposed)	
		Total (A + B)		Implemented (A)		Un-implemented(B)		As per CTO					
		Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity
1.	Sponge Iron	(2x350TPD+2x100 TPD+4x500 TPD)	8,00,000 TPA	(2x350TPD+2x100 TPD+4x500 TPD)	8,00,000 TPA	-	Nil	(2x350TPD+2x100 TPD+4x500 TPD)	8,00,000 TPA	(4x600 TPD &2x700 TPD)	12,54,000 TPA	2x350 TPD+ 2x100 TPD+ 4x500 TPD+ 4x600 TPD+ 2x700 TPD)	20,54,000 TPA
2.	Billet Caster	-	2,00,000 TPA		2,00,000 TPA		Nil	2,00,000 TPA	2,00,000 TPA	-	-	-	2,00,000 TPA
3.	Rolling mill	1,00,000 TMT Rod mill, 1x70,000 TMT Bar Mill, 1x60,000 Structural Mill, 2x2,00,000 Wire Rod Mill, 1x30,000 Pipe Mill	6,60,000 TPA	1x60,000 TMT Rod mill, 1x60,000 TMT Bar Mill, 1x60,000 Structural Mill, 1x2,00,000 Wire Rod Mill, 1x30,000 Pipe Mill	4,10,000 TPA	1x2,00,000TPA Wire rod mill & 1x50,000 TPA R.M	2,50,000 TPA	1x60,000 TMT Rod mill, 1x60,000 TMT Bar Mill, 1x60,000 Structural Mill, 1x2,00,000 Wire Rod Mill, 1x30,000 Pipe Mill	4,10,000 TPA	Other long product 9,00,000 TPA	9,00,000 TPA	1x1,00,000 TMT ROD, 1x70,000 TMT Bar Mill, 1x60,000 Structural Mill, 2x2,00,000 Wire Rod Mill, 1x30,000 Pipe Mill, Other long product 9,00,000 TPA	15,60,000 TPA
4.	Sinter Plant	-	-	-	-	-	-	-	-	65 m^2	5,90,000 TPA	-	5,90,000 TPA

Sl. No.	Plant Equipment /Facility	Existing Facilities as per EC dated 21.5.2019 & and subsequent amendment dated 14.10 2019								Proposed Units		Final (Existing +Proposed)	
		Total (A + B)		Implemented (A)		Un-implemented(B)		As per CTO					
		Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity
5.	MBF	-	-	-	-	-	-	-	-	450 m^3	3,93,750 TPA (1x450 m^3)		3,93,750 TPA (1x450 m^3)
6.	Ferro alloys	(2x6MVA+2x9 MVA+3x11 MVA-Matching capacity for 1,17,000 TPA	2,50,000 TPA	-	1,33,000 TPA		1,17,000 TPA	(3x11 MVA+2x9 MVA+2x6 MVA	1,33,000 TPA	-	-	(2x6MVA+2x9 MVA+3x11 MVA-Matching capacity for 1,17,000 TPA	2,50,000 TPA
7.	SMS	(EAF 1x80T(18H) hot metal route; IF.15x18T+4x12T+.4x8T, IF with matching LF)	14,44,286 TPA	4x8 T/Heat,8x18 T/Heat, 4x12 T/Heat	6,23,080 TPA	-	821206 TPA	4x8 T/Heat,8x18 T/Heat, 4x12 T/Heat	6,23,080 TPA	(16x20T, & 4x8T)	9,29,280 TPA	(1x80T, 15x18T, 4x12T &8x8T) &16x20T)	23,73,286 TPA
8.	Pelletization & beneficiation unit	2x6,00,000 TPA	12,00,000 TPA	(2x6,00,000 TPA)	12,00,000 TPA	-	Nil	(2x6,00,000 TPA)	12,00,000 TPA	2x0.6 MTPA to be moderni	18,00,000 TPA	(2x0.9MTPA+1x1.20MTPA	30,00,000 TPA

Sl. No.	Plant Equipment /Facility	Existing Facilities as per EC dated 21.5.2019 & and subsequent amendment dated 14.10 2019								Proposed Units		Final (Existing +Proposed)	
		Total (A + B)		Implemented (A)		Un-implemented(B)		As per CTO					
		Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity
										zed to 2x0.9 MTPA+ 1x1.20 MTPA New)			
9.	Coal Washery	1x10,00,000 TPA	10,00,000 TPA	1x3,00,000 TPA	3,00,000 TPA	-	700000 TPA	-	300000 TPA	-	-	1X10,00,000 TPA	10,00,000 TPA
10.	Power Plant	58 MW(WHRB) +100 mw (AFBC	158 MW	58 MW(WHRB) +100 mw (AFBC)	158 MW	-	Nil		158 MW	88 MW WHRB + 80 MW AFBC + 2.0 MW TRT	170 MW	WHRB- 146 MW AFBC -180 MW TRT -2 MW	328 MW
11.	Bloom Caster	-	3,53,000 TPA	-	3,53,000 TPA	-	-	-	3,53,000 TPA	-	-	-	3,53,000 TPA
12.	Lime Plant		60,000 TPA		-	-	60,000 TPA		-	-	-	-	60,000 TPA

Sl. No.	Plant Equipment /Facility	Existing Facilities as per EC dated 21.5.2019 & and subsequent amendment dated 14.10 2019								Proposed Units		Final (Existing +Proposed)	
		Total (A + B)		Implemented (A)		Un-implemented(B)		As per CTO					
		Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity
13.	Producer Gas Plant	48,450 Nm^3/hr)	48,450 Nm^3/hr	Nm^3/hr)	48,450 Nm^3/hr	-	-	48,450 Nm^3/hr.)	48450 Nm^3/hr	48,000 Nm^3/hr)	48,000 Nm^3/hr	96,450Nm^3/hr)	96,450 Nm^3/hr)

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

Sl. No.	Raw Material	Quantity required in Tons per Annum for expansion			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Iron Ore Fines	14,40,000	26,91,562	41,31,562	Khandadhar mines and Gandhamardhan mines	112.6 km & 153.20 km	Rail
2	Coal	12,21,800	13,20,000	25,41,800	Talabira Mines of MCL	20 km	Rail
3	Coke	1,60,200	1,60,200	3,20,400	Jharsuguda/ Sambalpur	30 km	Rail
4	Bentonite	12,000	7,000	19,000	Local Market	105 km	Rail/Road
5	Dolomite Fines	18,000	18,000	36,000	Local Market	105 km	Rail/Road
6	Lime Stone	18,000	18,000	36,000	Local Market	105 km	Rail/Road
7	Chromite Ore	6,00,000	-	6,00,000	Jajpur Sukinda Mines	210 km	Road
Total		**34,70,000**	**42,14,762**	**76,84,762**			

8.2.10 Existing water requirement is 13,644 m^3/day, water requirement is met from Hirakud Reservoir and permission for the same has been obtained from Orissa Department of Water Resources vide letter No. Irr-II-WRC-01/05/1308/WR, dt. 13.04.2005. The water requirement for proposed project is estimated as 9085 m^3/day, which will be met from Hirakud Reservoir also. Thus, Total make up water requirement for the project after expansion will be 22,729 KLD which will be sourced from Hirakud Reservoir. Agreement for drawl of 13,798.68 m^3/day (3 MGD/ 5.64 Cusec) of water was done for a period of 3 years (07.09.2021 to 06.09.2024). PP has received the letter from water resources department Govt. of Orissa for renewal of agreement. For additional requirement of 9,085 m^3/day agreement will be done after the statutory clearances.

8.2.11 Existing power requirement of 175 MW is obtained from CPP, Solar Panel & State grid. The power requirement for the proposed project is estimated as 228.1 MW which will be met from CPP, Solar Panel & State Grid.

8.2.12 Baseline Environmental Studies:

Period	1st December 2020 to 28th February, 2021 & Additional one month AAQ for January,2022
AAQ parameters at 8 locations	PM_{10} = 76.4-52.1μg/m^3 $PM_{2.5}$ = 32.2-20.2 μg/m^3 SO_2 = 14.6-7.9 μg/m^3 NO_2 = 26.4-12.7 μg/m^3

<table>
<tr><td></td><td>CO = 0.698-0.218 mg/m^3</td></tr>
<tr><td>AAQ modelling (Incremental GLC)</td><td>PM_{10} = 3.78 µg/m^3 (1.45km & SSW)
SO_2 = 2.257µg/m^3 (1.45km & SW)
NOx = 2.541 µg/m^3 (1.45km & SW)</td></tr>
<tr><td>Ground water quality at 8 locations</td><td>pH: 7.54 to 6.99, Total Hardness: 178 to 62 mg/l, Chlorides: 34.6 to 28.8mg/l & Fluoride: 1.21 to 0.16mg/l. Heavy metals are within the permissible limits</td></tr>
<tr><td>Surface water quality at 8 locations</td><td>pH: 7.72 to 6.6, DO: 8.1 to 6.4 mg/l, BOD: <1.8 mg/l & COD: 14.8 to 8.2 mg/l</td></tr>
<tr><td>Noise levels at 8 Locations</td><td>71.43 to 43.98 dBA for day time and 63.53 to 41 dBA for night time.</td></tr>
<tr><td>Soil at 6 Locations</td><td>pH: 7.18 to 6.92, N (Nitrogen): 4.6 to 0.26 Milligram Per Kg, P (Phosphorus): 0.028 to 0.018 Milligram Per Kg, K (Potassium): 0.058% to 0.042%, Electric Conductivity: 132.6 to 116.2 Millisiemens Per Cm</td></tr>
<tr><td>Traffic assessment study findings</td><td>• Traffic Study has been conducted at SH-10 which is adjacent to the plant site.
• Transportation of raw material, fuel & finished product will be done 10.45% by road.
• Existing max. PCU is 1112 PCU/hr on SH-10 and existing level of service (LOS) is B of total free flow capacity.
Existing PCU details is given below-
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>ExistingV/C Ratio</th><th>LOS</th></tr>
<tr><td>SH-10</td><td>1112</td><td>3600</td><td>0.30</td><td>B</td></tr>
</table>
After expansion
<table>
<tr><th>Road</th><th>V (Volume In PCU/hr.)</th><th>C (Capacity In PCU/hr.)</th><th>ExistingV/C Ratio</th><th>LOS</th></tr>
<tr><td>SH-10</td><td>1377</td><td>3600</td><td>0.38</td><td>B</td></tr>
</table>
PCU load after proposed project will be 1112 (existing) + 265 (Additional) =1377 PCU/hr and level of service (LOS) will be B (Very Good).
*Note: Capacity as per IRC-73-1980 Guide line for capacity for roads.
**Considering peak hourly volume at 3 locations
Conclusion: The level of service will B (very good) after including additional traffic due to proposed project.</td></tr>
<tr><td>Flora & Fauna</td><td>Python which belongs to the schedule I of fauna is present within the buffer zone.
Wildlife Management Plan with budget allocation of Rs. 70.586 Lakhs was approved vide Letter No. 7752/7WL-FD&WLC-147/2020 Dated. 29th Sept, 2020.</td></tr>
</table>

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

(A) **Solid waste generation and management**

Sl. No	Type of Waste	Source Name	Quantity (TPA)			Treatment before disposal	Method of Disposal
			Existing(TPA)	Proposed(TPA)	Total Quantity (TPA)		
1.	Middling & Rejects	CoalWashery	4,20,000		4,20,000	-	Captive use in FBC boileras fuel
2.	Ashand Accretion	DRI Kilns	11,09,680	16,64,520	27,74,200	-	To be used in Brick Manufacturing plant of M/s. Shyam Metalics
	Dolchar		3,77,040	5,65,560	9,42,600	-	Captive use FBC Boiler as fuel
3.	Dedusting dust	Pellet Plant	82,800	1,24,200	2,07,000	-	Reused in Pellet Plant
4.	Return Sinter Fines	Sinter Plant	-	88,590	88,590	-	Reused in Sinter Plant
5.	BF slag	BlastFurnace	-	1,18,965	1,18,965	-	Used in PSC manufacturing plant–Star Cement Raipur & Dalmia Cement, Jharsuguda.
	BF sludgeand dust		-	1,90,000	1,90,000	-	Reusedin Sinterplant
6.	Tar	PGP Plant	7,875	7,875	15,750	-	Sale to authorizedusers /Recyclers/Re-processors having valid authorization from SPCB, Odisha.
7.	Slag	S M S	2,01,870	1,34,580	3,36,450	Watersprinkling	Land filling in the nearby abandoned mines
	Dust		32,540	19,200	51,740	Watersprinkling	To be used in land filling
8.	FlyAsh	FBC Boiler	1,50,475	1,50,475	3,00,950	AshConditioning	Land filling in approved abandoned stone quarry.
9.	Bag House Dust	Ferro	35,000	-	35,000	-	Fe-Mn slag is to be used in Si-Mn production Si-Mn slag is to be used in

Sl. No	Type of Waste	Source Name	Quantity (TPA)			Treatment before disposal	Method of Disposal
			Existing(TPA)	Proposed(TPA)	Total Quantity (TPA)		
	Slag	alloy plant	2,25,000	-	2,25,000	-	land filling Fe-Cr slag will be used as aggregate in concrete works

(B) **Hazardous waste generation and management**

Sl. No.	Waste Description	Source Name	Quantity(TPA)			Treatment before disposal	Mode of Disposal
			Existing Quantity	Proposed Quantity	Total Quantity		
1.	Used Oil	Transformer	8 KLA	12 KLA	20 KLA	-	Storage in containers over the concrete floor under-ventilated covered shed followed by sale to actual users/Recyclers/Re-processors having valid authorization from SPCB, Odisha or disposed to TSDF.
2.	Wastes/ Residues Containing Oil	Plant Machinery	6 KLA	9 KLA	15 KLA	-	
3.	Phenolic water	PGP	13.5 KLD	13.5 KLD	27 KLD	ETP, lime treatment	Reusedinprocess.
4.	Spent resin	DM Plant	-	6 TPA	6 TPA	-	Storage in an impervious containers under well ventilated covershed to be supplied to recyclers authorized.
5.	Tarry residues	PGP	1 TPA	1 TPA	2 TPA	-	Storage in an impervious pit/ container drums for co-incineration in CPP/DRIkiln
6.	Discarded containers	General Store	-	15 TPA	15 TPA	-	Storage in an impervious floor under well ventilated covered shed followed disposal in the Authorized HW Incinerator/Co-processing in authorized Cement Kiln.

8.2.14 Public Consultation:

Details of Advertisement	Odia daily "The Dharitri" and English daily "The Times of India" on 30.07.2021
Date of Public consultation	31.08.2021
Venue	U.P. School Field, Pandloi, District- Sambalpur, State- Odisha.
Presiding Officer	Additional District Magistrate, Sambalpur.
Major issues raised	• Employment opportunity to local people • Integrated development of Education& public Health facility of locality • Repair & Construction of Approach road to plant & village roads • Employment opportunity to local women • Street light on approaching road to plant • Major to control Dust emission • Public toilet, tube well & Road facility • Help to needy people • Providing Computers, Table, Chair to village School & financial assistance to private teachers

Action plan as per MoEF&CC O.M. F.No. 22-65/2017-IA.III dated 30/09/2020

Sl. No.	Issues raised by Public	Physical Activity & Action Plan as per O.M dated 30.09.2020	Capital Budget to be spent in 1 yr (Rs. In Lakhs)	Recurring Budget to be spent in next 2 yrs (Rs. In Lakhs)	Time Schedule for Implementation
1	**Employment opportunities to local People & Local women**	1.M/s. SMEL is giving recruitment in their Sambalpur Plant to the fresh ITI Pass out students from nearby villages namely, Rengali, Lapanga, Pandloi, Bamaloi, Katarbaga, Khinda, Gurupali, Nishabhanga etc. 2. 1st preference will be given to the local people (men /women both) on the basis of their merit and skill.	**50.00**	**50.00**	This process will be completed within 3 yrs…
2	**Employment under company payroll**	SMEL will adhere protocols and will try to provide opportunities as per Qualification and competency. Since most of the labour intensive works has been out sourced for better operation & management. So the company will ensure for engagement of locals in those jobs.	-	-	This process of giving employment to local people is continuing & within a period of 3 yrs it will be done.
3	**Supply of safe drinking water in nearby villages.**	SMEL is providing safe drinking water through tanker in nearby villages namely pandloi, Nishanbhanga, Kaliapada, Gurupli, Bausen etc. Further 3 nos. of	**58.00**		It will be completed within 1 year.

Sl. No.	Issues raised by Public	Physical Activity & Action Plan as per O.M dated 30.09.2020	Capital Budget to be spent in 1 yr (Rs. In Lakhs)	Recurring Budget to be spent in next 2 yrs (Rs. In Lakhs)	Time Schedule for Implementation
		water filter/ RO sytem has already been installed by SMEL. **Actions Plan:** 2 nos. of Purified Drinking Water facilities shall be installed at strategic public locations **Location:** Jangla, Bhursipalli, Tilaimal, Gurupali, Pudapada, Dharopani, Rengali, Jharmunda, Baunsen			
4	**Construction of Public toilet, tube well & Pond in nearby villages**	4 Common toilets with water facilities will be provided in nearby villages namely Pandloi, Nishanbhanga & Kaliapada Village	**6.00**	**-**	Dec, 2022
5	**Women Empowerment in surrounding villages by Providing jobs & financial support to SHG groups.**	Promotion of Income Generation Activities- Kitchen Garden, Leaf plate, Pickle making, NTFP etc. (100 interested women beneficiaries within 10 SHG members of nearby GPs shall be trained)	**30.00**	**30.00**	This process is continuing….
6	**Integrated development of Education & public Health facility of locality & organizing local Health Camps**	**Education** i.Tie up with local ITI college from 2009 & providing all financial support for development of education. Budget=Rs. 25.00 Lakh Avg. per year (**Letter from ITI college is attached as Annexure**) **Health** ii. Two Health Camps per year. Location-Pandloi, Nishanbhanga, Bamaloi, Gurupali Budget=Rs. 55.00 lakh 3.Purchase of Ambulance for the benefit of the local villages.(Rs.20.00 Lakh)	**80.00**	**20.00**	This process is continuing….
7	**Providing Computers, Table, Chair to village School & financial assistance to private teachers.**	Company is supplying Computers & other accessories to 6 nos. of schools. Namely: (1)Lahamani U.G High School, Jangala (2)Akshara English School, Rengali (3)Govt. Polytechnic Sambalpur, Rengali (4) Govt. Hospital, Rengali- (5)Jambahal Primary School, Jangala	**100.00**	**100.00**	This Process will continue..

Sl. No.	Issues raised by Public	Physical Activity & Action Plan as per O.M dated 30.09.2020	Capital Budget to be spent in 1 yr (Rs. In Lakhs)	Recurring Budget to be spent in next 2 yrs (Rs. In Lakhs)	Time Schedule for Implementation
		(6)Golamal High School, Ludhapali			
8	**1.Repair & Construction of Approach road to plant & village roads** **2. Peripherial Development**	1.Maintainance of PCC road Location-Meherpada, Ganesh nagar, Pandloi 2.Contruction of PCC from Nishanbhanga to Jharmunda 3.Providing mechanical sweeping machine to keep the road clean from dust.	**280.00**	**100.00**	June, 2023
9	**Installation of Street light on approaching road from plant to villages**	Installation of 1,000 Solar street light at 10 m interval in villages namely Pandloi, Nishanbhanga, Jharmunda(@5,000 rupees each)	**50.00**		Dec, 2022
10	**Pollution control measures for reduction of the Pollution level.**	1.Raw material is being transported through properly covered trucks from the plant site. 2. 5 nos. of truck mounted mist cannon fogging system in and around the plant premises will be installed. 3. Engaging automatic heavy duty road sweeper in all roads to remove the dust before the dust resuspended by truck movement. 4.Water sprinkling is done at regular intervals on the internal & external roads used for material transportation. 5.Additionally wheel wash system will be installed at the Main entry/Exit gate for control fugitive emission. 6. 5 nos. of Water tankers of 10KLD capacity each have been engaged to sprinkle water on nearby village roads twice a day.	**239.00**		Dec, 2022
11	**Encourage Local Contractors by giving contract works in Priority basis.**	SMEL is giving 1st preference to the local contactors having relevant skills and work experience. Whenever the company authority requires the help of contractors it will provide to them.	-	-	This Process will continue.
12	**Help to needy people**	1.Promotion of Income Generation Activities- Mushroom Cultivation, NTFP etc.	**80.00**	**27.00**	This Process will continue.

Sl. No.	Issues raised by Public	Physical Activity & Action Plan as per O.M dated 30.09.2020	Capital Budget to be spent in 1 yr (Rs. In Lakhs)	Recurring Budget to be spent in next 2 yrs (Rs. In Lakhs)	Time Schedule for Implementation
		2. SMEL is helping to needy people & engaged in different developmental works in its nearby villages through its CSR activities.			
13	**Adoption of Village**	**Name of Village: Bausen** **Physical Activities:** Different developmental program will be carried out such as health, education & road & infrastructure development. **<u>Budget Allocated</u>** (i)For Health=Rs. 40.00 Lakh (ii)For Education=Rs.38.00Lakh (iii) Road & Infrastructure Development=Rs.35.00 Lakh	**60.00**	**53.00**	This Process will continue…
Total Budget			**1213.00**		

8.2.15 Existing capital cost of project was 1554.00 Crores. The capital cost of the proposed project is Rs 1205.00 Crores and the capital cost for environmental protection measures is proposed as Rs 182.00 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 18.00 Crores. The employment generation from the proposed project / expansion is 3270. The details of cost for environmental protection measures is as follows:

Sl. No.	Description of Item	Existing (Rs.InCrores)		Proposed (Rs.In Crores)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
i.	Air Pollution Control/ Noise Management	27.40	6.90	100.59	10.3
ii.	Water Pollution Control	5.28	0.70	25.80	3.2
iii.	Rain water Harvesting	1.03	0.15	11.86	0.15
iv.	Occupational Health & Safety	3.52	0.51	17.8	1.2
v.	Green Belt Development	0.90	0.45	7.0	1.25
vi.	Solid Waste management	3.65	0.44	13.95	1.5
vii.	Online Monitoring System	1.12	0.20	5.0	0.4
Total		**42.90**	**9.35**	**182.00**	**18.00**
Addressal of Public Consultation concerns		**12.13**			

8.2.16 Existing green belt has been developed in 55.56 ha area which is about 33.41% of the total project area of 166.269 ha with total sapling of 1,38,900 trees. Proposed greenbelt will be developed in 80.01 ha which is about 44.25 % of the expansion project area of 180.789 ha. Thus

total of 135.57 ha area (39.06% of total project area of 347.058 ha) will be developed as greenbelt. A (2x2) 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 2,500 trees per hectare. Total no. of 2,00,025 saplings will be planted and nurtured in 80.01 hectares in 3 years. Further, PP submitted the revised plantation targets – to plant 31250 saplings during the FY 2022 & 28775 saplings during the FY 2023.

