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

Date of zero draft MoM sent to Chairman: 02/02/2022
Approval by Chairman: 03/02/2022
Uploading on PARIVESH: 03/02/2022

Summary record of the Fifty Second (52nd) meeting of Re-Constituted Expert Appraisal Committee (REAC) held on 27th and 28th January, 2022 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) Notification, 2006.

The Fifty Second meeting of the Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environment Appraisal of Industry-1 Sector Projects was held on **27th and 28th January, 2022** in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the ongoing Corona Virus Disease (Covid-19) pandemic. The list of EAC attendees is as follows:

S. No.	Name	Position	27/01/2022	28/01/2022
1.	Dr. Chhavi Nath Pandey	Chairman	Present	Present
2.	Dr. Kawaljeet Singh, Scientist 'E', CPPRI.	Member	Present	--
3.	Dr. M.K.Gupta, Director, CPPRI.	Member	--	Present
4.	*Dr. Siddharth Singh,*	*Member*	*Absent*	*Absent*
5.	Dr. Jagdish Kishwan	Member	Present	Present
6.	Dr. Tejaswini Ananth Kumar	Member	Present	Present
7.	Dr. G.V. Subramanyam	Member	*Absent*	*Absent*
8.	Shri. Ashok Upadhyaya	Member	Present	Present
9.	Shri. Rajendra Prasad Sharma	Member	Present	Present
10.	*Dr. Sanjay Deshmukh*	*Member*	*Absent*	*Absent*
11.	Prof. S.K. Singh	Member	Present	Present
12.	*Dr. R. Gopichandran*	*Member*	*Absent*	*Absent*
13.	Shri Jagannadha Rao Avasarala	Member	*Absent*	*Absent*
14.	Shri. J.S. Kamyotra	Member	Present	Present
15.	Dr. Manoranjan Hota	Member	--	Present
16.	Dr. Sukumaran Jeyakrishanan	Member	--	Present
Officials from MoEF&CC				
17.	Shri. Sundar Ramanathan	Member Secretary	Present	Present
18.	Dr. Sandeepan B.S.	Scientist 'B'	Present	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 51st meeting held during 11-12th January, 2022 were confirmed by the EAC as already uploaded on PARIVESH.

27th January, 2022

52.1 Expansion of Integrated Steel Plant from 3.0 to 4.5 MTPA by change in EC configuration of 5.5 MTPA Integrated Steel Plant by **M/s. Bhushan Power & Steel Limited** located at Village Thelkoloi, Post Lapanga, Tehsil Rengali, **District Sambalpur, Odisha** [Online Proposal No. IA/OR/IND/234756/2021, File No. IA-J-11011/40/2009-IAII(I)] **– Environment Clearance under para 7 (ii) of EIA Notification 2006 – regarding.**

52.1.1 M/s. Bhushan Power & Steel Limited (BPSL) has made an online application vide proposal no. IA/OR/IND/234756/2021 dated 04/01/2022 along with copy of EIA/EMP report, Form – 2 and certified compliance report seeking Environment Clearance (EC) under the provisions of para 7(ii) of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & nonferrous), 2 (a) Coal Washeries, 2(b) Mineral Beneficiation, 1(d) Thermal Power Plants and 4(b) Coke oven plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central level.

52.1.2 The representatives of the project proponent along with their EIA consultant – M/s. M. N. Dastur & Co. (P) Limited participated in the meeting.

Observations of the Committee

52.1.3 The committee noted following discrepancies:

i. As per the KML file uploaded on Parivesh, there are five parcels of land indicated as a project site in the KML file. However, the said file is not in consonance with the plant lay out given in the slide no. 5 of the presentation made before the EAC.

ii. As per the EC accorded on 06/12/2016, the total land requirement for the expansion was 284 ha. Further, as per the EIA report submitted as part of expansion EC, the total area available with the proponent was reported to be 2050.32 acres. Now, the total land under para 7(ii) has been projected as 2348.07 acres. Thus, conflicting statements have been made with respect to land area available with the PP. No explanation is made available in this regard.

iii. As per the implementation status, it has been reported that 1.0 MTPA coke oven plant has been commissioned. However, as per the CTO uploaded on Parivesh, only 0.5 MTPA has been commissioned.

iv. As per the implementation status, it has been reported that 506 MW power plant has been commissioned. However, as per the CTO uploaded on Parivesh, only 406 MW has been commissioned.

v. As per the application submitted, green belt will be developed in 328 acres of land (only 17.5 % of the total area). PP has proposed to plant 450 acres greenery outside the plant area at two -three locations away from the plant to make it 41.5 % of the total area. Besides, there is a 518 acres of land vacant in the existing plot left for future expansion. PP does not have adequate land for within the project site to develop 33% of total area as a green belt.

vi. Pollution load calculations have not been furnished with respect to the EC granted on 6/12/2016 vis-à-vis proposed modification sought under instant proposal.