8.2.17 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.

Certified Compliance Report from Integrated Regional Office

8.2.18 The status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide letter no. 101-258/EPE/1003 dated 30.08.2021 in the name of M/s Shyam Metalics & Energy ltd. The action taken report regarding the partial/non-complied condition was submitted to Regional officer MoEF&CC, Bhubaneswar dated 08.09.2021. MoEF&CC (RO), Bhubaneswar evaluated the same and has issued letter dated 12.09.2021. The details of the observations made by IRO in the report dated 30.08.2021 and issued closure report. Present status as furnished by the PP is given as below.

S. No.	Non-compliances details	Observation of RO (abridged)	Condition No.			Re-assessment by RO/Response by PP
			EC date	Specific	General	
1	Maintenance of the garland drains	It is viewed that regular maintenance of the garland drains should be carried out.	14.10.2019	xiii	-	**Submission of PP:** Garland drains are constructed around the dumps to arrest silt and sediment flows. The drains are connected to a settling tank and accumulated water is being used for dust: suppression and plantation. De-silting of garland drains is carried out at regular intervals. **Remarks by IRO-Complied**
2	Housekeeping services	The project authorities need to improve housekeeping within the plant premises and a lot of unused scraps within the premises need to be cleared.	14.10.2019	xvii	-	**Submission of PP:** PP has engaged a road sweeping machine to clean all the concrete roads. A housekeeping team has been formed to look after all the issues in different depts. Regular

S. No.	Non-compliances details	Observation of RO (abridged)	Condition No.			Re-assessment by RO/Response by PP
			EC date	Specific	General	
						cleaning works of all the areas inside the plant is being carried out by housekeeping team. Now the housekeeping has been comparatively improved. PP has engaged two tractors to collect and shift all the unused scraps to SMS unit to reuse in induction furnaces. Mobile water sprinklers are provided for periodic water sprinkling on haul roads, loading and unloading points, etc. Regular water sprinkling is being carried out by four dedicated mobile water tankers of 20 KL each at fugitive dust emission sources to control dust emissions. **Remarks by IRO-Complied**
3	Solid waste	The project authority need to submit detail information on various solid wastes generated, disposed of recycled and reused by the plant	14.10.2019	xviii	-	**Submission of PP:** The project authorities have submitted information on generation and utilization of solid waste. **Remarks by IRO-Complied**
4	Plantation	The project authorities may undertake extensive plantations within and outside the industrial premises along the road for checking and disbursement of dust and fugitive emission in consultation with the concerned DFO.	14.10.2019	xx	-	**Submission of PP:** Till 2020-21 PP has planted 210657 numbers of saplings. PP has planned to plant around 125000-150000 numbers of saplings in the coming 2-3 years. Phase wise plantation is being carried out within and outside the industrial premises along

S. No.	Non-compliances details	Observation of RO (abridged)	Condition No.			Re-assessment by RO/Response by PP
			EC date	Specific	General	
						the road for checking and disbursement of dust and fugitive emission. The density of plantation is maintained at around 2500 plants per ha. **Remarks by IRO- Complied**
5	Flora and Fauna	Details on the action taken with respect to conservation of flora and fauna may be intimated to this Regional Office	14.10.2019	xxi	-	**Submission of PP:** Thick plantation using local flora species is being carried out on safety zone, along transport toads and on inactive dumps. Fencing of the plant boundary area is being carried out to avoid inadvertent entry of persons/animals. **Remarks by IRO- The condition may be treated as Complied.**
6	CREP	The detailed information on recommendation made on Corporate Responsibility for Environmental Protection (CREP) for steel sector should be submitted along with the budgetary provision to this office.	14.10.2019	xxiv	-	**Submission of PP:** An amount of Rs. 11.7 Cr. earmarked for CREP shall be implemented within four years. Detailed year wise action plan for implementation of CREP has been submitted and will be implemented within 3 years from the date of project execution. **Remarks by IRO- Complied**
7	CSR	The progress made with regard to establishment of ITI may please be intimated to this office	14.10.2019	xxv	-	**Submission of PP:** Under CSR activities the things will be carried on as and when administrations intimate us about the acquisition of land for ITI. **Remarks by IRO-The condition may be**

S. No.	Non-compliances details	Observation of RO (abridged)	Condition No.			Re-assessment by RO/Response by PP
			EC date	Specific	General	
						treated as "Assured to comply".
8	Socio-economic	The detailed information on the socio-economic development activities carried out along with the budgetary provisions should be submitted to this office	14.10.2019	x	-	**Submission of PP:** The detailed information on CSR activities along with budgetary allocation has been Submitted. **Remarks by IRO- Complied**

8.2.19 The project proponent had initially applied for EC vide proposal no. IA/OR/IND/187952/2020 dated 19/02/2022 and the proposal was considered in 2nd meeting of the EAC for Industry-I sector held on 22nd - 23rd March, 2022 wherein the Committee returned the proposal in its present form as EAC noted that as per the Form 1&2 application submitted to the Ministry, project proponent had not disclosed the involvement of forest land in the proposed expansion project. Further, EAC recommended that project proponent shall first seek amendment in ToR dated 14/01/2021w.r.t. involvement of forest land in the proposed expansion project.

8.2.20 Accordingly, M/s. Shyam Metalics and Energy Limited applied vide proposal no. IA/OR/IND/264265/2022 dated 29/03/2022 for amendment in Terms of Reference dated 14/01/2021 w.r.t. involvement of forest land in the proposed expansion project and the proposal was considered during 3rd meeting of the EAC for Industry-I sector held on 11 - 12th April, 2022. The EAC noted the following involvement of forest land in the proposed expansion project:

<table>
<tr><th>S No</th><th>Particular</th><th>Description as per Approved ToR</th><th>Description after Amendment</th></tr>
<tr><td>1</td><td>Project area</td><td>Total: 347.058 ha
Forest land: Nil
Non-forest land: 347.058 ha</td><td>Total Area: 347.058 ha
<table>
<tr><th>Particulars</th><th>Area</th><th>Involvement of Forest Land</th><th>Status</th></tr>
<tr><td>Existing</td><td>166.269 ha</td><td>38.393 ha.
Forest clearance has been obtained vide letter no. 5-ORC-064/2008- BHU dated 27/01/2010.</td><td>Acquired</td></tr>
<tr><td>Proposed</td><td>180.789 ha</td><td>8.361 ha.
Stage-I Forest Clearance has been obtained vide letter No. 82/19769/F&E dated 9/01/2020. Stage-II</td><td>Land is allotted by IPICOL, acquisition under process</td></tr>
</table></td></tr>
</table>

S No	Particular	Description as per Approved ToR	Description after Amendment			
					Forest Clearance is in Process.	
			Total Project Area	**347.058 ha**	**46.754 ha**	**-**

According to amendment application, out of total project area of 347.058 ha proposed land of 180.789 ha involves forest land of 8.361 ha for which PP already obtained stage -1 forest clearance on 09/01/2020. After deliberations, the Committee recommended for amendments in ToR dated 14/01/2021and the ToR amendment letter was issued by MoEF&CC on 26.05.2022.

8.2.21 The project proponent again applied for EC vide proposal no. IA/OR/IND/269835/2020 dated 11.05.2022 after obtaining requisite amendment in ToR and the proposal was considered in the 6th meeting of the EAC held on 30-31st May, 2022 wherein the Committee **deferred** the proposal and sought requisite information. The deliberations and recommendations of the EAC are as follows:

Deliberations by the Committee (EAC during 30-31st May, 2022)

8.2.22 The Committee noted the following:

1. Instant proposal is for expansion of existing Integrated steel plant to final capacity of Sponge Iron - 2,054,000 TPA, Billets (Mild & Alloy Steel)- 23,73,566 TPA, Rolled Products - 15,60,000 TPA, Captive Power- 308 MW, Pellets - 30,00,000 TPA, Producer Gas Plant-96,450 Nm^3/Hr, Sinter Plant- 5,90,625 TPA, Blast Furnace- 3,93,750 TPA.
2. Out of total project area of 347.058 ha, proposed land of 180.789 ha involves forest land of 8.361 ha for which PP already obtained Stage -1 forest clearance on 09/01/2020.
3. Manmade pits exist in the proposed site for expansion along-with Hirakud Reservoir and rivers and nallahs exists within the study area from the project site.
4. There is 1 no. of Schedule - I species reported in study area, namely Python (Pythan molurus). Wildlife Conservation Plan for the Schedule - I species found in the study area has been prepared with a budget allocation of Rs. 70.586 Lakhs and authenticated by PCCF, Raipur. vide Letter No. 7752/7WL-FD&WLC-147/2020 Dated. 29th Sept, 2020.
5. The specific conditions (xxv) in EC dated 10/12/2008 is as follows "*As committed, Rs. 2.00 Crores shall be earmarked for setting up of Industrial Training Institute (ITI) in consultation with the State Govt. and progress shall be reported to the Ministry's Regional Office at Bhubaneswar."* The PP informed EAC that they are waiting for the allotment of government land for this purpose.

Recommendations of the Committee (EAC during 30-31st May, 2022)

8.2.23 In view of the foregoing and after detailed deliberations, the Committee **deferred** the proposal and sought following requisite information for further consideration of the proposal:

i. The PP will submit compliance status of directions issued by SPCB in the past in view of public complaints, especially in respect of action taken to keep the internal roads and the road in front of plant clean from dust to prevent air pollution due dust re-suspended by trucks movement.

ii. Revised Action Plan on the issues raised during the Public Hearing needs to be submitted with timeline and budget.

iii. Hirakud water reservoir is at 0.67 km from the Unit. Mitigation measures w.r.t. water bodies which is very near to the Unit needs to be submitted.

iv. This is an existing Unit and therefore it is necessary to ensure whether all air pollutants-PM2.5, PM10, SO2, NOx, CO emissions in the occupational environment of different process plants, within the permissible exposure limits of as per Factories Act? If not it is requested to kindly do air monitoring-industrial hygiene survey within occupational environments in order to ensure good environment within the industry, so that workers health is ensured. In this regard details needs to be submitted.

v. Particulate matter is in higher side. PP shall submit the detailed mitigation measures for controlling the same.

vi. The specific condition (xxv) in EC dated 10/12/2008 is as follows "As committed, Rs. 2.00 Crores shall be earmarked for setting up of Industrial Training Institute (ITI) in consultation with the State Govt. and progress shall be reported to the Ministry's Regional Office at Bhubaneswar." The PP informed EAC that they are waiting for the allotment of government land for this purpose. The committee opined that a factual report from District Administration should be asked on this issue by the Ministry. After receipt of the information from the District Administration, the proposal may be placed before the EAC for further consideration.

8.1.1 In view of above, the project proponent has submitted the ADS reply on PARIVESH on 11.06.2022 as follows:

S. No	ADS Point	Reply/Response of PP
1	The PP will submit compliance status of directions issued by SPCB in the past in view	➢ In response to the public Complain, a direction was issued to M/s. Shyam Metalics & Energy Limited on 26.04.2021 vide letter No.6612-IND-I-CON-5335. A joint inspection was conducted by the officials of CPCB zonal office Kolkata & State Pollution control Board, Odisha. Direction was issued to the company to shut down DRI Kiln-VII to control PM emission till rectification of ESP is done & to meet the prescribed standard & take appropriate corrective action to remove other lapses. ➢ In response to the above direction, a compliance report was submitted by PP on dated 27.05.2021

<table>
<tr><th>S. No</th><th>ADS Point</th><th>Reply/Response of PP</th></tr>
<tr><td></td><td>of public complaints, especially in respect of action taken to keep the internal roads and the road in front of plant clean from dust to prevent air pollution due dust re-suspended by trucks movement.</td><td>wherein they have mentioned that they have complied all the non-compliances observed during the joint inspection by officials of CPCB & OSPCB.
➢ After getting the compliance report plant was inspected on 22.06.2022 and permission of operation of Kiln-VII has been granted. The above said permission / lifting of direction has been made vide letter No.8878-IND-I-CON dated 05.07.2022 for lifting of the direction issued by letter No.6612-IMD-I-CON-5335 dated 26.04.2021.
Action taken to keep the internal roads of plant clean from dust to prevent air pollution due dust re-suspended by trucks movement.
The following actions has been taken by the company to prevent air pollution due to movement of trucks & keep the internal roads free from dust.
<table>
<tr><th>Existing Facilities to keep the internal roads & the road in front of plant clean from dust</th><th>Proposed Facilities to be provided within a period of six months</th></tr>
<tr><td>➢ 148 nos. of water sprinkler system installed in the various parts of internal road of the plant
➢ 2 nos. of fogging system has been installed to control the fugitive emission.
➢ 2 nos. of heavy-duty mechanical sweeping machine have been engaged to sweep the internal roads & road in front of the plant clean.
➢ Wheel washing system has been implemented in the entry gate/exit gate of the plant.
➢ 6 nos. of Sprinkler mounted tankers has been provided to sprinkle the water throughout the day to control fugitive emission.</td><td>➢ Additional 100 nos. of water sprinklers will be provided in various parts of internal roads which has not been covered under the present sprinkling system.
➢ 5 nos. of truck mounted mist cannon fogging system in and around the plant premises will be installed.
➢ Additional 4 nos. of Wheel washing system will be installed in the entry gate/exit gate of the plant.
➢ Two additional Sprinkler mounted tankers will be provided to sprinkle the water throughout the day to control fugitive emission.</td></tr>
</table></td></tr>
<tr><td>2</td><td>Revised Action Plan on the issues raised during the Public Hearing needs to be submitted with timeline and budget.</td><td>Revised Action Plan as per O.M dated 30.09.2020 (Also updated at para 8.2.14 above.)
<table>
<tr><th>Sl. No.</th><th>Issues raised by Public</th><th>Physical Activity & Action Plan as per O.M dated 30.09.2020</th><th>Capital Budget to be spent in 1 yr (Rs. In Lakhs)</th><th>Recurring Budget to be spent in next 2 yrs (Rs. In Lakhs)</th><th>Time Schedule for Implementation</th></tr>
<tr><td>1</td><td>Employment opportunities to local People & Local women</td><td>1.M/s. SMEL is giving recruitment in their Sambalpur Plant to the fresh ITI Pass out students from nearby villages namely, Rengali, Lapanga, Pandloi, Bamaloi, Katarbaga, Khinda, Gurupali, Nishabhanga etc.</td><td>50.00</td><td>50.00</td><td>This process will be completed within 3 yrs…</td></tr>
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S. No	ADS Point	Reply/Response of PP					
				2. 1st preference will be given to the local people (men /women both) on the basis of their merit and skill.			
		2	**Employment under company payroll**	SMEL will adhere protocols and will try to provide opportunities as per Qualification and competency. Since most of the labour intensive works has been out sourced for better operation & management. So the company will ensure for engagement of locals in those jobs.	-	-	This process of giving employment to local people is continuing & within a period of 3 yrs it will be done.
		3	**Supply of safe drinking water in nearby villages.**	SMEL is providing safe drinking water through tanker in nearby villages namely pandloi, Nishanbhanga, Kaliapada, Gurupli, Bausen etc. Further 3 nos. of water filter/ RO sytem has already been installed by SMEL. **Actions Plan:** 2 nos. of Purified Drinking Water facilities shall be installed at strategic public locations **Location:** Jangla, Bhursipalli, Tilaimal, Gurupali, Pudapada, Dharopani, Rengali, Jharmunda, Baunsen	**58.00**		It will be completed within 1 year.
		4	**Construction of Public toilet, tube well & Pond in nearby villages**	4 Common toilets with water facilities will be provided in nearby villages namely Pandloi, Nishanbhanga & Kaliapada Village	**6.00**	**-**	Dec, 2022
		5	**Women Empowerment in surrounding villages by Providing jobs & financial**	Promotion of Income Generation Activities- Kitchen Garden, Leaf plate, Pickle making, NTFP etc. (100 interested women beneficiaries within 10 SHG members of nearby GPs shall be trained)	**30.00**	**30.00**	This process is continuing….

S. No	ADS Point	Reply/Response of PP					
			support to SHG groups.				
		6	**Integrated development of Education & public Health facility of locality & organizing local Health Camps**	**<u>Education</u>** i.Tie up with local ITI college from 2009 & providing all financial support for development of education. Budget=Rs. 25.00 Lakh Avg. per year (**Letter from ITI college is attached as Annexure**) **<u>Health</u>** ii. Two Health Camps per year. Location-Pandloi, Nishanbhanga, Bamaloi, Gurupali Budget=Rs. 55.00 lakh 3.Purchase of Ambulance for the benefit of the local villages.(Rs.20.00 Lakh)	**80.00**	**20.00**	This process is continuing….
		7	**Providing Computers, Table, Chair to village School & financial assistance to private teachers.**	Company is supplying Computers & other accessories to 6 nos. of schools. Namely: (1)Lahamani U.G High School, Jangala (2)Akshara English School, Rengali (3)Govt. Polytechnic Sambalpur, Rengali (4) Govt. Hospital, Rengali- (5)Jambahal Primary School, Jangala (6)Golamal High School, Ludhapali	**100.00**	**100.00**	This Process will continue..
		8	**1.Repair & Construction of Approach road to plant & village roads** **2. Peripherial Development**	1.Maintainance of PCC road Location-Meherpada, Ganesh nagar, Pandloi 2.Contruction of PCC from Nishanbhanga to Jharmunda 3.Providing mechanical sweeping machine to keep the road clean from dust.	**280.00**	**100.00**	June, 2023
		9	**Installation of Street light on**	Installation of 1,000 Solar street light at 10 m interval in villages namely Pandloi,	**50.00**		Dec, 2022

S. No	ADS Point	Reply/Response of PP					
			approaching road from plant to villages	Nishanbhanga, Jharmunda(@5,000 rupees each)			
		10	**Pollution control measures for reduction of the Pollution level.**	1.Raw material is being transported through properly covered trucks from the plant site. 2. 5 nos. of truck mounted mist cannon fogging system in and around the plant premises will be installed. 3. Engaging automatic heavy duty road sweeper in all roads to remove the dust before the dust resuspended by truck movement. 4.Water sprinkling is done at regular intervals on the internal & external roads used for material transportation. 5.Additionally wheel wash system will be installed at the Main entry/Exit gate for control fugitive emission. 6. 5 nos. of Water tankers of 10KLD capacity each have been engaged to sprinkle water on nearby village roads twice a day.	**239.00**		Dec, 2022
		11	**Encourage Local Contractors by giving contract works in Priority basis.**	SMEL is giving 1st preference to the local contactors having relevant skills and work experience. Whenever the company authority requires the help of contractors it will provide to them.	-	-	This Process will continue.
		12	**Help to needy people**	1.Promotion of Income Generation Activities-Mushroom Cultivation, NTFP etc. 2. SMEL is helping to needy people & engaged in different developmental works in its nearby villages through its CSR activities.	**80.00**	**27.00**	This Process will continue.
		13	**Adoption of Village**	**Name of Village: Bausen Physical Activities:**	**60.00**	**53.00**	This Process will continue…

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<tr><td></td><td></td><td>Different developmental program will be carried out such as health, education & road & infrastructure development.

<u>Budget Allocated</u>
(i)For Health=Rs. 40.00 Lakh
(ii)For Education=Rs.38.00Lakh
(iii) Road & Infrastructure Development=Rs.35.00 Lakh</td><td></td><td></td><td></td></tr>
<tr><td colspan="3">Total Budget</td><td colspan="3">1213.00</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>Hirakud water reservoir is at 0.67 km from the Unit. Mitigation measures w.r.t. water bodies which is very near to the Unit needs to be submitted.</td><td>
➢ The water level in Hirakud reservoir is control by respective department of state Govt. during rainy season or flood. With improvement in , meterological prediction, the water resource department never allows the water level to reach the highest flood level i.e 630 ft~192 meter. They opened the gate (~110 gate) depending on the inflow of water from the upstream.
➢ Regarding Matwali Nala which is flowing on the west side of the Plant Boundary (nearest point is 150 mtr away) is a seasonal nalla. The land area between plant & nalla belongs to water resource department. Company will seek permission from the concerned dept. to carry out plantation on the land & other developmental work.
<u>Mitigation measures w.r.t. water bodies</u>
➢ No water is drained to Matwali Nala as the company is ensuring zero liquid discharge norms.
➢ The company will construct all along the boundary wall facing towards Matwali Nala & the company will maintain Zero Liquid discharge Policy (ZLD) by which the water from the plant will never be allowed to mix with the water of Matwali Nala. Besides the Boundary wall inside our factory premises have their individual garland drains connected to main drain which feed to 3000 m^3/day waste water treatment plant and treated water is reused in process
➢ A thick green belt of 15 mtr will be provided along with the boundary facing towards Matwali Nala. No plant facility will be installed in that area, some portion of the area will also be kept for beautification purposes, such as Eco- park for which Budgetary allocation of Rs. 6.00 Crore has been made . For other facilities Rs.9.10 Crore will be spent. Total Budget for the above will be around Rs. 15.10 Crore which will be borne by the company.
➢ A brief Feasibility Report has been Prepared for mitigation measures w.r.t water bodies.
</td></tr>
<tr><td>4</td><td>This is an existing Unit and therefore it is necessary to ensure whether all air pollutants-PM2.5, PM10, SO2, NOx, CO emissions in the occupational environment of different process plants, within the permissible exposure limits of</td><td>
➢ As per the provisions of factory Act, 1948, in second schedule of section 41-F, the work place monitoring of air pollutants has been carried out by NABET & NABL accredited consultant on 03.06.2022& 10.06.2022.The results are given below.
<u>03.06.2022</u>
<table>
<tr><th>Location</th><th>Particulate Matter in (µg/m^3)</th><th>SO_2 in (mg/m^3)</th><th>NOx in (mg/m^3)</th><th>Carbon monoxide (CO) in(mg/m^3)</th></tr>
<tr><td>DRI</td><td>808</td><td>0.075</td><td>0.18</td><td>2.45</td></tr>
<tr><td>Induction Furnace</td><td>625</td><td>0.068</td><td>0.15</td><td>2.86</td></tr>
<tr><td>Pellet Plant Area</td><td>719</td><td>0.082</td><td>0.19</td><td>2.67</td></tr>
<tr><td>Ferro Alloys Plant Area</td><td>736</td><td>0.064</td><td>0.16</td><td>2.73</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S. No</th><th>ADS Point</th><th>Reply/Response of PP</th></tr>
<tr><td></td><td>as per Factories Act? If not it is requested to kindly do air monitoring- industrial hygiene survey within occupational environments in order to ensure good environment within the industry, so that workers health is ensured. In this regard details needs to be submitted.</td><td>
<table>
<tr><td>As Per Factory Act</td><td>1200</td><td>5.6</td><td>6.0</td><td>61.7</td></tr>
<tr><td>Protocol</td><td>IS: 5182 (Part 4):1999</td><td>IS-5182 (Part-2) 2001, West & Gaeke</td><td>IS-5182 (Part-6) 2006, Jacob & Hieocher</td><td>IS 5182 (Part-10):1888</td></tr>
</table>
<u>10.06.2022</u>
<table>
<tr><td>Location</td><td>Particulate Matter in (µg/m^3)</td><td>SO_2 in (mg/m^3)</td><td>NOx in (mg/m^3)</td><td>Carbon monoxide (CO) in(mg/m^3)</td></tr>
<tr><td>DRI</td><td>789</td><td>0.072</td><td>0.19</td><td>2.63</td></tr>
<tr><td>Induction Furnace</td><td>698</td><td>0.064</td><td>0.16</td><td>2.91</td></tr>
<tr><td>Pellet Plant Area</td><td>745</td><td>0.086</td><td>0.20</td><td>2.72</td></tr>
<tr><td>Ferro Alloys Plant Area</td><td>738</td><td>0.071</td><td>0.13</td><td>2.68</td></tr>
<tr><td>As Per Factory Act</td><td>1200</td><td>5.6</td><td>6.0</td><td>61.7</td></tr>
<tr><td>Protocol</td><td>IS: 5182 (Part 4):1999</td><td>IS-5182 (Part-2) 2001, West & Gaeke</td><td>IS-5182 (Part-6) 2006, Jacob & Hieocher</td><td>IS 5182 (Part-10):1888</td></tr>
</table>
All parameters in the work places was within the limits for 8 hours time weighed average concentration. The workers has been provided with all personal protective equipment and strict adherence of safety rules is observed.
</td></tr>
<tr><td>5</td><td>Particulate matter is in higher side. PP shall submit the detailed mitigation measures for controlling the same.</td><td>
There are six number of major industries in the vicinity. The higher level of Particulate matter is contributed by those industries as well as the heavy vehicles plying in the nearby SH– 10 Sambalpur to Rourkela. Therefore, Particulate matter is in higher side.
Mitigation measures for controlling the high concentration of particulate matter (PM) in Ambient air.
A. Various APCDs will be deployed to keep the emissions much below the prescribed standards-
<table>
<tr><td>S. No.</td><td>Plant</td><td>Air Pollution Control Devises</td></tr>
<tr><td>1</td><td>IF</td><td>Bag filter & single Stack</td></tr>
<tr><td>2</td><td>BF</td><td>Dust Catcher, Ventury Scrubber, emergency venting flare stack with water seal</td></tr>
<tr><td>3</td><td>DRI</td><td>DSC, ABC, ESP, Lime Scrubber & High Stack</td></tr>
<tr><td>4</td><td>Sinter</td><td>MEROS TECHNOLOGY</td></tr>
<tr><td>5</td><td>CPP</td><td>WHRB, ESP & LIME Scrubber</td></tr>
<tr><td>6</td><td>Pellet plant</td><td>ESP & Lime Scrubber</td></tr>
</table>
In addition to above installation Regular Monitoring of the efficiency of the above APCDs will be carried out & preventive maintenance will be done.

B. To reduce the high concentration of PM in Ambient air, the following measures will be taken.
1. 5 nos. of truck mounted mist cannons will be procured for inside as well as outside boundary. 2. Engaging automatic heavy-duty road sweeper in all roads to remove the dust before the dust resuspended by truck movement.
3. Fixing of sprinkler system along the roads with automation to avoid generation of dust.
4. Installing adequate nos. of automatic wheel washing systems in the entry as well as the exit of the vehicles.
</td></tr>
</table>

S. No	ADS Point	Reply/Response of PP
6	The specific condition (xxv) in EC dated 10/12/2008 is as follows "As committed, Rs. 2.00 Crores shall be earmarked for setting up of Industrial Training Institute (ITI) in consultation with the State Govt. and progress shall be reported to the Ministry's Regional Office at Bhubaneswar." The PP informed EAC that they are waiting for the allotment of government land for this purpose. The committee opined that a factual report from District Administration should be asked on this issue by the Ministry. After receipt of the information from the District Administration, the proposal may be placed before the EAC for further consideration.	After receipt of the minutes of 6th EAC meeting, PP approached to the district magistrate & collector, Sambalpur vide letter dated 02.06.2022 showing earlier letters given to the collector & also to request him to provide suitable land for construction of ITI or to give necessary permission to adopt any ITI situated in periphery. In response to above said letter, Honourable District Magistrate & Collector, Sambalpur vide his letter No.619/SPL/LA dated 10.06.2022 intimated PP the following. *"As per the specific condition mentioned in the EC you are directed to select a suitable patch of Govt. land in consultation with the Tehsildar, Rengali for establishment of ITI in your periphery area. In this connection necessary permission may be accorded for the same. Further, you are also directed to consult with the director, Technical Education, Odisha for adoption of an ITI situated in your periphery area at your own cost. In this regard action taken report may kindly be acknowledged to the undersigned."* Accordingly, PP submitted a letter to Tehsildar, Rengali & to Director, Technical Education on Dt. 13.06.2022. Tehsildar in reply has directed RI to search a suitable patch of Govt. Land vide memo No. 2908, Dt. 21.06.2022.

8.2.24 Based on the ADS reply by PP, the proposal was re-considered in the 8th EAC meeting held on 23-24th June, 2022. The deliberations and recommendations of the EAC are as follows:

Written representations:

8.2.25 During the meeting, based on the deliberations made by the EAC, the project proponent vide letter dated 23.06.2022 submitted the following information:

1. Total generation of PM per annum and the percentage captured facility wise.
2. SOP for arresting the emissions if they rapidly approach to the critical limits.
3. Action plan for disposal of e-waste
4. Letter to Ministry dated 23.06.2022 for necessary rectification and consideration in s.no. 9.1 of Form 2 with respect to CTO.
5. Safety & Health policy of the company.

Deliberations by the Committee

8.2.26 The Committee noted the following:

1. Instant proposal is for expansion of existing Integrated steel plant to final capacity of Sponge Iron - 2,054,000 TPA, Billets (Mild & Alloy Steel)- 23,73,566 TPA, Rolled Products - 15,60,000 TPA, Captive Power- 308 MW, Pellets - 30,00,000 TPA, Producer Gas Plant-96,450 Nm^3/Hr, Sinter Plant- 5,90,625 TPA, Blast Furnace- 3,93,750 TPA.
2. Out of total project area of 347.058 ha, proposed land of 180.789 ha involves forest land of 8.361 ha for which PP already obtained Stage -1 forest clearance (FC) on 09/01/2020.
3. Manmade pits exist in the proposed site for expansion along-with Hirakud Reservoir and Rivers and nallahs exists within the study area from the project site.
4. There is 1 no. of Schedule - I species reported in study area, namely Python (*Pythan molurus*). Wildlife Conservation Plan for the Schedule - I species found in the study area has been prepared with a budget allocation of Rs. 70.586 Lakhs and authenticated by PCCF, Raipur vide Letter no. 7752/7WL-FD&WLC-147/2020 Dated. 29th Sept, 2020.
5. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.
6. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.
7. The Committee noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the

storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

8. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.

9. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as committed by the PP the green belt development shall be completed within one year.

10. The Committee also deliberated on the public hearing issues along with revised action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.

11. The Committee deliberated upon the certified compliance report of IRO MoEFCC as well as action taken report submitted by PP with respect to the observations reported by IRO and found it satisfactory.

12. The EAC deliberated on the information furnished by the project proponent on the points raised by the Committee in the previous meeting and found it satisfactory.

13. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

14. The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

15. The environmental clearance recommended to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. 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. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

Recommendations of the Committee

8.2.27 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 following 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. The project proponent shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

ii. The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

iii. The activities and the action plan proposed by the project proponent to address the issues raised during public hearing and socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

iv. Manmade pits exist in the proposed site for expansion along-with Hirakud Reservoir and rivers and nallahs exists within the study area from the project site. The water bodies shall not be disturbed. Landscaping shall be done on both embankments, with green belt covering 10 m land on both sides of the nallah. This shall be in addition to the 33% green belt development.

v. Tailings from Iron Ore washing plant shall be dewatered in filter press and no slime /tailing pond shall be permitted.

vi. Solid waste utilization

- PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making.
- PP shall recycle/reuse 100 % solid waste generated in the plant.
- Used refractories shall be recycled as far as possible.

vii. Sinter Plant shall be equipped with Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant.

viii. Tar shall be recovered from producer gas and shall be sold to registered processors and phenolic water shall be incinerated in After Burn Chamber (ABC) of DRI kilns.

ix. Blast Furnaces shall be equipped with Top Recovery Turbine (capacity more than 450m^3), dry gas cleaning plant, stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.

x. Secondary fume extraction system shall be installed on converters of Steel Melting Shop.

xi. Basic Oxygen Furnace (BOF) gas shall be cleaned dry.

xii. Electric Arc Furnace shall be closed type with 4th hole extraction system.

xiii. 85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil or Mixed BF/CO gas/Producer gas.

xiv. Dust emission from Steel Plant stacks shall be up to 30 mg/Nm^3.

xv. 22,729 KLD of water requirement for the total project shall be met from Hirakud Reservoir after necessary permission. No GW abstraction is permitted.

xvi. Three tier Green Belt shall be developed in a time frame of one year with native species all along the periphery of the project site of adequate width and tree density shall not

be less than 2500 per ha. In addition, PP shall provide 50-meter-wide green belt towards Reserve Forest located at 0.50 km from project site. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.

xvii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

xviii. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.

xix. Rain water harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.

xx. The proposed project shall be designed as "Zero Liquid Discharge" Plant. No waste water will be discharged outside the plant boundary.

xxi. Hirakud water reservoir is at 0.67 km from the Unit. Mitigation measures as committed w.r.t. safeguarding the water bodies shall be implemented.

xxii. As committed earlier, Rs. 2.00 Crores shall be earmarked for setting up of Industrial Training Institute (ITI) in consultation with the State Government and progress shall be reported to the Ministry's Integrated Regional Office.

xxiii. PP shall ensure the education benefits demanded in PH reach to the beneficiaries directly (in terms of no. of youth sponsored for post-school education, from the local villages) and donations to the ITI should not be counted against this.

xxiv. Air cooled condensers shall be used in the power plant.

xxv. A proper action plan must be implemented to dispose of the electronic waste generated

xxvi. During operational phase-at coke oven areas the PP shall monitor the benzene, toluene, xylene (BTX) and Polycyclic Aromatic Hydrocarbons (PAHs) in the occupational environments and the concentrations found to be compared with permissible limits for these chemicals as per Indian Factories Act, 1948.

xxvii. The coal dust to be measured at coal handling areas, ball mills, furnace charging areas through personal and area monitoring and to be compared and it should be within 2 mg/m3, respirable dust fraction containing less than 5% quartz as per Indian Factories Act, 1948.

xxviii. The recommendations of the approved Site-Specific Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned 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 at process stacks to monitor stack emission as well as 04 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

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

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

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

vii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

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

ix. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).

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

xi. Monitor CO, HC and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.

xii. Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.

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

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

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB

and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

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

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

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

ii. Restrict Gas flaring to < 1%.

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

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

v. Ensure installation of regenerative/recuperative type burners on all reheating furnaces.

VI. Waste management

i. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.

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

VII. Green Belt

i. Green belt shall be developed in an area equal to 33% of the plant area with native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

ii. 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.

iii. Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.

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

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

X. Miscellaneous

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

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

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

iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

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

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

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

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

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

x. The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.

xi. 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.

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

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

xiv. 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.

xv. 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.

Amendment/ Extension/ Modification of Environmental Clearance Proposal

Agenda No. 8.3

8.3 Proposed New Clinkerization Plant (2.7 MTPA) with Waste Heat Recovery Boiler (10 MW) by M/s ACC Ltd., Located at Amehta, Tehsil Vijayraghavgarh, District Katni, Madhya Pradesh – Extension of Validity of Environmental Clearance.

[Proposal No. IA/MP/IND/271530/2022, File No. J-11011/175/2008-IA.II (I)]
[Name of Consultant: J.M. EnviroNet Pvt. Ltd.; Valid upto: 07.02.2023]

8.3.1 M/s ACC Limited has made an online application vide proposal no IA/MP/IND/271530/2022 dated 06.06.2022 along with Form-6 and sought for extension of validity of Environment Clearance (EC) accorded by Ministry vide letter no. J-11011/175/2008-IA.II(I) dated 24.11.2011 and subsequent EC validity extension dated 06.11.2019.

Details submitted by Project proponent

8.3.2 M/s. ACC Limited obtained Environmental Clearance for "Proposed New Clinkerization plant (2.7 MTPA) at Amehta, Expansion of Limestone Mines (from 5.445 MTPA to 9.495 MTPA) and Captive Power Plant (from 50 MW to 85 MW), Waste Heat Recovery Boiler (10 MW) and new centralized coal processing plant with coal washery (0.405 MTPA) at Kymore Cement Works, Tehsil: Vijayraghavgarh, District Katni, Madhya Pradesh" from MoEFCC, New Delhi vide letter no. J-11011/175/2008-IA.II(I) dated 24.11.2011 (valid upto 23.11.218). MoEF&CC granted EC validity extension vide letter dated 06.11.2019 (valid upto 23.11.2021) for setting up of clinker plant (2.7 MTPA), captive power plant (from 50 MW to 85 MW) and Waste heat recovery boiler (10 MW).

8.3.3 Consent to Establish for Clinker Plant (2.7 MTPA) and WHRS (15 MW, with a remark - 10 to 15 MW as per feasibility) obtained from MPPCB *vide* their letter no. 99558 dated 20.12.2019 (valid upto 31.10.2024). After obtaining the EC validity extension & CTE, company commenced the project activities during Q4 2019.

8.3.4 **The implementation status of the existing EC is as follows:**
As on date, around 75% of the project work has been completed and PP expect some slippages in the target for completion of the project by November, 2022. ACC Limited expect around 90% of the project work/ jobs completion by 23rd November, 2022 putting all the efforts to complete and commission the project by May, 2023.

Completion/Implementation Schedule:

Facility wise schedule as on 31st May, 2022			
S. No.	**Facility Description**	**Current Status**	**Expected completion Schedule**

1	Raw Meal Section	~80% activity completed	March 2023
2	Pyro Section comprising of Kiln, Preheater and Clinker Silo along with WHRS	~70% activity completed	April 2023
3	Coal Mill section	~65% activity completed	April 2023
4	Stacker & re-claimer	~95% activity completed	December 2022
5	Wagon Tippler	~60% activity completed	January 2023
6	Railway Siding	~80% activity completed	January 2023
7	Overall completion	~75% activity completed	May 2023
8	First Clinker	---	May 2023

8.3.5 The instant proposal is for extension of validity of Environmental Clearance issued letter no. J-11011/175/2008-IA.II(I) dated 24.11.2011 and subsequent validity extension dated 06.11.2019 till 23rd November, 2023.

8.3.6 **Reasons for delay:** PP reported that the extreme circumstances caused due to COVID 19, impacted the project progress and impacted the targeted completion schedule. Brief details are as given below:

- Stoppage of Project Activities due to lock down
- Mass migration of Labour due to the extreme COVID 19 circumstances
- Delay in equipment supplies required for the Project
- Cost escalation
- Re-mobilization of the resources to plant
- Slow progress in work

Written representations:

8.3.7 During the meeting, based on the deliberations made by the EAC, the project proponent vide email dated 23.06.2022 submitted the following information:

1. Details related to CO_2 roadmap of ACC Limited.
2. Plantation commitment related to Ametha Project (revised plantation targets - 31250 saplings during the FY 2022 & 28775 saplings during the FY 2023).

Deliberations by the Committee

8.3.8 The Committee noted the following:

i. Environmental Clearance for Proposed New Clinkerization plant (2.7 MTPA) at Amehta, Expansion of Limestone Mines (from 5.445 MTPA to 9.495 MTPA) and Captive Power Plant (from 50 MW to 85 MW), Waste Heat Recovery Boiler (10 MW) and new centralized coal processing plant with coal washery (0.405 MTPA) was granted by the MoEF&CC, vide letter no. J-11011/175/2008-IA.II(I) dated 24.11.2011 (valid upto 23.11.2018).

ii. The EC validity extension was granted vide letter dated 06.11.2019 (valid upto 23.11.2021 i.e. 24.11.2018 to 23.11.2021) for setting up of clinker plant (2.7 MTPA), captive power plant (from 50 mW to 85 MW) and Waste heat recovery boiler (10 MW).
iii. PP in the instant proposal has requested for further extension of validity of Environmental Clearance letter no. J-11011/175/2008-IA.II(I) dated 24.11.2011 and subsequent validity extension dated 06.11.2019 till 23rd November, 2023.
iv. The EAC noted that as per the declaration of PP, as on date, around 75% of the project work has been completed and PP expect some slippages in the target for completion of the project by November, 2022. ACC Limited expect around 90% of the project work/ jobs completion by 23rd November, 2022 putting all the efforts to complete and commission the project by May, 2023.
v. PP has also submitted the schedule of implementation w.r.t. commissioning of project by May, 2023.
vi. Validity of EC dated 24.11.2011 and subsequent EC validity extension dated 06.11.2019 is for a period up to 23.11.2022 as per the provisions of Ministry Notification no. S.O. 221(E) dated 18/01/2021 and Ministry's Gazette Notification vide S.O.1807 (E) dated 12th April 2022.

Recommendations of the Committee

8.3.9 In view of the foregoing and after deliberations, the Committee **recommended** to extend the validity of EC issued vide No. J-11011/175/2008-IA.II(I) dated 24.11.2011 and subsequent EC validity extension dated 06.11.2019 by additional one year i.e. upto 23.11.2023 as per Ministry's Gazette Notification vide S.O.1807 (E) dated 12th April 2022 subject to stipulation of following specific conditions in addition to environmental safeguards prescribed in the EC letter no. J-11011/175/2008-IA.II(I) dated 24.11.2011 and subsequent EC validity extension dated 06.11.2019.

i. Extension validity is limited to setting up of clinker plant (2.7 MTPA), captive power plant (from 50 MW to 85 MW) and waste heat recovery boiler (10 MW) only.
ii. Permission from the Competent Authority concerned for conversion of land usage to industrial activity should be obtained for setting up of new clinker plant in the present mine lease area.
iii. Project proponent shall submit a study report within six months to IRO MoEF&CC on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.
iv. The whole plantation/green belt development should be done by the year up to July-August, 2022 with subsequent replacement of trees, which are not survived.
v. PP also committed to do plantation of about 50,000 additional trees/plants outside the project site.

vi. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

vii. The total PM generated and the percentage of this captured by the pollution control equipment per annum must be reported regularly.

viii. The PP shall obtain fresh environmental clearance in case of change in scope of the project, if any.

ix. All the compliances pertaining to Mining and coal washery shall be followed.

x. All other terms and conditions stipulated in the environmental clearance accorded vide letter no. J-11011/175/2008-IA.II(I) dated 24.11.2011 and subsequent EC validity extension dated 06.11.2019 shall remain unchanged.

Agenda No. 8.4

8.4 Expansion of Aluminium Smelter Plant from 0.26 MTPA to 0.72 MTPA and Captive Power Plant from 650 MW to 1650 MW by M/s Aditya Aluminium (A Division of M/s Hindalco Industries Limited) at Village Lapanga, Rengali C.D. Block, Distric Sambalpur in Odisha – Extension of validity of Environmental Clearance.

[Proposal No. IA/OR/IND/271413/2022, File No. J-11011/136/2009-IA.II (I)]

8.4.1 M/s Aditya Aluminium (A Division of M/s Hindalco Industries Limited) has made an online application vide proposal no IA/OR/IND/271413/2022 dated 06.06.2022 along with Form-6 and sought for extension of validity of Environment Clearance (EC) accorded by Ministry vide letter no. J-11011/136/2009-IA-I (I) dated 29.11.2012 and subsequent amendments dated 14.06.2013 & 14.08.2018 and EC validity extension dated 20.07.2020 (valid upto 28.11.2022).

Details submitted by Project proponent

8.4.2 M/s. Aditya Aluminium (A Division of M/s Hindalco Industries Limited) has been granted Environmental Clearance by the Ministry for expansion of Aluminium Smelter Plant from 0.26 MTPA to 0.72 MTPA and Captive Power Plant from 650 MW to 1650 MW at Village Lapanga, Rengali, C.D. Block, District Sambalpur in Orissa vide letter no. J-11011/136/2009- IA-II(I) dated 29/11/2012. Subsequently amendment to the EC was granted vide letter dated 14/06/2013 and 14/08/2018. Further, the project was granted extension of validity of EC on 20.07.2020 for a period valid upto 28.11.2022.

8.4.3 The implementation status of the existing EC is as follows:

S. No.	Product	Phase I (Operational)	Phase II (To be Implemented)
i	Aluminium Smelter	0.36 MTPA	0.36 MTPA
ii	Captive Power Plant	900 MW (6x150 MW)	750 MW (5x150 MW)

8.4.4 At present, the Phase-I facility of 0.36 MTPA Aluminium Smelter and 900 MW Captive Power Plant was commissioned in 2014 & achieved 100% production in 2016 and subsequent enhancement of potline production to the tune of 0.20 MTPA through process optimization upto 0.38 MTPA aluminium smelter and the plant is in full-scale operation. The metal produced from the plant is of high purity and more than 90% is exported to companies like Boeing, Mitsubishi, Hyundai & others.

8.4.5 Some of the common facility for the phase-II like railway siding & raw material handling system, water intake and storage facilities, road and other infrastructure facilities, ash handling, track hopper & disposal system are completed. The balance works for the phase-II facilities are being planned and will be executed in line with the schedule of activities submitted along with the application form. The tentative schedule for the phase-II facilities i.e. of 0.36 MTPA Aluminium Smelter and 5x 150 MW Captive Power Plant will be established within 2 years (i.e. Nov-2024).