Recommendations of the Committee

52.1.4 In view of the aforementioned discrepancies, the Committee recommended to return the proposal in its present form and submit the revised application as per the provisions of EIA Notification, 2006.

52.2 Expansion of Existing Sponge Iron Plant capacity from 100 TPD (2x50 TPD) to 300 TPD (2x100 TPD) and 3 MW captive Power Generation Plant by **M/s. Mahamanav Ispat Pvt. Ltd.** located at Belagal Village, Ballari Taluk, **Ballari District, Karnataka**. [Online Proposal No. IA/KA/IND/238994/2021, File No. J-11011/287/2020-IA. II (I) – **Environment Clearance – regarding.**

52.2.1 M/s. Mahamanav Ispat Private Limited has made an online application vide proposal no. IA/KA/IND/238994/2021 dated 07/01/2022 along with copy of EIA/EMP report, Form – 2 and certified 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 and Non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

Details submitted by Project proponent

52.2.2 The details of the ToR are furnished as below:

Date of Application	Consideration	Details	Date of Accord	ToR Validity
11/11/2020	Issued standard ToR	Standard ToR issued	21/11/2020	20/11/2024
09/04/2021	Corrigendum ToR issued by Ministry	Corrigendum in ToR issued	04/05/2021	

52.2.3 The project of M/s. Mahamanav Ispat Private Limited located at Belagal Village, Ballari Taluk, Ballari District, Karnataka is for expansion of existing Sponge Iron Plant capacity from 100 TPD (2x50 TPD) to 300 TPD (2x100 TPD) and 3 MW captive Power Generation Plant.

52.2.4 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>11.18 ha (27.63 acres)
Existing: 13.14 acres and proposed 14.49 acres land
(Private Land)</td><td>Land use
--</td></tr>
<tr><td>--</td><td>Land acquisition details as per MoEF & CC O.M. dated 7/10/2014</td><td>Total 27.63 acre land (Existing project land of 13.14 acres and proposed project land of 14.49 acres) has been acquired by project proponent.</td><td>--</td></tr>
<tr><td>iii.</td><td>Existence if habitation & involvement of R&R, if any</td><td><u>Project Site</u>: Nil

<u>Study Area:</u>
<table>
<tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Belagal Thanda</td><td>2.40 km</td><td>ENE</td></tr>
</table></td><td>No R&R is involved in proposed project.</td></tr>
</table>

<table>
<tr><th>S No</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Piller</th><th>Latitude</th><th>Longitude</th></tr><tr><td>North</td><td>15° 6'43.58"N</td><td>76°48'24.25"E</td></tr><tr><td>East</td><td>15° 6'39.46"N</td><td>76°48'28.74"E</td></tr><tr><td>South</td><td>15° 6'36.98"N</td><td>76°48'24.62"E</td></tr><tr><td>West</td><td>15° 6'39.32"N</td><td>76°48'21.22"E</td></tr><tr><td>SW</td><td>15° 6'36.45"N</td><td>76°48'20.05"E</td></tr><tr><td>NE</td><td>15°6'42.61"N</td><td>76°48'27.65"E</td></tr></table></td><td>-</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>556 m AMSL</td><td>-</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any</td><td>Nil</td><td>-</td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td><u>Project Site</u> –Nil

<u>Study Area:</u><table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Allipura Kere</td><td>5.77 Km</td><td>NE</td></tr><tr><td>Avinamodugu Kere</td><td>7.64 Km</td><td>SW</td></tr><tr><td>Halkundi Lake</td><td>8.26 Km</td><td>NE</td></tr><tr><td>Tungabhadra canal passes</td><td>9.42 Km</td><td>NE</td></tr></table></td><td>-</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/National Park/ Wild Life Sanctuary/ Biosphere Reserve/ Tiger Reserve/ Elephant Reserve, etc. if any within the study area.</td><td>Nil.
However, following reserve forests are located within study area:
Ballari RF – 0.3 Km, S
Chikkantapur RF-5.6Km, W
Metriki RF – 8.5 Km, SW
Mincheri RF – 9.2 Km, SE
Marutla Extension RF-9Km, SW</td><td></td></tr>
</table>