8.4.6 The instant proposal is for extension of validity of Environmental Clearance letter no. J-11011/136/2009-IA-I (I) dated 29.11.2012 and subsequent amendments dated 14.06.2013 & 14.08.2018 and EC validity extension dated 20.07.2020 (valid upto 28.11.2022).

8.4.7 **Reasons for delay:** The phase II facility of 0.36 MTPA Aluminium smelter and captive power plant MW (5x150 MW) along with its ancillary facilities could not be implemented within the validity period of 10 years, due to market fluctuations and decline in London Metal Exchange (LME) Prices for Aluminium in last five years and out-break of Covid-19 pandemic in last two years.

Deliberations by the Committee

8.4.8 The Committee noted the following:

i. Environmental Clearance for for expansion of Aluminium Smelter Plant from 0.26 MTPA to 0.72 MTPA and Captive Power Plant from 650 MW to 1650 MW vide letter no. J-11011/136/2009- IA-II(I) dated 29/11/2012. Subsequently, amendment to the EC was granted vide letter dated 14/06/2013 and 14/08/2018. Further, the project was granted extension of validity of EC on 20.07.2020 for a period valid upto 28.11.2022.

ii. PP in the instant proposal has requested for further extension of validity of Environmental Clearance letter no. J-11011/136/2009-IA-I (I) dated 29.11.2012 and subsequent amendments dated 14.06.2013 & 14.08.2018 and EC validity extension 20.07.2020 for a period 28.11.2024.

iii. The EAC noted that the proposed Phase-II project could not be implemented within the validity period of 10 years, due to market fluctuations and decline in London Metal Exchange (LME) Prices for Aluminium in last five years and out-break of Covid-19 pandemic in last two years.

iv. The EAC noted that as per the declaration of PP, some of the common facility for the phase-II like railway siding & raw material handling system, water intake and storage facilities, road and other infrastructure facilities, ash handling, track hopper & disposal system are completed. The balance works for the phase-II facilities are being planned and will be executed in line with the schedule of activities submitted along with the application

form. The tentative schedule for the phase-II facilities i.e. of 0.36 MTPA Aluminium Smelter and 5x 150 MW Captive Power Plant will be established within 2 years (i.e. Nov-2024.

v. PP has also submitted the schedule of implementation w.r.t. commissioning of project by November, 2024.

vi. Validity of EC dated 29.11.2012 and subsequent amendments dated 14.06.2013 & 14.08.2018 and EC validity extension dated 20.07.2020 is for a period up to 28.11.2023 as per the provisions of Ministry Notification no. S.O. 221(E) dated 18/01/2021 and Ministry's Gazette Notification vide S.O.1807 (E) dated 12th April 2022.

Recommendations of the Committee

8.4.9 In view of the foregoing and after deliberations, the Committee **recommended** subject uploading the EDS reply on Portal to extend the validity of EC issued vide Letter No. J-11011/136/2009- IA-II(I) dated 29.11.2012 and subsequent amendments dated 14.06.2013 & 14.08.2018 and EC validity extension dated 20.07.2020 by additional one year i.e. upto 28.11.2024 as per Ministry's Gazette Notification vide S.O.1807 (E) dated 12th April 2022 subject to stipulation of following specific conditions in addition to environmental safeguards prescribed in the EC letter no. J-11011/136/2009- IA-II(I) dated 29.11.2012 and subsequent amendments dated 14.06.2013 & 14.08.2018 and EC validity extension dated 20.07.2020.

i. Greenbelt shall be developed in at least 33% of the project area and gap plantation shall be made in the existing plantation to achieve target of 2500 saplings per ha as per the CPCB/MoEF&CC guidelines.

ii. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

iii. The total PM generated and the percentage of this captured by the pollution control equipment per annum must be reported regularly.

iv. M/s. Aditya Aluminium (A division of M/s Hindalco Industries Limited) shall abide by all orders and judicial pronouncements, made from time to time, passed by any judicial or executive authority (including CBI) so far as they pertain to the present proposal, if any, directly or indirectly.

v. During operational phase, at aluminium smelter plant and other production areas –process plants, PP shall monitor particulate and gaseous fluoride exposures through area and personal air monitoring and also urinary fluoride among workers. The concentration of fluoride content to be compared with permissible exposures limit of 2.5 mg/m^3 for fluorides (as F^-) as per Indian Factories Act, 1948.

vi. During Operational Phase-at CPP, the PP shall measure coal dust, PM10 and PM2.5 dust at coal handling area, ball mill, conveyer belt, furnace charging area and the coal dust concentration has to be measured through area and personal area monitoring and the concentration of coal dust found has to be compared with permissible exposure limit of 2 mg/m3, respirable dust fraction containing less than 5% quartz.

vii. All other terms and conditions stipulated in the environmental clearance accorded vide letter no. J-11011/136/2009- IA-II(I) dated 29/11/2012 and subsequent amendments dated

14.06.2013 & 14.08.2018 and EC validity extension dated 20.07.2020 shall remain unchanged.

Agenda No. 8.5

8.5 Expansion of Sponge Iron Plant production from 3,00,000 TPA to 3,75,000 TPA through process optimization by M/s MSP Steel and Power Ltd, located at Village Jamgaon, District Raigarh, Chhattisgarh - Amendment of Environment Clearance condition regarding.

[Proposal No. IA/CG/IND/271935/2022, File No. J-11011/267/2007/IA-II (I)]

8.5.1 M/s MSP Steel and Power Ltd has made an online application vide proposal no. IA/CG/IND/271935/2022 dated 10.06.2022 along with Form 4 and sought for amendment in Environmental Clearance accorded by the Ministry vide File no. J-11011/267/2007-IA.II(I) dated 26.12.2019 w.r.t. waiver of additional condition no. (ii) at para 17 pertaining to usage of air cooled condenser in power plant.

Details submitted by Project proponent

8.5.2 M/s. MSP Steel and Power Limited was initially granted environmental Clearance by MoEF&CC vide letter No. J-11011/267/2007-IA II (I) dated 02/04/2009 for capacity expansion of Billet production from 95,000 to 695,000 TPA and Captive Power Plant from 16 MW to 52 MW. Subsequently, amendment to the environmental Clearance was issued on 9/9/2010 for change in the capacity of Pellet plant from 0.6 MTPA to 0.9 MTPA and Captive Power Plant from 20 MW to 44 MW (AFBC Boiler). Thereafter, another amendment to the environmental Clearance was issued on 23/08/2012 for change in configuration of Steel Melting Shop within permitted production capacity of 672,172 TPA Billets and inclusion of 4.5 MW biomass based power plant. Thereafter, M/s. MSP Steel and Power Limited obtained EC under para 7(ii) of EIA Notification, 2006 vide letter dated 26.12.2019 for expansion of Sponge Iron Plant production from 3,00,000 TPA to 3,75,000 TPA through process optimization.

8.5.3 The aforesaid EC dated 26.12.2019 was granted, inter-alia, with a specific condition that *"Air cooled condenser in power plant shall be used."*

8.5.4 The instant proposal is for seeking amendment in EC dated 26.12.2019 with respect to waiver of the additional condition no. (ii) at para 17 pertaining to usage of air cooled condenser in power plant as follows:

S. No.	Details as per EC dated 26.12.2019	Proposed Amendment in EC
1.	Para 17	Para 17

S. No.	Details as per EC dated 26.12.2019	Proposed Amendment in EC
	Specific Condition No. (ii) **Air cooled condenser in power plant shall be used.**	Specific Condition No. (ii) **Existing water cooled condenser (WCC) in power plant shall be continued.**

8.5.5 PP reported that there is no change in configuration & capacity of units in granted EC.

8.5.6 **Reason for seeking amendment in EC:** PP has submitted that due to the technical constraint and unfavourable site condition it is difficult to install Air Cooled condenser in power plant. PP has submitted that:

i. MSP's plant in Raigarh is under water sufficiency zone.
ii. Usually Air Cooled Condenser (ACC) in CPP is recommended in a water scarcity zone declared by the Central Ground Water Authority, Gol. Whereas plant location in Raigarh does not fall under Water Scarcity zone.
iii. MSPSPL's operation is based on 2 MCM Surface water from Kur Nala sanctioned by WRD, CG Govt. vide their Water Cooled System. The PP has been sourcing by constructing in-stream storage infrastructure approved by the CG Government.
iv. Existing Turbine and connected cooling system is designed as per Water Cooled Condensation system. Change of cooling system to Air Cooled Condenser (ACC) would involve substantial & cost intensive modification of existing WCC, which has got operation life of more than 10 years further.
v. ACC require more space which is not available at the existing site layout finalised in 2008.
vi. ACC operation consumes more Auxiliary power of about 1.3% the WCC capable of rendering equal output in addition to reduced efficiency of 3% approx for low thermal conductivity. Excess consumption of power generated by greater quantity of coal affects the carbon foot-print and would have adverse bearing on environment.
vii. Operational efficiency drop in ACC will result in lesser output of power than WCC which in turn would impact the operational efficiency of other production facilities like DRI, Pellet, SMS & Rolling Mill etc dependent on captive generation of power.

8.5.7 Further, PP has obtained reports of expert agencies namely M/s Siemens Ltd. and M/s AKB Power Consultant Pvt. Ltd. who have the following views:

Agency	Summary of Report
M/s Siemens Ltd.	• Steam turbines (i.e. STG sets) as an equipment are designed to operate between specified inlet and outlet pressure & temperature regimes. Turbines designed for water cooled condenser operate at defined vacuum parameters. If it is required to operate with Air-cooled condenser then practical achievable vacuum shall deteriorate, for which existing steam turbine is not designed.

Agency	Summary of Report
	• Performance of the STGs depends on the pressure drop (energy drop or enthalpy drop) available across the steam turbine and its optimization to convert the available thermal energy to mechanical energy of rotation. With reduced drop available with Air-cooled condenser, this performance also gets affected which would result in the higher steam consumption or lower generation due to the change in operating parameters. • The burden of downtime and physical adjustments within pre-existing boundary conditions would pose greater challenge. Also this would cause lower performance and poor conversion of heat energy to useful energy and thus would be inferior in terms of energy efficiency as well as economic perspective.
M/s AKB Power Consultant Pvt. Ltd.	i) Following additional space will be required for installing ACC for existing 2 x 12MW and 1 x 18MW TG units: • For each of 2 x 12MW Turbine additional layout space for ACC :: 37M x 16M • For1 x 18MW Turbine additional layout space for ACC :: 40 X 18M With the present space availability same is not feasible since in Plant Water reservoir is located very near to the TG building. Moreover, each ACC has to be installed adjacent to relevant TG location to avoid system pressure and temperature loss due to long ducting resulting in unwanted drop in generation which will not be acceptable. ii) If existing WCCs are replaced by ACCs there will be more aux. Energy consumption resulting in lower net energy availability against existing electrical load requirements of the Steel plant which will culminate to production loss of the plant.

Written Submission by PP

8.5.8 During the meeting, based on the deliberations made by the EAC, the project proponent vide letter dated 24.06.2022 submitted the following information:

1. Existing lay-out and plant facilities already established thereon cannot accommodate a huge bulky Air Cooled Condenser for the STG of CPP (72.5 MW) which requires about 18200 SqM. (4.5 Acres) additional space.
2. Since the adjoining area at North & East boundary of CPP Division is under dense Reserve Forest, there is no possibility for acquiring additional land of 18200 SqM. in alignment with the pre-existing CPP & TG installation area.
3. Information available in public domain at the web-site of Central Ground Water Authority (CGWA), Govt. of India shows that Raigarh area as on date is under "SAFE ZONE" so far the present ground water potentiality is concerned.

4. Plant's nearness to Hirakud Dam Back Water Catchment area (12/13 kms) is an added locational advantage for natural recharge of Ground Water source.
5. Besides, the artificial ground water recharge structures such as Rain Water Harvesting Pits and Rain Water Harvesting Ponds within our factory premise, MSP's involvement in 5 surrounding villages namely Jamgaon, Manuapali, Saraipali, Kukurdha, Kolaibahal having large patches of public wet land / water bodies altogether measuring more or less 110 acres, by desilting & deepening of the same in 7/8 years interval so as to create extra pondage and prevent them from drying up.
6. The existing CPP project of MSP is recommended by EAC based on assured surface water source from nearby Kur Nala by creation of in-stream storage structure by MSP. Production capacity increase of Sponge Iron from 300000 TPA to 375000 TPA (25%) based on process upgradation and change in raw material mix as per EIA Notification, 2006, 7(ii) in the same machinery without any increase in pollution load, as approved in the last EC dated 26.12.2019, does not cause any increase in CPP capacity or change in its operation process.
7. Existing turbine and its cooling system is designed based of Water Condensation system. Switching over to Air Cooled system will render the existing TG redundant which has an operational life of 20 years further.
8. Air Cooled Condenser having low thermal conductivity, its performance degrades under high ambient temperature and in windy condition thereby causing loss of performance efficiency by about 3% whereas Water Cooled Condenser ensures consistent efficiency for high rate of heat transfer, which is demanded operationally.
9. In addition to reduced efficiency of about 3%, Air Cooled Condenser consumes excess auxiliary power than Water Cooled Condenser for rendering equal output.
10. Low operational efficiency by 3% and extra auxiliary power consumption of 1.3% in Air Cooled Condenser together will result in higher requirement of power for about 70 MW (50 MW + 20 MW) per day. For additional generation of power to make up the shortfall quantum of 70 MW power coal consumption will increase by 80-82 MT per day than the EC approved coal quantity. In addition, extra coal consumption will also enhance the carbon foot print proportionately and will contribute for pollution greater than permissible level.
11. Installation of Air Cooled Condenser with new TG at new site & land will otherwise involve an additional project cost of about Rs.70.0 Cr apart from dismantling of the existing installations mechanical & civil etc.

Deliberation by the Committee

8.5.9 The Committee noted the following:

i. M/s. MSP Steel and Power Limited was initially granted environmental Clearance by MoEF&CC vide letter No. J-11011/267/2007-IA II (I) dated 02/04/2009 for capacity expansion of Billet production from 95,000 to 695,000 TPA and Captive Power Plant from 16 MW to 52 MW. Subsequently, amendment to the environmental Clearance was issued on 9/9/2010 for change in the capacity of Pellet plant from 0.6 MTPA to 0.9 MTPA and Captive Power Plant from 20 MW to 44 MW (AFBC Boiler). Thereafter, another amendment to the environmental Clearance was issued on 23/08/2012 for change in configuration of Steel Melting Shop within permitted production capacity of 672,172 TPA

Billets and inclusion of 4.5 MW biomass based power plant. Thereafter, M/s. MSP Steel and Power Limited obtained EC under para 7(ii) of EIA Notification, 2006 vide letter dated 26.12.2019 for expansion of Sponge Iron Plant production from 3,00,000 TPA to 3,75,000 TPA through process optimization.

ii. The instant proposal is for seeking amendment in EC dated 26.12.2019 with respect to waiver of additional condition no. (ii) at para 17 pertaining to usage of air cooled condenser in power plant as detailed in para 8.5.4 above.

iii. The EAC noted that PP has obtained reports of expert agencies namely M/s Siemens Ltd. and M/s AKB Power Consultant Pvt. Ltd. considering the effects of operation with Air-cooled condenser for the existing STGs operating with Water-cooled condenser.

iv. The EAC also noted that MoEF&CC (Monitoring Cell of IA Division) had issued a letter to M/s. MSP Steel and Power Limited on 30th March, 2022 pertaining to non-compliances observed with respect to the afore-said project and directed PP to submit the (i) clarification for non-compliance observed during the site visit of IRO, MoEF&CC, (ii) Action Taken Report (ATR) and (iii) Action plan with respect to the above non-complied conditions. In this regard, M/s. MSP Steel and Power Limited initially vide letter dated 28.04.2022 requested MoEF&CC for extension of time upto 10.05.2022 for submission of compliance report. Thereafter, the project proponent, vide letter dated 10.05.2022, submitted the representation made with regard to the actions being taken so far and time bound action plan to accomplish the unfulfilled part of EC conditions as enumerated in the table below:

NON-COMPLIANCE OBSERVED BY MOEF&CC	**ACTION TAKEN PLAN BY PP VIDE LETTER DATED 10.05.2022**
A (i) EC dated 02.04.2009: **(Specific Condition vi)** Control measures has not been observed for fugitive emissions near coal washery, pellet plant and near rolling mill area. Permanent water sprinkling system has not been installed in high dust areas and housekeeping inside the plant has not been found satisfactory.	As a measures for control of fugitive emissions **rotative water sprinklers are installed in 10-12 mtrs gap permanently since the year 2004-05** along the internal roads connecting all facilities / services, dusty material handling areas within the plan premises. No. of sprinklers have increased with expansion of activity area. Areas not serviceable by sprinkler are facilitated by dedicated mobile Water Tanks equipped with water spraying mechanism for suppression of fugitive dust. **Sprinklers in Coal Washery** area located at one end of North-east boundary were not operational on the day of inspection because of shut-down of Coal Washery. In fact, does not operate over 90% of a year. Sprinklers in washery area are put into operation when the washery is made put into operational. Use of water **sprinkler in Rolling Mill** stock yard area is not operationally feasible as there is a need to keep the TMT bars and other finished steel structural products away from water to avoid oxidation / corrosional effect on them. But, for suppression of dust, along internal road having movement of trucks / material handling machineries in available open areas are done by mobile water spray system. Covered area of hot rolling mill does not require any use of sprinklers.

NON-COMPLIANCE OBSERVED BY MOEF&CC	ACTION TAKEN PLAN BY PP VIDE LETTER DATED 10.05.2022
	It is true that about 49 nos. water **sprinklers in Pellet plant** out of which 30 nos. Sprinklers installed along the internal road of about 300 mtrs were not in operation when IRO/ Raipur was on that spot. Due to some electrical fault the pressure pump connected to those sprinklers was not in operation. However, operation of those sprinklers could be restored within an hour time with the operation of water pump resumed by power connectivity from alternative source. Photographs of the sprinklers with zone wise details & period installed covering all of in zones and movement/ activity area zones are submitted by the project proponent.
A(ii) EC dated 02.04.2009: **(Specific Condition xvi)** Proper utilization/ management of fly ash has not been followed by PP as per Fly Ash Notification, 1999 as amendment in 2003.	Regarding management/ utilization of fly ash and other mixed ash / dust, PP beg to reiterate what have submitted to the State Board (CECB) and in PP's representation to IRO/ Raipur (in para 4) vide letter dated 17.11.2021 and further quantity wise utilization ash for last 10 years reported in PP's letter to the IRO /Raipur dated 30.11.2021 as sought for. Copies of letter dated 17th Nov' & 30th Nov,2021 are submitted. **Road/ Land Development & Brick Making**: However, it is further submitted that fly ash generated in 44 MW (34+10) coal base CPP is fully utilized as per the MoEF&CC norms / guidelines for road construction, development of land covered under project, in the new industrial projects that came up in periphery as well as for brick making done in-house and to the brick units linked to plant for fly ash. **SECL Coal Mines Void Filling**: MSPSPL has also duly applied the South Eastern Coalfields Ltd., for supply of fly ash for filling of the mines void in their closed coal mines in Raigarh area as permissible under the notification of MoEF&CC under intimation to the Chhattisgarh Environment Conservation Board seeking necessary recommendation. Vide dated 19.03.2020, Member Secretary, CECB, Govt. Of CG has also advised the SECL authority to allow the power producing plants in Raigarh to supply fly ash for back filling of the mine/ mines void. **Closure Plan of Two Ash Mounds**: Residual of composite ash & dust comprising of bottom ash, char dust, granulated slag etc after being used for development of project area and village road construction etc. were shifted to a company owned land located at two sites at plant proximity. Quantity of such ash dusts of 10 yrs are stated in letter dated 30.12.2021. Such ash & dusts are dumped in a scientific manner involving water spraying, sand layering, by forming benches for safe disposal of dusts with proper compaction. As on date both the ash dumps/ mounds equipped with water spray system, stabilised in a scientific and eco-friendly manner and closed by geo-carpeting of the same and plantation of local species on them.

NON-COMPLIANCE OBSERVED BY MOEF&CC	ACTION TAKEN PLAN BY PP VIDE LETTER DATED 10.05.2022
	Thus both the mounds are settled and stabilised. There is no incidence of any collapse or adverse impact on environment so far. No public complain is received as yet except a couple of person whose intent of lodging complaint just before the upcoming public hearing for proposed expansion was to explore the possibility of extortion from the management. However, for better and productive use of said ash mounds PP has planned to put up solar power project of 2.0 MW (1.5 MW + 0.5 MW) on the flat top surface of 2 mounds and development of horticulture and plantations on the remaining part. For safeguarding the toe part of the mound, concrete wall construction is going on which will be completed within June'2023 considering the rainy period. Ash mound closure activities, as proposed by MSPSPL are being carried out at site. Photographs of two mound sites are submitted. **NEW FLY ASH BASE VALUE ADDED PRODUCTS – A SUSTAINABLE MEASURES:** **(i) Gypsum Composite**: As a sustainable measure, in addition to brick making and mines void filling, MSPSPL has initiated the process of exploring the possibility of further value addition of Fly Ash for developing of a new product namely **Fly Ash-Gypsum Composite** usable as plastering material for interior application as a substitute of cement at much lower cost. For the above purpose MSPSPL has entered into an Agreement with Council of Scientific and Industrial Research (CSIR) a laboratory under Central Building Research Institute GoI, (CBRI) on 15th April'22 and under PP's sponsorship for development said Fly Ash – Gypsum Composite Product. Copy of the letter of confirmation dated 26.04.2022 received from of CBRI to provide Fly-ash utilization know-how to MSPSPL is submitted. **(Acceptance letter of CBRI, Roorkee).** **(ii) Geo-polymer Concrete Product:** In addition, MSPSPL is in the process of procuring know-how from CBRI for production of Geo-Polymer Concrete product from Fly Ash. Technical write-up on the process of manufacturing Geo-polymer Concrete Product by use of Fly Ash is submitted. **(Technical write up & offer of CBRI-Roorkee)** In due consideration of above facts and initiatives, for obtaining Fly-ash base value added products other than brick/ paving block, PP requests to implement the closure plan of existing two old stabilized mounds by Solar project & plantation as being undertaken by PP.
A(iii) EC dated 02.04.2009: <u>(Specific Condition xvii)</u>	Current Layout plan showing the standing green belt is also furnished **(Green belt in plant lay out) & (Plantation plan).**

NON-COMPLIANCE OBSERVED BY MOEF&CC	ACTION TAKEN PLAN BY PP VIDE LETTER DATED 10.05.2022
PP has not submitted the plant lay out plan with earmarking the plantation done in the 33% of the area as per stipulated condition.	
B (iv) EC dated 09.09.2010: <u>(Addl. Specific Condition vi)</u> **and** **C (v) EC dated 26.12.2019: (Addl. Specific Condition <u>Dated 26.12.2019)</u>** **Air- Cooled Condensers** and closed circuit cooling system has not been found.	Under clause 4 of the EC dated 09.09.2010 issued by the Ministry in respect of expansion project of Steel & CPP, PP is directed to explore the possibility of Air-Cooled Condenser (ACC) with close loop cooling system while approving the Water-Cooled Condenser (WCC) system. Considering the advantage of Water-Cooled Condenser over Air-Cooled Condenser due to the technical, operational, environmental factors and other site conditions as enumerated below. CPP is continuing on Water-Cooled Condenser system with closed circuit water loop which has got operational life of 10 to 12 year further. **FACTORS CONSIDERED FOR WCC ARE**: i) Usually Air Cooled Condenser (ACC) is recommended in a water scarcity zone declared by the Central Ground Water Authority, GoI. Whereas plant location in Raigarh does not fall under Water Scarcity zone. ii) MSPSPL's operation is linked to 2 MCM Surface water sanctioned by WRD, CG Govt. Vide their letter no. 3330/273/WRD, CG Govt. dated 06.04.2013, which includes the make-up water requirement of Water Cooled system. The Company has been sourcing surface water by constructing in-stream storage infrastructure at Kurnala river for uninterrupted / unrestricted drawal of water. Photocopy of sanctioned letter & copy of Agreement signed with the CG Govt. is submitted. **(Approval 2 MCM) & (Agreement of 2 MCM).** iii) Existing Turbine and connected cooling system is designed as per Water Cooled Condensation system. Change of Cooling system Air Cooled Condenser (ACC) would involve substantial modification of systems and mechanism and replacement of high value capital goods having an operation life of more than 10 years further. iv) ACC require more space which is not available at the existing site. v) ACC, having low thermal conductivity, its performance degrades under high ambient temperatures and windy condition causing loss of performance efficiency by 3% approx whereas WCC ensures consistent efficiency for high rate of heat transfer, which is demanded operationally. vi) ACC operation consumes more Auxiliary power of about 1.3% the WCC capable of rendering equal output in addition to reduced efficiency of 3% approx. Excess consumption of power generated by greater quantity of coal affects the carbon foot-print and has a proportionate adverse bearing on environment. vii) Operational efficiency drop explained in clause IV & V above will result in letter net output of power in ACC than WCC which in turn

NON-COMPLIANCE OBSERVED BY MOEF&CC	ACTION TAKEN PLAN BY PP VIDE LETTER DATED 10.05.2022
	would reducing impact the operational efficiency of other production facilities like DRI, Pellet, SMS & Rolling Mill etc dependent on captive generation of power. **EXPERT OPINION ON USE OF WCC ARE :** i) Technology Report of technology provider SIEMENS is submitted**.** ii) Opinion of CPP operation consultant M/s. AKB Power Ltd. dtd. and of M/s. Shaktipunj Engg. Pvt. Ltd. dated 06.05.2022 are submitted**.** iii) Further MSPSPL has engaged NIT, Raipur for their expert opinion on ACC over WCC at plant which will be furnished within June'22, who have already inspected CPP on 05.05.2022. Copy of assignment to NIT is submitted**.** **MSPSPL Representation to MoEF&CC dtd. 31.12.2019**: After the EAC meeting PP made a reasoned representation to the Ministry vide letter dated 31.12.2019 requesting to waive the condition of Air-Cooled Condenser considering the site conditions and technical hindrances. Copy of letter dated 31.12.2019 is submitted**.** **EC Amendment application:** Further, PP has submitted application in PARIVESH Portal in prescribed format for amendment of EC dated 10.05.2022 with a request to amend the additional condition of 17(ii) present EC dated 26.12.2019. Copy of EC amendment application in Form – 4 including its acknowledgement issued by MoEF&CC is submitted**.**
EAC deliberated the issues and action plan.	

Recommendations of the Committee

After deliberations, the Committee **recommended** the proposal for amendment in Environment Clearance, as detailed in para 8.5.4 above. The EAC also recommended the following additional conditions:

i. Implementation of Action Plan as submitted by the PP vide letter dated 10.05.2022.
ii. A prope action plan must be implemented to dispose of the electronic waste generated in the industry.
iii. The total PM generated and the percentage of this captured by the pollution control equipment per annum must be reported regularly.
iv. All other terms and conditions stipulated in the environmental clearance accorded shall remain unchanged.

DAY-2: JUNE 24, 2022 [FRIDAY]

Consideration of Environmental Clearance Proposal

8.6 **Expansion of Clinker production (2.5 to 3.4 MTPA) & Cement (OPC/PPC/PSC/Composite Cement) & GGBS (4.8 to 6.0 MTPA) and Captive Power Plant (18 MW) by M/s JSW Cement Limited located at Village Bilakalagudur, Mandal Gadivemula, District Kurnool, Andhra Pradesh– Re-Consideration of Environmental Clearance.**

[Proposal No. IA/AP/IND/267226/2020, File No. J-11011/889/2007-IA-II-(I)]
[Consultant: B. S. Envi-Tech Pvt. Ltd.; Valid upto 16.11.2022]

8.6.1 M/s JSW Cement Limited has made an online application *vide* proposal no. IA/AP/IND/267226/2020 dated 21/04/2022 along with copy of EIA/EMP Report, Form - 2 and Certified EC Compliance Report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(b) Cement Plants and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

8.6.2 Name of the EIA consultant: M/s. B.S. Envi Tech Pvt. Ltd. [Sl. No. 144, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/RA 0174; valid upto 16/11/2022, Rev. 23, May 09, 2022].

Details submitted by Project proponent

8.6.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
03/12/2019	14th Meeting held on 23-24th December, 2019	Terms of Reference	10/02/2020	09/02/2024

8.6.4 The project of M/s JSW Cement Limited located in Bilakalagudur Village, Gadivemula Mandal, Kurnool District, Andhra Pradesh is for expansion of clinker production capacity from 2.5 MTPA to 3.4 MTPA and Cement (Ordinary Portland Cement (OPC)/Portland Pozzolona Cement (PPC)/Portland Slag Cement (PSC)/Composite Cement (CC)/ Ground Granulated Blast-furnace Slag (GGBS)) capacity from 4.8 to 6.0 MTPA with installation of 18 MW Coal Based Captive Power.

8.6.5 Environmental Site Settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>263.05 Ha.</td><td>Land use:
<table>
<tr><th>S. No.</th><th>Details</th><th>Before Expansion</th><th>After Expansion</th></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>1</td><td>Cement Plant Built-up area</td><td>80.85</td><td>82.85</td></tr>
<tr><td>2</td><td>Vacant land (for future expansion)</td><td>62.02</td><td>47.58</td></tr>
<tr><td>3</td><td>Road area</td><td>3.43</td><td>5</td></tr>
<tr><td>4</td><td>Solar Plant</td><td>10.17</td><td>10.17</td></tr>
<tr><td>5</td><td>CPP</td><td>10*</td><td>10</td></tr>
<tr><td>6</td><td>Proposed CPP</td><td>0</td><td>3.5</td></tr>
<tr><td>7</td><td>Area for Plantation/ Greenbelt</td><td>91.58</td><td>98.95</td></tr>
<tr><td>8</td><td>Colony</td><td>5</td><td>5</td></tr>
<tr><td colspan="2">TOTAL AREA</td><td>263.05</td><td>263.05</td></tr>
<tr><td colspan="4">* 18 MW existing CPP has been transferred to M/s JSW Energy Ltd.</td></tr>
</table>
</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>The total land of 263.05 Ha is under the possession of JSWCL. The expansion is planned to be executed within the existing premises and no additional land will be acquired.</td><td>-</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>No R&R is involved</td><td>-</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site.</td><td>
<table>
<tr><th>S. No.</th><th>Latitude N’’</th><th>Longitude E’’</th></tr>
<tr><td>A</td><td>15°40'36.61"N</td><td>78°27'16.02"E</td></tr>
<tr><td>B</td><td>15°41'12.97"N</td><td>78°27'10.27"E</td></tr>
<tr><td>C</td><td>15°41'39.49"N</td><td>78°27'12.39"E</td></tr>
<tr><td>D</td><td>15°41'26.99"N</td><td>78°28'12.96"E</td></tr>
<tr><td>E</td><td>15°40'33.31"N</td><td>78°27'58.99"E</td></tr>
<tr><td>F</td><td>15°40'30.74"N</td><td>78°27'45.50"E</td></tr>
</table>
</td><td>-</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>252 m above msl</td><td>-</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No Forest Land Involved</td><td>-</td></tr>
<tr><td>vii.</td><td>Water body (Rivers, Lakes, Pond, Nala,</td><td>An irrigation canal exists within the project site.

Water bodies within Study area</td><td>-</td></tr>
</table>

S. No.	Particulars	Details	Remarks
	Natural Drainage, Canal etc.) exists within the project site as well as study area	1. Kunderu River – 2.1 km - WSW 2. Kurnool Cuddapah Canal – 2.8 km – E 3. SRBC Canal – 3.6 km – SW 4. Gal Eru – 7.8 km – ESE 5. Alaganuru Balancing Reservoir – 4.62 – WNW	
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil. Nearest Reserved Forests: 1. Gani RF – 3.1 km – SW	-

8.6.6 JSWCL received the first Environmental Clearance from MOEF&CC vide No. J-11011/889/2007-IA-II(I) dated 25/08/2008. The Chronology of EC is as follows:

S. No.	Clearances	Capacity
1.	**Cement Plant EC-1** from MOEFCC vide No. J-11011/889/2007-IAII(I) dt 25.08.2008	Clinker: 2.0 MTPA, Cement: 2.2 MTPA (PSC & OPC – 1.1 MTPA Each), & Captive Power Plant (CPP): 2x18MW.
2.	**Cement Plant EC-2 (Installation of Slag Grinding Unit)** from MOEFCC vide No. J-11011/159/2010-IAII(I) dt 13.05.2011	Expansion of Cement Grinding unit from 2.2 MTPA to 4.8 MTPA by setting up of 2.60 MTPA slag grinding unit.
3.	**Cement Plant EC-3** from MOEFCC vide No. J-11011/889/2007-IAII(I) dt. 09.03.2016	Enhancement of Clinker Production: 2 to 2.5 MTPA and change in product mix from 4.8 MTPA (1.1 MTPA of OPC & 3.7 MTPA of PSC to 4.8 MTPA of OPC/PSC/GGBS
4.	**Cement Plant EC-4**	Use of Fuel Mix (Pet Coke along with Coal in

S. No.	Clearances	Capacity
	From MOEFCC vide No. J-11011/889/2007-IAII(I) dt. 06.06.2017	Different Proportion) in Existing cement plant & Captive Thermal Power Plant, change in boiler Technology AFBC to CFBC, Change of CCS from water Cooled to air Cooled & addition of PPC as Finished Product
5.	**Amendment in EC** F.No. J-11011/889/2007-IAII-(I) dt. 28-01-2021.	Transfer of 18 MW Captive Power Plant to M/s JSW Energy Ltd. from the integrated cement plant

Consent for Operation (CFO) from APPCB has also been obtained vide Order No. APPCB/KNL/KNL/124/HO/CFO/2016 dated 16/08/2016. Later the order was auto renewed on 16/06/2017 extending the validity up to 30/09/2022.

8.6.7 Implementation status of the existing EC

Sl. No.	Facilities	Units	As per EC dated 25/08/2008 & 09/03/2016	Implementation Status as on - 31/03/2022	Production as per CTO
1	Clinker Production	MTPA	2.50	2.50	2.50
2	Cement Production (MTPA) OPC/PPC/GGBS/PSC/ Composite Cement)	MTPA	4.80	4.80	4.80
3	Coal Based Captive Power Plant CPP	MW	2x18	*1x18	CTO is in the name of JSW Energy
**Transferred to JSW Energy vide MOEFCC EC no. F.No. J-11011/889/2007-IA-II-(I) dated 28/01/2021*					

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

Facility	Present Capacity	Proposed Expansion	Capacity After Expansion
Clinker Production (MTPA)	2.50	0.9	**3.4**
Cement Production (MTPA) OPC/PPC/GGBS/PSC/ Composite Cement)	4.80	1.2	**6.0**
Waste Heat Recovery Power Plant (MW)	Nil	*9	***9**
**Coal Based Captive Power Plant CPP (MW)		1x18	**1 X 18 MW**
**EC not required. Consent for Establishment obtained from APPCB.* ***1x18 MW CPP was transferred to M/s JSW Energy Ltd. vide MoEF&CC letter No. F.No. J11011/889/2007-IA-II-(I) dt. 28.01.2021*			

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

S. No.	Raw material		Existing requirement	Additional requirement	Total requirement after proposed expansion	Source	Distance / Transportation
1.	Limestone		3.65	1.30	4.95	Captive Mine	1 km, belt conveyor
2.	Aluminous Laterite		0.19	0.05	0.24	Kerala	850 km, By rail upto Nandyal/ and by road to plant
3.	Flue Dust		0.08	0.03	0.11	JSW Steel, Bellary	250 km, by road
4.	Red Mud		0.00	0.01	0.01	Belgavi	540 km, by road
5.	Coal	Cement Plant	0.34	0.12	0.46	Imported/ indigenous	237 km (Krishnapatnam Port), By rail upto Panyam and by road to plant
		Power Plant	0.00	0.12	0.12		
6.	Pet Coke		0.24	0.09	0.33	Imported/ Indigenous	750 km, By rail upto Panyam and by road to plant
7.	BF Slag		2.96	0.15	3.11	JSW Steel, Bellary	250 km, By rail upto Panyam and by road to plant
8.	Fly ash		0.01	0.33	0.34	CPP/Nearby power plant	250 km, by road, closed bulker
9.	Gypsum		0.24	0.06	0.30	Imported/ Chemical	400 km, by road

8.6.10 The existing water requirement of the plant is 1280 m^3/day Additional Water requirement for expansion of cement plant and Captive power plant is 880 m^3/day. JSWCL has obtained permission for withdrawal of 4500 m^3/day water from the State Groundwater Department, AP. Post expansion, the total fresh water requirement will be 2160 m^3/day. Approximately 1500 m^3/day will be sourced from the mine pit harvested water and the balance will be drawn through bore wells. Groundwater drawl permission obtained from Central Ground Water Authority vide letter No 21-4(15)/SR/CGWA/2008-860 dated 23/06/2008. NOC since 30/12/2014 has been granted by State Groundwater Department, AP. vide Rc. No. 226/D1/2014, dated 30/12/2014.

8.6.11 The peak power requirement of the cement plant after the expansion is 48.5 MW. Presently the power requirement is met from the existing 18 MW power plant of JSW Energy Ltd, 5.5 MW

solar power plant, and the grid power. Additional power requirements will be sourced from the new 1X18MW Captive Power Plant, WHRPP, solar plant and APCPDCL with a dedicated 220 kV overhead grid line.

8.6.12 Baseline Environmental Studies:

Period	Winter Season, 2020-2021 (December 2020, January 2021 and February 2021)
AAQ parameters at 08 Locations	• PM_{10} = 43.9 to 63.8 μg/m^3 • $PM_{2.5}$ = 21.4 to 33.6 μg/m^3 • SO_2 = 7.6 to 13.8 μg/m^3 • NOx = 8.1 to 14.5 μg/m^3 • CO: less than 1 ppm
AAQ modelling (Incremental GLC)	**Impact of plant and transportation:** • PM_{10} = 6.18 μg/m^3 - 0.50 km - SW • $PM_{2.5}$ = 2.47 μg/m^3 - 0.50 km - SW • SO_2 = 3.32 μg/m^3 - 0.70 km - N • NOx = 5.69 μg/m^3 - 0.60 km - N • CO = 280 μg/m^3 (along the route) **Model used :** AERMOD – Version 10.1
Ground water quality at 08 locations	• pH = 7.02 – 7.44 • Total Hardness = 335 - 565 mg/l • Chlorides = 78-373 mg/l • Fluoride = 0.73 – 1.21 mg/l • Heavy Metals (Zinc) = 0.12 – 0.94 mg/
Surface water quality at 07 Locations	pH: 7.56 to 7.86; DO: 5.1 to 6.1 mg/l; BOD: 03 to 04 mg/l ; COD from 11 to 22 mg/l
Noise Levels At 08 Locations	50.8 to 69.8dB (A) for the day time 40.3 to 61.3 dB (A) for the Night time.
Traffic assessment study Findings	
• **Traffic study carried out at three locations** 1. Near Railway station, National Highway (NH-18), connecting Kurnool – Chittoor. o Type of Road : Arterial - 4 lane divided (2 way) road o PCU limit : 3600 PCU per hour 2. Poluru Road connecting National Highway (NH-18) – Gadivemula Road o Type of Road : Arterial - 2 lane undivided (one way) concrete road o PCU limit : 1500 PCU per hour 3. Near HPCL Petro Hub, 'Y' Junction connecting Gadivemula Road and Plant site road. o Type of Road : Arterial - 2 lane undivided (one way) concrete road o PCU limit : 1500 PCU per hour • Transportation of raw material, fuel & finished product will be done 50% by road.	

Particulars	Details			Remarks		
	NH-18	**Poluru Road**	**Y' junction gadivamula**	**NH-18**	**Poluru Road**	**Y' junction gadivamula**
Traffic Load Study Period	08-02-2021, 08:00 AM to 08-02-2021, 08:00 PM	09-02-2021, 08:00 AM to 09-02-2021, 08:00 PM	10-02-2021, 08:00 AM to10-02-2021, 08:00 PM	Connecting Kurnool – Chittoor road	National Highway-18 – Gadivemula Road	Gadivamula Road And Plant Site Road
Traffic Load (Baseline) (PCU/Hr) – Max	816 PCU's/hr during 08:00-09:00 AM	215PCU's/hr during 08:00-09:00 AM.	257 PCU's/hr during 0:00-10:00 AM	LOS: B (Very Good)	LOS: A (Excellent)	LOS: A (Excellent)
Additional Traffic Load During Operation Of Project (PCU/Hr) – Max	101PCU/Hr	101PCU/Hr	101PCU/Hr	Maximum trucks which would add to the existing traffic will be 46 trucks / hour (101 PCU/Hr)	Maximum trucks which would add to the existing traffic will be 46 trucks / hour (101 PCU/Hr)	Maximum trucks which would add to the existing traffic will be 46 trucks / hour (101 PCU/Hr)
Total Traffic Load During Operation Of Existing And Proposed (PCU/Hr) – Max	968 PCU/Hr	316 PCU/Hr	358 PCU/Hr	LOS: B (Very Good)	LOS: B (Very Good)	LOS: B (Very Good)
Traffic Capacity As Per The IRC 106:1990 For Highways (PCU/Hr)	3600 PUC per hour	1500 PUC per hour	1500 PUC per hour	IRC-106:1990 Guide line		

- No change in Level of Service at location -1. Level of Service changed from A to B at location 2 and 3 due to additional traffic from JSW.

- **EMP MEASURES**
  - Closed trucks will be employed for transport of Materials/Products
  - Trucks- Pollution Under Control (PUC) will be employed
  - Plantation of local species has already been taken up along the road on either side
  - Monitoring of trucks to ensure compliances such as covering of trucks by tarpaulin, avoiding spillage on roads etc.

- **PARKING FACILITIES:**

  JSWCL has earmarked an area of 3.75 Ha for parking facility with following

  - 0.9 Ha Area for roads and free movement of trucks
  - 2.1 Ha area for 700 vehicles (@30 m^2 /truck)

• 0.5 Ha for greenbelt around the parking area • 0.25 Ha for facilities to truck drivers All facilities, such as canteen, toilets, rest rooms, etc. will be provided for truck drivers. Separate office building equipped with all communication and other infrastructure will be provided to the transporters.	
Flora and fauna	• Nearest Forest - Gani RF – 3.1 km, SW • 9 nos of Schedule - I species are reported in 10 km namely Blackbuck, Peafowl, Sloth bear, Indian Wolf, Great Indian Bustard, Lesser Florican, Indian Python, Smooth Coated Otter, Lesser florican and Flapshell turtle. Conservation Plan was approved by the Principal Chief Conservator of Forests and Head of Forest Force (PCCF & HOF) Forest Department, Govt. of Andhra Pradesh with a budget of Rs. 455 Lakhs vide Rc.no. 5967/2O21/WL-2. Dated 09.07.2021.

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

Manufacturing Process:

- Ash (0.05 MTPA) generated from Power Plant will be used in the cement production process
- Dust collected from Pollution Control Equipment will be recycled back to the process

Domestic Waste from colony:

Present solid waste generation from colony is about 300 kg/day.
Proposed additional 100 kg/day.