52.2.5 The existing project was accorded environmental clearance vide letter No: SEIAA: 70: IND: 2008 Dated: 20/03/2009. CTO renewal is obtained from Karnataka Pollution control Board vide letter No: AW-303500 dated 28/08/2017 and CTO is valid till 30/06/2022:

52.2.6 Implementation status of the existing EC:

Facilities	**Configuration/ capacity**	**As per EC dated 20/03/2009**	**Implementation Status as on** 20/08/2017	**Production as per CTO**
Sponge Iron Unit	30,000 TPA (DRI Kiln: 2x50 TPD)	30,000 TPA	30,000 TPA	30000 TPA

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

S No	Name	Existing Units		Proposed Units		Total (Existing Proposed)	
		Configuration	Production	Configuration	Production	Configuration	Production
1	Sponge Iron	DRI Kiln: 2x50 TPD	30,000 TPA	DRI Kiln: 2x100 TPD	66,000	DRI Kiln: 2x100 TPD + 2x50 TPD	99,000* TPA
2	Captive Power Plant (WHRB)	--	--	--	3MW	--	3MW

Note: * enhancing the production capacity of existing 2x50 TPD DRI Kiln from 30,000 TPA to 33,000 TPA by increasing the working days from 300 to 330 days.

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

S No	Raw Material	Qty. (TPA)	Source	Distance from Project Site	Mode of Transport
1	Iron Ore	198000	Local	130 Km	By Road in covered Trucks
2	Imported Coal	84150	Local	450 Km	By Road in covered Trucks
3	Lime Stone	4950	Local	150 Km	By Road in covered Trucks

52.2.9 Existing water requirement is 60 m^3/day, water requirement is obtained from Ballari Municipal Corporation/ Karnataka Urban Water supply and drainage Board (KUW&DB). The proposed water requirement is 173.25 m^3/day. Thus, total water requirement after expansion is estimated as 233.25 m^3/day, which will be met from Ballari Municipal Corporation/ KUW&DB.

52.2.10 The power requirement for the project is estimated as 3.0 MW, which will be obtained from the captive power plant of 3 MW.

52.2.11 Baseline Environmental Studies:

Period	December 2020, January 2021, February 2021
AAQ Parameters at 8 Locations (min and max)	$PM_{2.5}$ = 12.1 to 30.6 µg/m^3 PM_{10} = 46.2 to 87.1 µg/m^3 SO_2 = 4.5 to 11.61 µg/m^3 NO_2 = 11.42 to 28.16 µg/m^3
AAQ Modelling (Incremental GLCs)	PM = 0.35 µg/m^3 (at a distance of 300 m/ SW). SO_2 = 0.15 µg/m^3 (at a distance of 300 m/ SW). NO_x = 0.26 µg/m^3 (at a distance of 300 m/ SW).
Ground Water at 7 Locations	pH: 7.31 to 8.38, Total Hardness: 200 to 564 mg/L, Chlorides 45 to 349.39 mg/L, Fluoride 0.59 to 1.42 mg/L, Heavy metals are within the limits.

<table>
<tr><td>Period</td><td>December 2020, January 2021, February 2021</td></tr>
<tr><td>Surface Water at 5 Locations</td><td>pH: 8.39 to 8.48,
DO 4.2 to 5.2 mg/L,
BOD 6.5 to 16 mg/L,
COD 32 to 48 mg/L</td></tr>
<tr><td>Noise Levels at 8 Locations</td><td>43.79 to 67.37 dB(A) for day time
36 to 63.95 dB(A) for night time</td></tr>
<tr><td>Traffic Assessment Study findings</td><td>Traffic study has been conducted at the Tumati- Belagal Road. Transportation of raw material, fuel & finished product will be done 100% by road.
Existing PCU is 72.4 PCU/hr on Tumati- Belagal Road 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>Tumati-Belagal Road</td><td>72.4</td><td>625</td><td>0.11</td><td>A (Excellent)</td></tr>
</table>
PCU load after proposed project will be 160 (72.4 + 87.6) PCU/hr and level of service (LOS) will be:
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Proposed V/C Ratio</th><th>LOS</th></tr>
<tr><td>Tumati-Belagal Road</td><td>160</td><td>625</td><td>0.25</td><td>B (Very Good)</td></tr>
</table>
* Note: Traffic Capacity as per IRC 64:1990 for Highways.

Conclusion: The level of service of the road will be decrease to Level B (Very good) from Level A (Excellent) after additional traffic due to the proposed project.</td></tr>
<tr><td>Flora and fauna</td><td>Black-Shouldered Kite, Indian Peafowl and Shikra belongs to Schedule I Species as per WL (P) Act, 1972 Schedule were recorded in the study area. Conservation plan to be submitted for approval.</td></tr>
</table>

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

S No	Type of Waste	Quantity (TPA)			Mode of Disposal
		Existing	Proposed	Total	
1	Iron Ore fines	9900	19800	**29700**	The Iron ore fines will be sold to the local pellet plant.