Hazardous Waste:

S.No.	Type Of Waste	Source Name	Quantity		Treatment before disposal	Mode Of Disposal	Agreement Details For Disposal
			Existing	Additional			
1	Spent Oil/Used grease	Cement Plant	20 KL/year used oil & 7.60 t/annum grease	2.0 KL/year used oil	None	Containers	Authorized Recycler

8.6.14 Public Consultation:

Details of advertisement given	18.10.2021 - The Hans India (English News Paper) 18.10.2021 - Surya (Telugu News Paper)
Date of public consultation	19.11.2021
Venue	Existing JSW cement plant located at Bilakalagudur (V), Gadivemula (M), Kurnool District, Andhra Pradesh

Presiding Officer	District Revenue Officer, Kurnool District [Nominated by District Collector]
Major issues raised	1. Employment 2. Land compensation 3. Air pollution 4. Village Development 5. Skill development 6. Construction of dam 7. Grazing land development

8.6.15 The capital cost of the project is Rs. 420 Crores. JSWCL has spent about Rs. 89.30 crores for implementing EMP measures with recurring cost of Rs. 2.55 crores in the existing plant. The capital cost for environmental protection measures is proposed as Rs. 34.78 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.1.93 Crores. The employment generation from the proposed expansion is 80 (locals will be preferred). The details of cost for environmental protection measures is as follows:

Description	**ENVIRONMENT CONTROL MEASURES**	**Capital Cost (Rs. Lakh)**	**Recurring Cost per annum (Rs. Lakh)**
Air Pollution Control	• Bag filter and Cyclone for raw mill	180	130
	• Upgradation of Coal Mill Bag House	80	
	• Industrial vacuum cleaning machine	110	
	• New/ upgradation of Bag filters at material transfer points	200	
	• ESP for CPP	750	
	• Roads, drains and concrete paving in truck parking extension	200	
	• Coal shed extension	540	
	• Sheet covering for dust control in CPP and cement plant	150	
	• Water sprinkler for coal yard in CPP	20	
	Sub-total (A)	**2230**	**130**
Wastewater Management	• Effluent treatment plant for CPP & WHRBPP	140	8.4
	Sub-total (B)	**140**	**8.4**
Energy Conservation Measures	• Solar street Lights (20 nos)	10	1.2
	• Variable Frequency Drives, SPRS for HT motors	10	
	Sub-total (C)	**20**	**1.20**
	• Shredder for Plastic waste shredding	100	6

Description	ENVIRONMENT CONTROL MEASURES	Capital Cost (Rs. Lakh)	Recurring Cost per annum (Rs. Lakh)
Solid Waste Management	**Sub-total (D)**	**100**	**6**
Greenbelt	• Greenbelt Development	92.5	10
	Sub-total (E)	**92.5**	**10**
Drains & Rainwater Harvesting	• Rooftop Rainwater Harvesting in colony and CPP	5.0	0.50
	Sub-total (F)	**5.0**	**0.50**
Environmental monitoring	• Stack Emissions (CEMS- 2 nos)	25	1.0
	• Equipment calibration	-	2.0
	• Periodic Env. monitoring by 3rd party (Stack emission, AAQ,, Soil Quality, Surface and Ground Water Quality, Waste Water, Noise)	-	5.0
	• Performance evaluation of major Pollution control equipment	-	10.0
	Sub-total (G)	**25.0**	**18.0**
OHS	• Occupational Health & Safety	-	6.0
	Sub-total (H)	**-**	**6.0**
Wildlife conservation	• Implementation of wildlife conservation plan (WLCP) with forest deptt.	325	13.0 (for 10 years)
	Sub-total (I)	**325**	**13.0**
PH issues & need based activities	• Budget for addressing PH issues and need based activities	540.50	-
	Sub-total (J)	**540.50**	**-**
Total		**3478.0**	**193.1**

8.6.16 JSWCL has developed greenbelt in an area of 91.58 (34%) ha in the cement plant complex which is more than 33% by planting 86567 numbers of seedlings of native and exotic species. A wide green belt has been developed all along the periphery of the activities of the plant with local plant species. JSWCL have planted more than 900 saplings per hectare and will attain 1500 /Ha, with gap filling within two years.

8.6.17 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.

Certified compliance report from Integrated Regional Office, MoEFCC

8.6.18 The Status of compliance of earlier EC was obtained vide letter No. IRO/VIJ/EPA/MISC/111-01/2021 dated 19/01/2022 from Integrated Regional Office, Vijayawada, Andhra Pradesh. Action taken report of the Observations/minor non-compliances submitted to IRO on 21/02/2022. Recertified compliance report was received from R.O. MoEF&CC, Vijayawada vide letter dated 14/03/2022. The details of the observations made by RO in the report dated 14/03/2022 along with its re-assessment / present status as furnished by the PP is given as below:

Sl. No	**Conditions**	**Non-compliances Recertified compliance on 14.03.2022**	**Corrective action taken (Action taken report submitted by the project proponent on 23.03.2022)**	**Remarks**
iv	Efforts shall be made to achieve power consumption of 70 units /tone of Portland-Pozzolona cement (PPC) and 95 units/tone of cement for Ordinary Portland Cement and thermal energy consumption of 670 kcal/Kg of Clinker. **[Partially Complied]**	As per the ATR submitted, it has been observed that the power consumption for OPC for the year 2020-21 was 80.01 kWh/t of cement. However, the thermal energy consumption was 723 kcal/Kg of Clinker. It has been stated that, in order to reduce thermal energy consumption, PAs have planned to replace the Cooler with the latest technology high efficiency cooler during the proposed expansion to achieve sp. thermal energy consumption of 695 Kcal/kg clinker. Tentative	Action plan for achieving the thermal energy consumption of 670 Kcal/kg clinker is as below: • Both the top cyclones (4 nos' in both the PH strings) will be replaced with Low Pressure cyclones. In addition, all other cyclones of the preheater will also be modified. • Modification in the Calciner by increasing the vessel height. • Reduction in false air ingress in Preheater cyclones from 10% to less than 7 %. By implementing the above measures, we are hopeful to achieve thermal energy consumption of 670 KCaI/kg clinker. The	By implementing the corrective measures, JSWCL is hopeful to achieve thermal energy consumption of 670 KCaI/kg clinker. The modifications are likely to be completed by August 2022

Sl. No	Conditions	Non-compliances Recertified compliance on 14.03.2022	Corrective action taken (Action taken report submitted by the project proponent on 23.03.2022)	Remarks
		schedule for replacement of cooler – June-July 2022. However, PAs have not yet achieved the sp. thermal energy consumption of 670 kcal/Kg of Clinker. It is required to make efforts to achieve thermal energy consumption of 670 kcal/Kg of Clinker. It requires immediate action (Specific Condition No. iv).	above modifications are likely to be completed by August 2022.	

8.6.19 The proposal was initially considered during the 5th meeting of Expert Appraisal Committee [EAC] (Industry-I) held on 12-13th May, 2022, After detailed deliberation, committee made the following observations:

Deliberations by the Committee held on12th -13th May, 2022

8.6.20 The EAC has made detailed deliberations on the proposal and observed the following:

i. An irrigation canal exists within the project site. The PP has not submitted suitable steps /conservation plan along with contouring, Run -off calculations, disposal etc. Details of mitigation measures and management plan needs to be submitted. As a canal exist in the project area, so a robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.

ii. On perusal of kml file the green belt has not adequately developed. This seems non compliances of earlier EC condition. PP shall provide detailed plantation status with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Details of implementation of the green belt development as per granted ECs needs to be submitted.

iii. Details of Action Plan on the issues raised during Public Hearing needs to be submitted with timelines and proposed budget for its implementation. The PP shall present to the EAC regarding mitigation measures against the social issues raised in Public consultation.

iv. Details of implementation status of the earlier commitment made by the PP during old PHs for which the Ministry has granted the earlier ECs.

v. EAC noted that there is non-compliance of EC condition, "Efforts shall be made to achieve power consumption of 70 units /tone of Portland-Pozzolona cement (PPC) and 95 units/tone of cement for Ordinary Portland Cement and thermal energy consumption of 670 kcal/Kg of Clinker." In this context, PP submitted that by implementing the corrective measures, JSWCL is hopeful to achieve thermal energy consumption of 670 KCaI/kg clinker. The modifications are likely to be completed by August 2022. EAC advised the PP to implement this condition first.

vi. Scheme for monitoring of Dioxin/Furan during co processing of hazardous waste in the Kiln has not been available to the EAC

vii. Details of the all possible measures to control particulate matter emissions needs to be submitted.

viii. Details of Greening and Paving shall be submitted in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

ix. Details monitoring data of the Continuous Emission Monitoring System (CEMS) for the existing process stacks and Continuous Ambient Air Quality Monitoring Station (CAAQMS) needs to be submitted.

x. Bilakalaguduru – 1.2 km – W (Population: 4906) are in close proximity to the project site. Environmental safeguards to be adopted in this regard has not been enumerated in the Report.

xi. There are 9 nos. of Schedule - I species reported in study area, namely Blackbuck, Peafowl, Sloth bear, Indian Wolf, Great Indian Bustard, Lesser Florican, Indian Python, Smooth Coated Otter, Lesser florican and Flapshell turtle. PP and consultant could not explain the implementation status of conservation Plans on the schedule I species.

xii. Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.

xiii. Details analysis of free silica in limestone needs to be submitted. Details of silicosis analysis carried out by the PP, if any shall be submitted to the EAC.

xiv. Details of recycling of water needs to be submitted. PP shall explore the possibility to use the STP water for its process so that ground water requirement can be reduced.

Recommendations of the Committee held on12th -13th May, 2022

8.6.21 In view of the foregoing and after detailed deliberations, the Committee recommended for the **deferment** and also subcommittee of EAC Industry-1 shall undertake a site visit to the project site and based on the site visit report and submission of the abovementioned requisite information by the PP, the instant proposal for Environment Clearance under the provisions of EIA Notification, 2006 may be considered by the EAC.

8.6.22 Accordingly, the proponent submitted the ADS reply vide letter dated 14.06.2022 uploaded on PARIVESH on 14.06.2022. Point-wise reply of ADS is given as below:

S. No.	Observation	Response
1.	An irrigation canal exists within the project site. The PP has not submitted suitable steps/ conservation plan along with contouring, Run -off calculations, disposal etc. Details of mitigation measures and management plan needs to be submitted. As a canal exist in the project area, so a robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.	The canal which passes through the plant site is an Irrigation Canal constructed by Irrigation Dept, Govt of A.P. This canal receives water from Srisailam Right Bank Canal. The canal is an elevated concrete canal protected on both sides with berms of 10 M width. Photograph of the canal at different areas within the plant site are submitted The canal is of 2185 M length with width of 10 M. The depth of canal is about 1.5 M. The canal berms on either side restricts entry of water into the canal. Contour map of the plant site and canal are submitted. The slope of the plant site is towards canal. However, the entire plant activities are mainly covered in 91 Ha area which is provided with a compound wall. Plant activity area of 91 Ha is developed with full-fledged storm water network system. The storm water collected is routed through the storm water network and is routed to mine pit for storage. No water from plant activity area drains beyond the compound wall into the canal. The rainwater draining from the area beyond the compound wall of the plant site slides along the slopes and flows towards south to drains into the mine pit. Only this area of about 52 Ha forms the catchment (between

S. No.	Observation	Response
		compound wall and canal) which drains into the mine pit. The runoff quantity with daily maximum 131 mm (total in four days) from this area is 20436 m^3 (@runoff coefficient of 0.30). The following measures are proposed to protect the canal a. No plant activities are proposed near to canal. b. Deep-rooted grasses that establish quickly, such as tall fescue grasses will be planted on the canal slopes in consultation with state irrigation deptt. No trees are proposed in this zone as the roots may cause adverse impact on the canal structure c. Beyond 50 m from the canal, dense plantation all along the canal covering an area having width of 20 m is proposed.
2.	On perusal of kml file the green belt has not adequately developed. This seems non-compliances of earlier EC condition. PP shall provide detailed plantation status with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Details of implementation of the green belt development as per granted ECs needs to be submitted.	As per the per ECs dated J-11011/889/2007-IA-II(I) dt 25.08.2008, J-11011/159/2010-IA-II(I) dt 13.05.2011, J-11011/889/2007-IA-II(I) dt. 09.03.2016, J-11011/889/2007-IA-II(I) dt. 06.06.2017 and J-11011/889/2007-IA-II-(I) dt. 28-01-2021 33 % of the project area has to be developed under greenbelt. Greenbelt is developed in an area of 91.58 Ha. (34 %) with a density of 954 trees per Ha. total number of trees existing are 86567 Nos. the list of species planted are submitted In order to increase the density of greenbelt from 954 trees/ Ha to 2500 trees per Ha, gap plantation is proposed with additional saplings of 142000 trees during this year (Monsoon 2022). Details of greenbelt developed till date and future plan submitted

S. No.	Observation	Response
3.	Details of Action Plan on the issues raised during Public Hearing needs to be submitted with timelines and proposed budget for its implementation. The PP shall present to the EAC regarding mitigation measures against the social issues raised in Public consultation.	Speaker wise issues along with action plan are submitted Action Plan on the issues raised during Public Hearing with budget and timelines are submitted Social issues raised during the public hearing and the proposed mitigation measures are submitted
4.	Details of implementation status of the earlier commitment made by the PP during old PHs for which the Ministry has granted the earlier ECs.	Company has complied with all the commitments made during the earlier PH. Details are submitted
5	EAC noted that there is non-compliance of EC condition, "Efforts shall be made to achieve power consumption of 70 units /tone of Portland-Pozzolona cement (PPC) and 95 units/tone of cement for Ordinary Portland Cement and thermal energy consumption of 670 kcal/Kg of Clinker." In this context, PP submitted that by implementing the corrective measures, JSWCL is hopeful to achieve thermal energy consumption of 670 KCaI/kg clinker. The modifications are likely to be completed by August 2022. EAC advised the PP to implement this condition first.	The company, since inception, has been making constant efforts to reduce its thermal energy consumption by way of equipment design, process improvements, judicious use of resources and awareness to employees towards the need for energy conservation. The thermal energy consumption of JSW Cement, Nandyal is one of the best among Indian and global cement industries even with TSR as high as 8.60%. Kiln Thermal energy consumption increases with increased utilization of Alternate fuels. Thermal energy data comparison of the best Indian and Global cement industries are submitted. From the given data which are publicly disclosed by the respective companies, it is evident that the thermal energy consumption to the level of 670 Kcal/kg clinker is not achievable with the currently available technology of pyro processing especially while the industries are under a mandate to utilize hazardous and non-hazardous alternate fuels as partial replacement of fossil fuels. However, in order to further reduce the thermal energy consumption, the Company has planned to replace the Clinker Cooler with the latest technology high efficiency cooler during the proposed expansion to achieve Sp.

<table>
<tr><th>S. No.</th><th>Observation</th><th>Response</th></tr>
<tr><td></td><td></td><td>Thermal energy consumption of 695 Kcal/kg clinker. Tentative schedule for replacement of cooler – within 2-3 months after grant of EC and Consent from SPCB.

The following additional measures will also be implemented during the proposed expansion:
1) Both the preheater top cyclones will be replaced with low pressure cyclones
2) Modification in calicner by increasing the calciner height
3) Reduction in false air ingress in preheater cyclones from 10% to 7%</td></tr>
<tr><td>6.</td><td>Scheme for monitoring of Dioxin/Furan during co processing of hazardous waste in the Kiln has not been available to the EAC</td><td>We have engaged M/s SMS Labs Services Pvt. Ltd. Chennai, an NABL(TC6118) accredited lab for monitoring of Dioxin and Furan and the same is done in line with MoEF&CC Notification G.S.R. 497(E) dated 10th May 2016 for co-processing whenever hazardous waste is co-processed in the Kiln. Test report of the same is submitted

The same practices will be continued after the proposed expansion.</td></tr>
<tr><td>7.</td><td>Details of the all possible measures to control particulate matter emissions needs to be submitted.</td><td>Details of the measures being adopted to control particulate emissions in the existing plant and also after the proposed expansion are submitted</td></tr>
<tr><td>8</td><td>Details of Greening and Paving shall be submitted in the plant area to arrest soil erosion and dust pollution from exposed soil surface.</td><td>Of the total area, the entire plant activity area is provided with compound wall and storm water drainage system (with sedimentation traps). No soil erosion from the plant area is likely to take place as no slopes are involved and the entire area is levelled and compacted.

Present and proposed land use of the plant area is as follows:
<table>
<tr><th>Facility</th><th>Area (Ha)</th><th>%</th></tr>
<tr><td>Built-up/ paved</td><td>113.02</td><td>42.97</td></tr>
<tr><td>Greenbelt/ Lawns & gardens</td><td>91.58</td><td>34.81</td></tr>
<tr><td>Area on the eastern side of the</td><td>40.0</td><td>15.21</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Observation</th><th>Response</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>canal (under cultivation)</td><td></td><td></td></tr>
<tr><td>Proposed CPP</td><td>3.5</td><td>1.33</td></tr>
<tr><td>Proposed additional greenbelt</td><td>7.37</td><td>2.80</td></tr>
<tr><td>Vacant area</td><td>7.58</td><td>2.88</td></tr>
<tr><td>Total</td><td>263.05</td><td>100</td></tr>
</table>
From the above land use, it is evident that presently, 93% of the plant area is covered (greening & paving) and after the proposed expansion, the same will increase to 97.12%. The vacant 2.88% area is already stabilized with naturally growing grass/ trees etc. and thus, does not contribute to soil erosion and dust pollution due to exposed surface.</td></tr>
<tr><td>9.</td><td>Details of monitoring data of the Continuous Emission Monitoring System (CEMS) for the existing process stacks and Continuous Ambient Air Quality Monitoring Station (CAAQMS) needs to be submitted.</td><td>Details of monitoring results of CEMS and CAAQMS for past Five months (Jan 2022 to May-22) are submitted</td></tr>
<tr><td>10</td><td>Bilakalaguduru – 1.2 km – W (Population: 4906) are in close proximity to the project site. Environmental safeguards to be adopted in this regard has not been enumerated in the Report.</td><td>Bilakalagudur lies at about 1.2 km in the Western direction of the plant.

In between the plant and village, captive limestone mine is existing. The following env safeguards have been adopted for protection of the village:
1) Thick greenbelt of about 120 M width has already been developed all along the western side of the active plant area facing Bilakalagudur village.
2) Additional greenbelt in 7.37 Ha has also been proposed to be developed towards the Western side of the plant boundary
3) Greenbelt in mine lease area is also under development.
4) Regular water sprinkling is done on the haul roads for dust suppression in mining area</td></tr>
</table>

S. No.	Observation	Response
		5) The connecting roads for transportation of material are concrete paved to minimized dust pollution due to vehicular movement 6) Regular monitoring of air quality near the village site
11	There are 9 nos. of Schedule - I species reported in study area, namely Blackbuck, Peafowl, Sloth bear, Indian Wolf, Great Indian Bustard, Lesser Florican, Indian Python, Smooth Coated Otter, Lesser florican and Flapshell turtle. PP and consultant could not explain the implementation status of conservation Plans on the schedule I species.	Conservation Plan has been prepared prepared by M/s Green Solutions, Hyderabad involving a team of experts namely Mr. B. Somasekhar Reddy IFS. (Rtd.), Mr. A.V.Joseph IFS, (Rtd.), Mr. D. Sudhakar IFS, (Rtd.), Mr. K.N. Benarji IFS, (Rtd.) and Mr. P.V Ramana Reddy IFS, (Rtd.) and approved by the PCCF & HoFF and Chief Wildlife Warden of AP vide Rc.no. 5967/2O21/WL-2. Dated 09.07.2021 As per the approved Conservation plan, JSW Cement will deposit an amount of Rs. 3.25 Crore with the State Forest Deptt who in turn will implement the conservation measures suggested in the Plan. Details of the Conservation activities to be implemented and the costs involved indicating the agency to implement the activity are submitted JSW will deposit Rs 3.25 crores with Forest Department, Govt of Andhra Pradesh by July, 2022
12	Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.	Contour map of the project site with storm water drainage system is submitted A detailed study has been carried out on rainwater harvesting. The existing and proposed rainwater harvesting structures along with the calculations of groundwater recharge are submitted
13	Details analysis of free silica in limestone needs to be submitted. Details of silicosis analysis carried out by the PP, if any, shall be submitted to the EAC.	Analysis results of free silica in limestone are submitted JSW is carrying out Free silica analysis through personal dust sampling. Report of the same is submitted

S. No.	Observation	Response
		JSW is conducting annual health checkup including chest x-ray of workers engaged in dust prone area. Details are submitted So far none of the workers has been observed to be having any indication/ symptoms of silicosis.
14	Details of recycling of water needs to be submitted. PP shall explore the possibility to use the STP water for its process so that ground water requirement can be reduced	No waste water is generated from the cement manufacturing process. Approx. 166 M^3/day of waste water is generated from CPP and WHRS and approx. 96 M3/day as domestic waste. Entire waste water will be treated and reused for plantation and dust suppression within the premises. Entire STP water is reused in plantation with a view to conserve fresh water.

8.6.23 Further, the based on the recommendations of EAC (Industry-1), the matter pertaining to site visit was put up before the Competent Authority for approval in the Ministry wherein it has been deliberated that the ADS reply submitted by the project proponent shall be taken into consideration and EAC should clearly mention the reasons for requirement or no requirement of the proposed site visit.

Written submission by PP

8.6.24 M/S JSW Cement Limited, vide letter dated 24.06.2022 has submitted the written submission before the EAC, as below:

(i) M/s JSW Cement Limited submitted the final EIA alongwith necessary Annexures for grant of Environment clearance for increase of Clinker production (2.5 to 3.4 MTPA) & Cement (OPC/PPC/PSC/Composite Cement) & GGBS (4.8 to 6.0 MTPA) and Captive Power Plant (18 MW) located at Village Bilakalagudur, Mandal Gadivemula, District Kurnool, Andhra Pradesh on the Parivesh portal vide Proposal no-IA/AP/IND/267226/2020.

(ii) The proposal was considered in the 5th EAC meeting wherein the committee sought some additional information/ clarifications and also proposed to constitute a sub-committee for a site visit before consideration of the EC proposal.

(iii) Meanwhile JSW Cement Limited submitted all the required information in response to the ADS vide our letter dated 14-06-2022.

(iv) The proposal was reconsidered in the 8th EAC meeting held on 24-06-2022 where the PP presented the ADS response and replied to all the queries raised during the EAC meeting to the satisfaction of each of the Committee members. However, if the

Committee or the sub-committee desires to make a visit to our project site, PP has no objection to the site visit. Rather PP will be pleased to welcome the members of the sub-committee or the entire Committee anytime to the project site.

(v) PP requested the honourable Expert Appraisal Committee (Industry Sector-I) to consider the proposal for grant of environment clearance.

8.6.25 Based on the ADS reply submitted by PP on 14.06.2022, the proposal was considered by the EAC (Industry 1) in its 8th meeting held during 23-24th June, 2022. The deliberations and recommendations of the Committee is as follows:

Deliberations by the Committee

8.6.26 The Committee noted the following:

1. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.
2. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.
3. The Committee noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.
4. An irrigation canal exists within the project site. As reported by the proponent, the canal passes through the plant site is an Irrigation Canal constructed by Irrigation Dept, Govt of A.P.
5. The EAC suggested to explore the possibility of creating the boundary wall along the canal to protect it.
6. Greenbelt is developed in an area of 91.58 Ha. (34 %) with a density of 954 trees per Ha. In order to increase the density of greenbelt from 954 trees/ Ha to 2500 trees per Ha, gap plantation is proposed with additional saplings of 142000 trees during this year (Monsoon 2022).
7. There are 9 nos. of Schedule - I species reported in study area, namely Blackbuck, Peafowl, Sloth bear, Indian Wolf, Great Indian Bustard, Lesser Florican, Indian Python, Smooth Coated Otter, Lesser florican and Flapshell turtle. Conservation Plan has been prepared and approved by the PCCF & HoFF and Chief Wildlife Warden of AP vide Rc.no. 5967/2O21/WL-2. Dated 09.07.2021.

8. The Committee has found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
9. As committed by the PP, 5 villages, namely Bilakalagudur, Bujunur, Gadivemula, Grandhivemula and Pesarvai shall be adopted and will develop the villages into model villages in next 10 years. An affidavit to this effect has been submitted by the PP.
10. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as committed by the PP the green belt development shall be completed in coming monsoon season.
11. The Committee also deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.
12. The Committee deliberated upon the certified compliance report of IRO, MoEF&CC as well as action taken report submitted by PP with respect to the observations reported by IRO, MoEF&CC and found it satisfactory.
13. The EAC examined the information furnished by the project proponent on the points raised by the Committee in the previous meeting and found it satisfactory. Further, the sub-committee for site visit also found the information submitted by the PP is found to be satisfactory and recommended that no further site visit is required at the moment and proposal can be appraised based on the information submitted by the PP. The EAC is of the view that all the requisite information submitted by the PP is found to be satisfactory and no need to visit the project site at present.
14. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.
15. The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.
16. The environmental clearance recommended to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. 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. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

Recommendations of the Committee

8.6.27 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 following 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) The PP shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(ii) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(iii) The activities and the action plan proposed by the project proponent to address the issues raised during public hearing and socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

(iv) An irrigation canal exists within the project site. A robust Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be implemented.

(v) The PP shall explore the possibility of constructing a wall parallel to the canal for its mitigation/preservation.

(vi) The Bilakalagudur lies at about 1.2 km in the Western direction of the plant. Environmental safeguards/mitigation measures, as committed by the PP, shall be implemented.

(vii) The Efforts shall be made to achieve power consumption of 70 units/tone of Portland-Pozzolona cement (PPC) and 95 units/tone of cement for Ordinary Portland Cement and thermal energy consumption of 670 kcal/Kg of Clinker.

(viii) Overhead belt conveyor for transportation of Limestone from the mines to the plant site shall be established in a time frame of three years from the date of issue of Environment Clearance after obtaining requisite statutory permissions from the concerned competent authority. Thereafter, road transportation of limestone from the mines to the plant site is not permitted.

(ix) Three tier Green Belt shall be developed in a time frame of one year covering at least 33% of the total project area with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Thick greenbelt of about 120 m width been developed all along the western side of the active plant area facing Bilakalagudur village shall be maintained. Additional greenbelt in 7.37 Ha shall be developed towards the Western side of the plant boundary as committed. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.

(x) The project proponent shall develop a robust monitoring plan for greenbelt development Wildlife Management.

(xi) Post expansion, the total fresh water requirement will be 2160 m^3/day. Approximately 1500 m^3/day will be sourced from the mine pit harvested water and the balance will be drawn through bore wells with permission from the Competent Authority. PP shall make efforts for gradual phasing out of ground water consumption and switching to alternative source of water.

(xii) Rain water harvesting system more than the annual water consumption has to be implemented.

(xiii) All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.

(xiv) Slip roads shall be provided at the gates and along crossings on main roads.

(xv) All internal and connecting road to the Highway shall be black topped/ concreted with suitable load in term of Million Standard Axle (MSA) as per IRC guidelines.

(xvi) Performance monitoring of pollution control equipment shall be taken up yearly and compliance status in this regard shall be reported to the concerned Regional Office of the MoEF&CC.

(xvii) 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.

(xviii) Project proponent shall develop separate drainage system for storm water and industrial waste water and effectively prevent the pollution of natural waterbody.

(xix) Particulate matter emissions from cement mill stacks shall be less than 20 mg/Nm^3 and for CPP less than 30 mg/Nm^3.

(xx) Air cooled condensers shall be used in the captive power plant in place of water-cooled system.

(xxi) As committed, entire waste water shall be treated and reused for plantation and dust suppression within the premises. Also, STP water shall be reused in plantation with a view to conserve fresh water.

(xxii) As committed, 5 villages, namely Bilakalagudur, Bujunur, Gadivemula, Grandhivemula and Pesarvai shall be adopted and will be developed into model villages in next 10 years.

(xxiii) Hot air dryer shall not be installed. Flue gases of preheater shall be used to dry the slag/bottom ash.

(xxiv) DeSOx system shall be provided dry type. NOx level shall be maintained below 600 mg/Nm^3 by using best available technology.

(xxv) Petcoke dosing shall be controlled automatically to control SO2 emission from chimney within the prescribed limits.

(xxvi) The PP shall implement a project specific AQMP (Air Quality Management Plan) with Best practices; shall determine priority pollutants. Pollution prevention approaches to reduce, eliminate, prevent pollution at its source, should be considered, like (but not limited to) are to use less toxic raw materials or fuels, use a less-polluting industrial process, and to improve the efficiency of the process.

(xxvii) The PP shall develop a control strategy and mitigation plan that incorporates the pollution control measures. The Clean Air practices shall be adopted like mechanical collectors, wet scrubbers, fabric filters (baghouses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation.

(xxviii) Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere. The PP to this affect shall implement a time bound Action Plan, and the compliance shall be submitted to IRO, MoEFCC.

(xxix) As the Kundur River is near to the mines of the project, the PP should prepare and implement a River conservation plan; and an adequate robust Erosion control and Soil Conservation Program (like Storm water diversion; Storm water drains with catch pits to trap run off material; Garland drains; Retention walls; Settling Ponds; Wheel washing arrangement; Silt removal from settling ponds & utilization; Greening & Paving; Excavated soil preservation for landscaping) is to be formulated and implemented by the PP.

(xxx) The TDS levels are reported to be high, nearer to the threshold limit and there is also a public hearing grievance relating to crop damage and low yield of crop produce due to water discharge from the plant. The PP shall ensure strict Zero Discharge from the plant and shall support the farmers whose crops have been damaged as per the PH conducted.

(xxxi) There is a government Canal passing through the project area. PP shall ensure all erosion and soil conservation methods and original water flow characters. PP shall ensure that no hazardous, waste water or runoff (including storm runoff) from the plant area shall enter into the canal. The PP shall also maintain the berms on either side of the canal and plant grasses and herbs/shrubs all along the canal on either sides. Further the PP shall also construct a wall parallel to the canal as an additional protection leaving sufficient gap from the canal berms and plantation belt.

(xxxii) As reported by the PP the project area is 263.05 hectares and the plant area is only in 96.52 hectares. PP shall explore the possibility of returning the excess land, especially the area through which the Government's canal is passing through back to the government/ original land owners.

(xxxiii) RO water treatment plants/units and solar lighting committed by the PP to the villages as per the Public hearing shall be provided in the 1st year itself and their maintenance shall be done by the PP in the following years.

(xxxiv) A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

(xxxv) All the recommendations made in the risk assessment report shall be implemented and compliance status in this regard shall be furnished to the Regional Office of the MoEF&CC along with the six monthly compliance report.

(xxxvi) The recommendations of the approved Site-Specific Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned 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 at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R. No. 612 (E) dated 25th S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

iii. The project proponent shall install system carryout to Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions.

iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

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

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

vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.

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

ix. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.

x. Provide wind shelter fence and chemical spraying on the raw material stock piles; and

xi. Provide Low NOX burners as primary measures and SCR /NSCR technologies as secondary measure to control NOX emissions.

xii. Have separate truck parking area and monitor vehicular emissions at regular interval.

xiii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport

xiv. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, 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 25thAugust, 2014 (Cement) and subsequent amendment dated 9thMay, 2016 (Cement) and 10th May, 2016 (in case of Co-processing Cement) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall 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.

ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

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.

ii. Project proponent shall submit a study report within six months on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.

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. As part of Corporate Environment Responsibility (CER) activity, company shall adopt villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.
ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

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

offices of the Government who in turn has to display the same for 30 days from the date of receipt.

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

iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

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

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

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

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

ix. The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.

x. 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).

xi. 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.

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

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

xiv. 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.

xv. 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.

Amendment to Environmental Clearance

Agenda No. 8.7

8.7 Expansion by establishing additional facilities consisting of I/O beneficiation plant of 0.8 MTPA capacity, Pellization plant of 0.6 MTPA, 4x100 TPD DRI Kilns to produce Sponge lron of 1,20,000 TPA, lnduction Furnace of 2x20 T to produce Hot Billets / M.S. Billets of 1,20,000 TPA, Rolling Mill to produce TMT bars / Wire Rod / Strips of 1,20,000 TPA through Hot Charging, manufacturing Ferro Alloy plant of 2x6 MVA capacity to produce 27,360 TPA of Fe Mn (or) 20,520 TPA of Si Mn (or) 10,260 TPA of FeSi (or) 41,040 TPA of Pig lron, Power generation through WHRB of DRI Kilns -10 MW, through FBC of 15 MW & 60,000 nos. of Fly Ash Brick making unit in the existing MS Black Pipe, ERW precision Tube unit by M/s Shree Nakoda Pipe Impex Pvt. Ltd., located at Khamaria Village, Tilda Tehsil, Raipur (D), Chhattisgarh - Amendment to Environmental Clearance.

[Proposal No. IA/CG/IND/277939/2022, File No. IA-J-11011/99/2021-IA-II (I)]

8.7.1 M/s. Shree Nakoda Pipe Impex Pvt. Ltd has made an online application vide proposal no. IA/CG/IND/277939/2022 dated 13.06.2022 along with Form-4 and addendum EIA report and sought for amendment in Environmental Clearance accorded by the Ministry vide File no. IA-J-11011/99/2021-IA-II (I) dated 22.04.2022 w.r.t. amendment in specific conditions stipulated in the EC.

8.7.2 **Name of the EIA consultant:** M/s Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S No 138, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/1922/SA0148 valid till 21.09.2022; Rev. 23, May 09, 2022].

Details submitted by Project proponent

8.7.3 M/s. Shree Nakoda Pipe Impex Pvt. Ltd was granted environmental Clearance by MoEF&CC vide letter No. J IA-J-11011/99/2021-IA-II (I) dated 22.04.2022 for expansion by establishing additional facilities consisting of I/O beneficiation plant of 0.8 MTPA capacity, Pellization plant of 0.6 MTPA, 4x100 TPD DRI Kilns to produce Sponge lron of 1,20,000 TPA, lnduction Furnace of 2x20 T to produce Hot Billets / M.S. Billets of 1,20,000 TPA, Rolling Mill to produce TMT bars / Wire Rod / Strips of 1,20,000 TPA through Hot Charging, manufacturing Ferro Alloy plant of 2x6 MVA capacity to produce 27,360 TPA of Fe Mn (or) 20,520 TPA of Si Mn (or) 10,260 TPA of FeSi (or) 41,040 TPA of Pig lron, Power generation through WHRB of DRI Kilns -10 MW, through FBC of 15 MW & 60,000 nos. of Fly Ash Brick making unit in the existing MS Black Pipe, ERW precision Tube unit.

8.7.4 The instant proposal is for seeking amendment in EC dated 22.04.2022 with respect to following specific conditions stipulated in the EC as follows:

Reference of approved EC	Description as per approved EC	Description as per proposal	Remarks
Special Condition no. (ii)	**Three tier Green Belt shall be developed in a time frame of one year covering 600.16 Ha. area with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC. In addition, Block plantation shall be done on vacant land within the premises of the plant.**	The total land envisaged for the proposed project is **16.281 Ha. (40.230 Acres).** Out of the total land area **5.5 Ha. (13.6 Acres)** of Greenbelt will be developed within the plant premises. 13,750 nos. of saplings will be planted within the plant premises which was mentioned in EIA / EMP report submitted to Honourable MOEF&CC vide proposal no. IA/CG/IND/ 256141/2021 and the same is mentioned in MoM of 2nd meeting of the EAC for Industry-I sector held on 22nd – 23rd March, 2022. Kindly refer Pg. no. 99 in Paragraph No. 2.14.15. However "**Three tier Green Belt shall be developed in a time frame of one year covering 600.16 Ha. area"** mentioned in the Specific Condition of E.C. letter issued on 22-04-2022 was typographical error. Hence PP requests to amend the Specific Condition no. (iii) as below *"**Three tier Green Belt shall be developed in a time frame of one year covering 5.5 Ha. (13.6 Acres) area with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concern Regional Office of the MoEF&CC. In addition, Block plantation shall be done on vacant land within the premises of the plant.*"**	PP reported that the details is mentioned in Pg. no. 2.11 of CHAPTER # 2 of EIA report vide proposal no. IA/CG/IND/ 256141/2021

Reference of approved EC	Description as per approved EC	Description as per proposal	Remarks
Special Condition no. (viii)	The water requirement after the proposed expansion project is estimated as 2000 m^3/day and shall be met from also (Janjgira) Tank / Shivnath River. **No ground water abstraction is permitted.**	It was mentioned in EIA / EMP report that Source of Water for the project will be partly from ground water (490 KLD) & partly from Jalso(Janjgira) Tank / Shivnath River / Any other Sources. (1510 KLD). A copy of the NOC from CGWA for 490 KLD obtained has also been submitted along with the Final EIA / EMP report & Form-2 submitted. **Also, there is an EDS sought vide dated 16th February 2022 after uploading Form-2 stating that NOC from CGWA permits withdrawal of only 490 KLD of Water and the required Quantity is 2000 KLD. Please clarify from where remaining water will be sourced.** For which **PP submitted a reply** stating the water will be sourced partly from ground water (490 KLD) & partly from Jalso (Janjgira) Tank / Shivnath River (1510 KLD) or any other sources. The project proponent have executed MOU with the Government of Chhattisgarh & State Investment Promotion Board (SIPB) of Govt. of Chhattisgarh has given assurance letter for supply of Surface water from Jalso (Janjgira) Tank and/or any other sources. **Hence,** ***PP requests to consider to permit 490 KLD of groundwater & 1510 KLD of surface water from Jalso (Janjgira) Tank / Shivnath River (1510 KLD) or any other sources.*** PP also confirms that RWH will be implemented.	The same is mentioned in Pg. no. 4.19 of **CHAPTER # 2** of EIA report & **Form-2** which was submitted to honourable Ministry vide proposal no. IA/CG/IND/ 256141/2021

8.7.5 There is no change in configuration & capacity of units in granted EC.

Deliberation by the Committee

8.7.6 The Committee noted the following:

i. The instant proposal is for seeking amendment in EC dated 22.04.2022 with respect to following specific conditions stipulated in the EC as follows as detailed in para 8.7.4 above.

ii. M/s. Shree Nakoda Pipe Impex Pvt. Ltd was granted environmental Clearance by MoEF&CC vide letter No. J IA-J-11011/99/2021-IA-II (I) dated 22.04.2022 for expansion by establishing additional facilities consisting of I/O beneficiation plant of 0.8 MTPA capacity, Pellization plant of 0.6 MTPA, 4x100 TPD DRI Kilns to produce Sponge lron of 1,20,000 TPA, lnduction Furnace of 2x20 T to produce Hot Billets / M.S. Billets of 1,20,000 TPA, Rolling Mill to produce TMT bars / Wire Rod / Strips of 1,20,000 TPA through Hot Charging, manufacturing Ferro Alloy plant of 2x6 MVA capacity to produce 27,360 TPA of Fe Mn (or) 20,520 TPA of Si Mn (or) 10,260 TPA of FeSi (or) 41,040 TPA of Pig lron, Power generation through WHRB of DRI Kilns -10 MW, through FBC of 15 MW & 60,000 nos. of Fly Ash Brick making unit in the existing MS Black Pipe, ERW precision Tube unit.

iii. The EAC noted that the total land envisaged for the proposed project is 16.281 Ha. (40.230 Acres). However, in the issued EC specific condition no iii. w.r.t. Greenbelt has been inadvertently mentioned 600.16 Ha to be developed in a time frame of one year. However, 33% of the total project land i.e. around 5.5 Ha. (13.6 Acres) of Greenbelt shall have to be developed within the plant premises.

iv. The EAC also noted that in the issued EC, specific condition (ix) states that water requirement of 2000 m^3/day shall be met from also (Janjgira) Tank / Shivnath River and no ground water abstraction is permitted. Project proponent requests to permit 490 KLD of groundwater & 1510 KLD of surface water from Jalso (Janjgira) Tank / Shivnath River (1510 KLD) or any other sources.

v. The Member Secretary informed to the EAC that the approved minutes of the EAC Meeting immediately be uploaded on Parivesh Portal. PP/Consultant to read the approved minutes and may request the EAC/Ministry for corrections. In this instant case, the Committee noted that the PP/Consultant was not vigilant and doesn't bother to read the minutes and report to the EAC/Ministry to rectify the typological errors at the time of MoM uploaded on-line on 05/04/2022 (2nd meeting of the EAC for Industry-I sector held on 22nd – 23rd March, 2022). EAC has instructed the PP/Consultant to take utmost care in future.

Recommendations of the Committee

8.7.7 After deliberations, the Committee **recommended** for amendment in Environment Clearance no. IA-J-11011/99/2021-IA-II (I) dated 22.04.2022 w.r.t. amendment in specific conditions stipulated in the EC as detailed in para 8.7.4 above.

Consideration in ToR Proposal

Agenda No. 8.8

8.8 Green Field Project 2.2 MTPA Integrated Steel Plant at Khasra No. 746, 747, 1320, 1322/1 and 1322/3, Village- Sarora, Tahsil- Tilda, District- Raipur, Chhattisgarh by M/s Godawari Power & Ispat Limited– Consideration of TOR.

[Proposal No. IA/CG/IND/263125/2022; File No. IA-J-11011/25/2022-IA-II(IND-I)]
[M/s. Pollution and Ecology Control Services; valid upto 16.10.2022]

8.8.1 M/s. Godawari Power and Ispat Limited has made an application online vide proposal no. IA/CG/IND/263125/2022 dated 14.06.2022 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No.3(a) Metallurgical Industries (Ferrous and Non/ferrous), 2(b) Mineral Beneficiation, 4(b) Coke Oven Plants and 1(d) Thermal Power Plant under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

8.8.2 Name of the EIA consultant: M/s. Pollution and Ecology Control Services [S No 74, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2023/SA 0165 valid till 16.10.2022; Rev. 23, May 09, 2022].

Details submitted by Project proponent

8.8.3 The project of M/s. Godawari Power and Ispat Limited located at Khasra No. 746, 747, 1320, 1322/1 and 1322/3, Village- Sarora, Tahsil- Tilda, District- Raipur, Chhattisgarh is for proposed greenfield Integrated Steel Plant [Beneficiation Plant- 2 x 1.8 MTPA, Pellet Plant- 2 x 1.5 MTPA, Coke Oven Plant 2 x 0.4 MTPA, Sinter Plant- 1 x 1.2 MTPA, Blast Furnace- 2 x 1.0 MTPA, Steel Melting Shop (BOF/ZPF- 2 x 1.1 MTPA, LRF- 2 X 1.1 MTPA), VD/Vod- 1 X 1.1 MTPA, Billet Caster- 1 x 0.6 MTPA, Slab Caster- 1 X 1.0 MTPA, Slab Caster- 1 x 1.8 MTPA, Long Product Mill- 1 x 0.6 MTPA, Hot Strip Mill- 1 x 1.0 MTPA, Hot Strip Mill- 1 x 1.8 MTPA, Oxygen Plant (VPSA- 2 x 350 TPD, Cryogenic- 2 x 325 TPD, Cold Rolled Complex, Power Plant 330 MW, Lime or Dolo Plant 2x350 TPD, Ferro Alloy Plant 6x9 MVA].

8.8.4 Environmental site settings:

S. No.	Particulars	Details	Remarks
i.	Total land	233.9 ha [Govt. land]	As per Toposheet No. 64 G/10 (Old) and F44P10 (New) published by Survey of India, Government of India, this land is shown as Bilari RF, however, DFO, Forest Division, Raipur (Chhattisgarh), Vide letter No./W.T.A./RA/2995 dated 08/10/2021 has certified that the proposed land does not falls under RF/PF/Orange Area or Chota Bade Jhar

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td></td><td>Ke Jungle. It is also certified that state forest department do not have any objection on it, if this proposed land is transferred to Industry Department, Government of Chhattisgarh for industrial purpose by Revenue Department.

MOU has been signed between the Government of Chhattisgarh and Godawari Power and Ispat Limited for setting up of proposed project and in-principal approval for allotment of Government Revenue Land is submitted.</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>MoU has been signed between Government of Chhattisgarh and Godawari Power and Ispat Limited for proposed unit.</td><td>-</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>R&R is not applicable.</td><td>-</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site.</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A.</td><td>21°34'55.67"N</td><td>81°44'46.63"E</td></tr><tr><td>B.</td><td>21°34'26.71"N</td><td>81°45'32.50"E</td></tr><tr><td>C.</td><td>21°33'45.12"N</td><td>81°45'2.92"E</td></tr><tr><td>D.</td><td>21°34'1.95"N</td><td>81°44'35.13"E</td></tr><tr><td>E.</td><td>21°34'42.94"N</td><td>81°44'14.29"E</td></tr></table></td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>279 m above mean sea level</td><td></td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No involvement of Forest Land.</td><td>As per Toposheet No. 64 G/10 (Old) and F44P10 (New) published by Survey of India, Government of India, this land is shown as Bilari RF, however, DFO, Forest Division, Raipur (Chhattisgarh), Vide letter No./W.T.A./RA/2995 dated 08/10/2021 has certified that the proposed land does not falls under RF/PF/Orange Area or Chota Bade Jhar Ke Jungle. It is also certified that state forest department do not have any objection on it, if this proposed land is transferred to Industry</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td></td><td>Department, Government of Chhattisgarh for industrial purpose by Revenue Department.</td></tr>
<tr><td>vii.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>Project site: Nil

Study area
<table>
<tr><th>Water body</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Gadaria Nala</td><td>71 m</td><td>N</td></tr>
<tr><td>Shivnath river</td><td>5Km</td><td>WNW</td></tr>
<tr><td>Mahanadi Canal</td><td>2.5 Km</td><td>E</td></tr>
<tr><td>Jamuniya Nadi</td><td>7.2 Km</td><td>E</td></tr>
</table></td><td>-</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td>Nil.

List of Reserved and protected forests:
Bilari Reserve Forest FC No. 40, 41 : 2 Km</td><td></td></tr>
</table>

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

S. No.	Plant Equipment/ Facility	Configuration	Capacity		
			Phase I	Phase II	Total
1	Benefication Plant		1 X 1.8 MTPA	1 X 1.8 MTPA	3.6 MTPA
2	Pellet plant (along with 8x4000 Nm3/hour Coal gasifier)		1 X 1.5 MTPA	1 X 1.5 MTPA	3.0 MTPA
3	Coke Oven plant		1 X 0.4 MTPA	1 X 0.4 MTPA	0.8 MTPA
4	Sinter Plant Future Provision	1X125 m^2		1 X 1.2 MTPA	1.2 MTPA

S. No.	Plant Equipment/ Facility	Configuration	Capacity		
			Phase I	Phase II	Total
5	Blast Furnace with pig casting machine	800 m^3	1 X 1.0 MTPA	1 X 1.0 MTPA	2.0 MTPA
6	Steel Melting Shop				
	BOF/ZPF	1x80 tonnes/heat	1 X 1.1 MTPA	1 X 1.1 MTPA	2.2 MTPA
	LRF	1x80 tonnes/heat	1 X 1.1 MTPA	1 X 1.1 MTPA	2.2 MTPA
	VD/Vod	1x80 tonnes/heat	1 X 1.1 MTPA		1.1 MTPA
7	Billet Caster	5 stand caster	1 X 0.6 MTPA		0.6 MTPA
8	Slab Caster no-01		1 X 1.0 MTPA		1.0 MTPA
9	Slab Caster no-02			1 X 1.8 MTPA	1.8 MTPA
10	Long Product Mill		1 X 0.6 MTPA		0.6 MTPA
11	Hot Strip Mill no-01		1 X 1.0 MTPA		1.0 MTPA
12	Hot Strip Mill no-02			1 X 1.8 MTPA	1.8 MTPA
13	Oxygen				
	VPSA		1 X 350 TPD	1 X 350 TPD	700 TPD
	Cryogenic		1 X 325 TPD	1 X 325 TPD	650 TPD
14	Cold Rolled Complex				
	HR /CR/Galvanized ERW Tube mill		1 X 0.25 MTPA	1 X 0.30 MTPA	0.55 MTPA
	Ductile Iron Pipe Plant		1X0.4 MTPA		0.40 MTPA
	Hot dip tube galvanizing unit		1 X 0.25 MTPA		0.25 MTPA
	Pickling Lime with ARP		1 X 1.0 MTPA		1.0 MTPA
	Cold Rolling Line		1 X 1.0 MTPA		1.0 MTPA
	HRC CTL		1 X 0.2 MTPA		0.2 MTPA
	HRC PO		1 X 0.2 MTPA	1 X 0.30 MTPA	0.5 MTPA
	CRCA CTL		1 X 0.1 MTPA	1X0.20 MTPA	0.30 MTPA

S. No.	Plant Equipment/ Facility	Configuration	Capacity		
			Phase I	Phase II	Total
	Color Coated Line		1 X 0.35 MTPA		0.35 MTPA
	Galvanizing line		1 X 0.25 MTPA		0.25 MTPA
	Galvalume Line		1 X 0.6 MTPA		0.6 MTPA
15	Power Plant (with 1X180 MW standby TG set in Phase-1 and 80 tph Boiler* as standby in Phase-1)		1 X 180 MW	1 X 150 MW	330 MW
16	Emergency DG set		5 MW	5 MW	10 MW
17	Lime/dolo Plant		1 X 350 TPD	1 X 350 TPD	700 TPD
18	Ferro alloy (120,000 tpa)		3X9 MVA	3 X 9 MVA	6 X 9 MVA
19	Miscellaneous Equipment Railway siding, Wagon tipplers, Stacker & Reclaimer, Material Handling System, Raw Material and Finished Good Stockyard, Water Handling and Distribution Systerm etc.	To be decided at the time of detailed Engineering			

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

S.No.	Raw Material	Total Quantity in MnTPA: Phase 1 (Handling & Moisture)	Total Quantity in MnTPA : Phase 2 (Handling & Moisture)	Total (Phase-1 + Phase-2)	Source Buyout
1.0	Iron Ore Fines	1.80	1.80	3.60	Domestic
2.0	Bentonite	0.01	0.01	0.02	Domestic
3.0	Dolomite	0.23	0.23	0.46	Domestic
4.0	Limestone	0.30	0.30	0.59	Domestic / Imported
5.0	Coking Coal for Coke Oven				
5.1	Hard	0.32	0.32	0.65	Imported

5.2	Soft	0.11	0.11	0.22	Imported
5.3	Semi Soft	0.11	0.11	0.22	Imported
6.0	Coal for Power Plant	0.79	0.79	1.59	Domestic / Imported
7.0	Coal for PCI	0.20	0.20	0.40	Domestic / Imported
8.0	Coke Fines for Sinter	0.07	0.07	0.15	Domestic
9.0	Scrap/DRI	0.28	0.28	0.56	Domestic / Imported
10.0	Acid for Pickling Line	0.01	0.02	0.03	Domestic
11.0	Zinc	0.03	0.01	0.04	Domestic
12.0	Aluminium	0.005	0.01	0.015	Domestic
13.0	Paint	0.0014	0.004	0.0054	Domestic
14.0	Primer	0.0007	0.002	0.0027	Domestic
15.0	Thinner	0.0003	0.001	0.0013	Domestic
16.0	Ferro Alloys	0.10	0.02	0.12	Domestic
17.0	Manganese for Ferro Alloys	0.15	0.15	0.30	Domestic / Imported
18.0	Fluxes (Limestone and Dolomite) for Ferro Alloys	0.01	0.01	0.03	Domestic
19.0	Coal for Producer Gas Plant	0.21	0.21	0.42	Domestic
20.0	Coal / Coke for Ferro Alloys	0.03	0.03	0.06	Domestic / Imported
21.0	Pure Magnesium	0.06	-	0.06	Domestic / Imported
22.0	Cement	0.20	-	0.20	Domestic

8.8.7 The total water requirement for the proposed project will be 20 MCM per annum in 1st Phase and 10 MCM per annum in 2nd Phase, that will be met from Shivnath River and only 0.18 MCM per year which is required only for Domestic use will be taken from ground water with prior approval of the competent authority.

8.8.8 The power requirement for the proposed project is estimated at 330 MW, which will be obtained from the captive power plant.

8.8.9 The capital cost of the project is Rs 5000 Crores and the capital cost for environmental protection measures is proposed as Rs. 500 Crores. The proposed project will employ around 10000 people, directly or indirectly (both the phases put together). During operation phase 2000 Admin Staff and 8000 Production Staff thus 10000 persons will be required additionally.

8.8.10 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.

8.8.11 Proposed Terms of Reference: [Baseline data collection period: 1st October to 31st December 2021]

Attributes	**Sampling**	
A. Air	No. of stations	Frequency
a. Meteorological parameters	1	Continuously 24 hrs once for 13 weeks during study period.
a. AAQ parameters	8	Continuously 24 hrs once for 13 weeks during study period.
A. Noise	8	Continuously 24 hrs once during study period.
A. Water	As per IS standards	
Surface water/Ground water quality parameters	Surface Water 8 Ground Water 8	Once during study period.
A. Land		
a. Soil quality b. Land use	8 Study Area	Once during study period.
A. Biological a. Aquatic b. Terrestrial	Random sampling/Quadrate Method	Once during study period.
A. Socio-economic parameters	Field survey through questionnaire, group discussion and random Sampling in the study area.	Once during study period.

8.8.12 M/s. Godawari Power and Ispat Limited had earlier applied for ToR vide proposal no. IA/CG/IND/252827/2022 dated 06/02/2022. The proposal was considered in the 1st meeting of the EAC for Industry-I sector held on 5 - 6th March, 2022 wherein EAC recommended the proposal to be returned in its present form and revised application as per the provisions of EIA Notification, 2006 shall be submitted to after obtaining clarification from the PCCF, State Forest Department, Govt. of Chhattisgarh regarding the legal status of the proposed project site.

8.8.13 The PP has again applied for TOR after obtaining the requisite information as per the recommendation of the Committee. The proposal is considered in the 8th meeting of the EAC for Industry-I sector held on 23-24th June, 2022. The deliberations and recommendations of the Committee are as follows:

Deliberation by the Committee

8.8.14 The Committee noted the following:

i. Instant proposal is for proposed greenfield Integrated Steel Plant [Beneficiation Plant- 2 x 1.8 MTPA, Pellet Plant- 2 x 1.5 MTPA, Coke Oven Plant 2 x 0.4 MTPA, Sinter Plant- 1 x 1.2 MTPA, Blast Furnace- 2 x 1.0 MTPA, Steel Melting Shop (BOF/ZPF- 2 x 1.1 MTPA, LRF- 2 X 1.1 MTPA), VD/Vod- 1 X 1.1 MTPA, Billet Caster- 1 x 0.6 MTPA, Slab Caster- 1 X 1.0 MTPA, Slab Caster- 1 x 1.8 MTPA, Long Product Mill- 1 x 0.6 MTPA, Hot Strip Mill- 1 x 1.0 MTPA, Hot Strip Mill- 1 x 1.8 MTPA, Oxygen Plant (VPSA- 2 x 350 TPD, Cryogenic- 2 x 325 TPD, Cold Rolled Complex, Power Plant 330 MW, Lime or Dolo Plant 2x350 TPD, Ferro Alloy Plant 6x9 MVA].

ii. The EAC deliberated on the proposal. Based on the KML file presented by the PP, the proposed Unit is green field project.

iii. The PP reported that as per Toposheet No. 64 G/10 (Old) and F44P10 (New) published by Survey of India, Government of India, this land is shown as Bilari RF, however, DFO, Forest Division, Raipur (Chhattisgarh), Vide letter No./W.T.A./RA/2995 dated 08/10/2021 has certified that the proposed land does not falls under RF/PF/Orange Area or Chota Bade Jhar Ke Jungle. It is also certified that state forest department do not have any objection on it, if this proposed land is transferred to Industry Department, Government of Chhattisgarh for industrial purpose by Revenue Department.

iv. The EAC also deliberated on the submissions of clarification from the PCCF, Chhattisgarh vide letter dated 19.05.2022 regarding the legal status of the proposed project site. PCCF, Chhattisgarh confirmed that the instant project area does not belong to any category of forest land. EAC deliberated the issues and found it satisfactory.

v. A canal and seasonal drain was observed nearby the project site. PP has to confirm the same and if exist, should prepare a drainage conservation plan.

Recommendations of the Committee

8.8.15 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 ToRs enclosed at Annexure-1 read with additional ToRs at Annexure-2:

(i) A canal and seasonal drain passing through project site. The PP shall submit the suitable steps /conservation plan along with contouring, Run -off calculations, disposal etc. A robust and full proof Drainage Conservation scheme to protect the natural drainage/water bodies and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.

(ii) Cumulative impact assessment for the existing integrated steel & power plants and proposed modernization & expansion project shall be carried out including the impact on riverine ecology of the Shivnath river.

(iii) The PP reported that as per Toposheet No. 64 G/10 (Old) and F44P10 (New) published by Survey of India, Government of India, this land is shown as Bilari RF, however, DFO, Forest Division, Raipur (Chhattisgarh), vide letter No./W.T.A./RA/2995 dated 08/10/2021 has certified that the proposed land does not falls under RF/PF/Orange Area or Chota Bade Jhar

Ke Jungle. It is also certified that state forest department do not have any objection on it, if this proposed land is transferred to Industry Department, Government of Chhattisgarh for industrial purpose by Revenue Department. The EAC also deliberated on the submissions of clarification from the PCCF, Chhattisgarh vide letter dated 19.05.2022 regarding the legal status of the proposed project site. PCCF, Chhattisgarh confirmed that the instant project area does not belong to any category of forest land. EAC deliberated the issues and found it satisfactory.

(iv) Tailing management plan shall be included in EIA.

(v) Air cooled condensers shall be used in the power plant.

(vi) Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.

(vii) Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(viii) PP should conduct Public Hearing and all issues should be addressed in the EIA/EMP.

(ix) The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.

(x) PP should submit action plan for rainwater harvesting system.

(xi) Action plan for 100 % solid waste utilization shall be submitted.

(xii) PP shall explore the possibility of plastic waste utilization in the Plant/Unit process.

(xiii) PP shall provide the plan for adoption of village near by the project site.

(xiv) Project proponent shall prepare layout plan showing all internal roads minimum 6m width and 9m turning radius with proper looping for smooth traffic flow, including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing.

(xv) Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.

(xvi) Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames", when PP comes for EC proposal. This study shall be formulated keeping in view of India's Net-zero commitment at the COP-26 Climate Summit.

(xvii) As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.

(xviii) Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by sea/rail/road with anticipated vessels/rakes/vehicles details, line source modelling and infrastructure strengthening details etc., These details shall be included in the EIA report.

(xix) Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

(xx) Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.

(xxi) Mass balance as well as energy balance for the integrated steel plant shall be submitted.

(xxii) Socio-economic survey in the project influence area that is 10 Kms radial coverage from the project site shall be carried out and included as a part of EIA report.

(xxiii) Characteristics of the coal to be used in the steel and power plant shall be submitted along with the EIA report.

(xxiv) Comprehensive risk assessment study for the entire steel complex shall be carried out and submitted.

(xxv) Monitoring and control of NO_x, SO_2 and CO gases from the submerged-arc furnace must be included in the pollution control scheme.

(xxvi) CO monitors may be fitted at strategic locations in the industry.

(xxvii) The total quantity of PM generated per annum and the percentage of this captured by the pollution control equipment must be reported regularly.

(xxviii) A Plan of Action for disposal of e-waste must be drawn up and implemented.

(xxix) A Standard Operation Procedure for arresting emissions (PM as well as gas) when these approach critical values may be established.

(xxx) PP shall prepare a cumulative EIA, especially for Air quality considering all the surrounding facilities.

(xxxi) As committed by the PP, the PP may formulate a Village Adoption program consisting of need-based community development activities, in consultation with the district administration and the village panchayats.

(xxxii) During operational phase-at coke oven areas the PP is advised to measure benzene, toluene, xylene and Polycyclic Aromatic Hydrocarbons in the occupational environments and the concentrations found to be compared with permissible limits for these chemicals as per Indian Factories Act, 1948.

(xxxiii) An action plan for Green Belt development consisting of 3 tiers of plantations of native species all along the periphery of the project of adequate width shall be raised in 33% of total area with a tree density of not less than 2500 per ha within a time frame of one year shall be submitted. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. PP shall start the green belt program in the monsoon period of 2022 all along the boundary of the project, as committed by PP.

Any other items with the permission of the Chair

Agenda No. 8.9

8.9 Clarification sought by M/s Exide Industries Limited for the applicability of EC for lead acid battery manufacturing units involving melting of lead for grid casting and oxide making etc. – regarding.

[[File No: IA-Z-11013/30/2022-IA-II(IND-I)] [M/s Exide Industries Limited]

8.9.1 The matter was arising out of the clarification sought by Tamil Nadu State Pollution Control Board for the expansion of battery manufacturing unit by M/s. Exide Industries Limited located at Hosur, Tamil Nadu. In this regard, the matter was considered by the Expert member and after deliberations it was opined that Manufacturing of Lead Acid Batteries from lead ingots *inter-alia* involves secondary metallurgical process, such as melting of lead for grid casting, oxide making etc. Hence, the manufacturing of Lead Acid Battery from lead ingots shall require prior EC under schedule 3(a) of EIA Notification 2006, as lead is a toxic heavy metal. Subsequently, the project proponent has submitted a representation to the Ministry on 12/04/2022 stating that they are manufacturing Lead Acid Batteries from lead ingots having purity of 99.97% through crucible furnace. The said activity does not fall within the purview of the EIA, 2006.

8.9.2 It has been decided by the Competent Authority that representation of the proponent shall be placed before the EAC-industry-1 and Dr. Indranil Chattoraj, Director, National Metallurgical Laboratory may be co-opted as an expert to examine the applicability of EC for manufacturing Lead Acid Batteries from lead ingots having purity of 99.97% through crucible furnace.

8.9.3 Dr. Indranil Chattoraj, Director, National Metallurgical Laboratory and representative of Policy Sector of IA Division has attended the meeting.

8.9.4 **The PP submitted that they do not have metallurgical expert to explain the applicability of secondary metallurgical processes for the production of Lead Acid Batteries and requested to the EAC to grant an opportunity to explain the same. The EAC has accepted the request of PP for making detailed technical presentation.**

8.9.5 After, detailed deliberation and based on the request of PP, the Committee suggested the PP to submit the technical details to prove why the production of Lead Acid Batteries doesn't fall under schedule 3(a) of EIA Notification 2006, secondary metallurgical processes.

Agenda No. 8.10

8.10 Expert opinion/clarification regarding coverage of Activities under Secondary Metallurgy as per the EIA Notification-2006 and amended thereof by M/s Ratnamani Metals and Tube Limited, located at Vastrapur, Ahmedabad, Gujarat- regarding.

[[File No: IA-Z-11013/27/2022-IA-II(IND-I), M/s Ratnamani Metals and Tube Limited]]

Project Proponent vide an email dated 23rd June 2022 has informed the Ministry that due to unavoidable circumstances, they are unable to attend the meeting. They requested the Ministry to consider the proposal in the next EAC meeting. The proposal was **deferred** and EAC recommended that the proposal shall be placed in the EAC after the request of the project proponent.

The meeting ended with vote of thanks to the Chair.

***

ANNEXURE –1

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

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

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco/sensitive areas and environmentally sensitive places)

iii. Co/ordinates (lat/long) of all four corners of the site.

iv. Google map/Earth downloaded of the project site.

v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.

vii. Landuse break/up of total land of the project site (identified and acquired), government/private / agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)

viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area

ix. Geological features and Geo/hydrological status of the study area shall be included.

x. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)

xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.

xii. R&R details in respect of land in line with state Government policy.

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

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).

ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha).*

iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.

iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis/à/vis the project location and the recommendations or comments of the Chief Wildlife Warden/thereon.

v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.

vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6. **Environmental Status**

i. Determination of atmospheric inversion level at the project site and site/specific micro/meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.

ii. AAQ data (except monsoon) at 8 locations for PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre/dominant wind direction, population zone and sensitive receptors including reserved forests.

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

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

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

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

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

viii. Soil Characteristic as per CPCB guidelines.

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

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

xi. Socio/economic status of the study area.

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

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

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

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of

raw materials and finished products and wastes (large quantities) by rail or rail/cum road transport or conveyor/cum/rail transport shall be examined.

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

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

vi. Measures for fugitive emission control

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

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

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

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

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

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

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

8. **Occupational health**

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

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

iii. Annual report of health status of workers with special reference to Occupational Health and Safety.

iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

9. **Corporate Environment Policy**

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have system of reporting of non/compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

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

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

i. All documents shall be properly indexed, page numbered.
ii. Period/date of data collection shall be clearly indicated.
iii. Authenticated English translation of all material in Regional languages shall be provided.
iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA/EMP Report.
vi. The index of the final EIA/EMP report must indicate the specific chapter and page no. of the EIA/EMP Report

vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J/11013/41/2006/IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.

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

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

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ANNEXURE-2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

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

ADDITIONAL ToRs FOR PELLET PLANT

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

ADDITIONAL ToRs FOR CEMENT INDUSTRY

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

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

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

ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY

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

ADDITIONAL ToRs FOR COKE OVEN PLANT

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

5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.

ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

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

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

Executive Summary

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

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

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ANNEXURE-3

List of the Expert Appraisal Committee (Industry-1) members participated during Video Conferencing (VC) meeting

S. No.	Name	Position	23/06/2022	24/06/2022
1.	Shri. Rajive Kumar	Chairman	Present	Present
2.	Dr. S. Ranganathan	Member	Present	Present
3.	Dr. Ranjit Prasad	Member	Present	Present
4.	Dr. E V R Raju	Member	Present	Present
5.	Dr. S. K. Singh	Member	Present	Present
6.	Dr. Jai Krishna Pandey	Member	Present	Present
7.	Dr. Dipankar Shome	Member	Present	Present
8.	Dr. Tejaswini Ananthkumar	Member	Present	Present
9.	Dr. Hemant Sahasrabuddhe	Member	Present	Present
10.	Dr. B. N. Mohapatra, DG, (Representatives of NCCBM)	Member	*Absent*	*Absent*
11.	Shri Nazimuddin, Scientist 'F' (Representative of CPCB)	Member	Present	Present
12.	Dr. S. Raghavan, Scientist 'D' (Representative of National Institute of Occupational Health (NIOH)	Member	Present	Present
13.	Dr. Sanjay Bist, Scientist 'E' (Representative of Indian Meteorological Department)	Member	Present	*Absent*
14.	Dr. R.B. Lal, Scientist E, MoEFCC	Member Secretary	Present	Present
Officials from MoEF&CC				
15.	Dr. Rajesh Prasad Rastogi	Scientist 'C'	Present	Present
16.	Dr. Sandeepan B.S.	Scientist 'B'	Present	Present

ANNEXURE-4

Approval of EAC Chairman

Email **Additional Director MoEFCC Dr R B LAL**

Re: Approval of draft minutes of the 8th EAC (Industry 1 Sector) meeting held during June 23-24, 2022

From :	chairman eac ind 1 <chairman.eac.ind.1@gmail.com>	Mon, Jul 04, 2022 09:14 AM
Subject :	Re: Approval of draft minutes of the 8th EAC (Industry 1 Sector) meeting held during June 23-24, 2022	
To :	Additional Director MoEFCC Dr R B LAL <rb.lal@nic.in>	
Cc :	ranganathan metals <ranganathan.metals@gmail.com>, ranjitnitj@gmail.com, rajuevr60@gmail.com, sksinghdce@gmail.com, jaikrishnapandey@gmail.com, dshome61@gmail.com, tejaswini acf <tejaswini.acf@gmail.com>, sshemant 801 <sshemant_801@rediffmail.com>, NCCBM DIRECTOR GENERAL <dg@ncbindia.com>, Nazimuddin <nazim.cpcb@nic.in>, Raghavan S <raghuharihar@gov.in>, raghuharihar@yahoo.co.in, Sanjay Bist <sanjay.bist@imd.gov.in>	

Dear Dr. Lal,

The draft minutes of VIII EAC-Industry-1 meeting are approved. Please do the needful.

Best wishes

Rajive Kumar
Chairman-EAC-Industry-1

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