S No	Type of Waste	Quantity (TPA)			Mode of Disposal
		Existing	Proposed	Total	
2	Char	11863.5	11880	**23743.5**	The char will be used in the AFBC boiler.
3	Ash	10642.5	6600	**17242.5**	The Ash will be sold to brick manufacturing units/ cement plants / Agarbatti industries.
4	Used Oil in DG Set	0.27 KL/A	0.30 KL/A	**0.095**	Disposed to KSPCB authorized dealers
5	Oil-soaked cotton waste	0.30 MT/A	0.35 MT/A	**0.05**	Disposed to KSPCB authorized dealers

52.2.13 Public Consultation:

Details of advertisement given	30/08/2021
Date of Public Consultation	30/09/2021
Venue	Project Site
Presiding Officer	Deputy Commissioner
Major issues raised	• Pollution levels in nearby villages by surrounding industrial cluster is causing health problems • No Infrastructure Development • Drinking water facilities to nearby villages • Job opportunities to local people

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

Sl. No.	Physical Activity	Cost in Rs.	Year wise Plan		
			2022-23	2023-24	2024-25
1	Financial support to Government Schools of Belgal, Belgal Tanda, Janukunte and Janukunte Thanda Villages in Consultation with School Staff and Villagers for infrastrucutre development.	20	10	5	5
2	Health Check-up camps at Belgal, Belgal Tanda, Janukunte and Janukunte Thanda Villages	9	3	3	3
3	Plantation Activities on either side of the Tumati Road	6	2	2	2
4	Drinking Water Facility to people of Belgal, Belgal Tanda, Janukunte and Janukunte Thanda Villages	15	5	5	5
	Total	**50**	**20**	**15**	**15**

52.2.14 The capital cost of the project is Rs. 33 Crores. The capital cost for environmental protection measures is proposed as Rs. 323.95 lakhs (10.80 % of the total project cost). The annual recurring cost towards the environmental protection measures is proposed as 38.9

Lakhs. The total manpower for the existing unit is 160 Nos. Total Number of Employment is 60 Nos. during the construction phase & 90 Nos during operation phase. The detail of cost for environmental protection measures is as follows:

S No	Particulars	Cost in Lakh Rs.
A. Capital Cost		
1	Air Pollution Control Equipment such as Fume extraction system with bag filters and stack arrangements	201.25
2	Provision of STP	14
3	Continuous online monitoring for stack emissions	25
4	Rain Water harvesting	20
5	Stack arrangements for DG set & other source of emissions	9
6	Traffic management and asphalting of internal roads	18
7	Solid & hazardous waste management	3.5
8	Green belt development	5
9	Conservation Plan for Schedule-I Species	5
10	Provision of garland drains and catch pit	6
11	Provision of PPEs for workers, enclosures and barriers for attenuation of noise	12
12	Provision of solar lighting as part of Energy Conservation measures	3
13	Environmental Monitoring during construction phase	2.2
	Total	**323.95**
B. Recurring Cost		
1	Environmental Monitoring during Operation phase	7.2
2	Solid & hazardous waste management	3
3	Occupational Health and Safety	5
4	Socio-economic improvement activities	5
5	Preparation of social need assessment report	0.5
6	Operation & Maintenance of Air Pollution Control Systems	5
7	Operation & Maintenance of STP	2.7
8	Operation & Maintenance of online monitoring	1.5
9	Maintenance of Green Belt development	1.5
10	DG Set maintenance	5
11	Operation & Maintenance of garland drains, solar lights, internal roads	2.5
	Total	**38.9**

52.2.15 Existing green belt has been developed in 2.02 ha area which is about 38.05 % of the existing project area of 5.32 ha with total sapling of 6500 Trees. Proposed greenbelt will be developed in 2.52 ha which is about 43.06 % of the expansion project area. Thus, total of 4.54 ha area (40.06% of total project area) will be developed as greenbelt. A 5 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species

will be planted with a density of 2500 trees per hectare. Total No. of 3800 saplings will be planted and nurtured in 2.52 hectare in 3 years.

52.2.16 There is no violation under EIA notification 2006/No Court cases/no show cause/no direction related to the proposed project.

52.2.17 Name of the EIA consultant: Environmental Health and Safety Consultants Pvt Ltd [S.No. 54 in List of ACOs with their Certificate no. QCI/NABET/ENV/ACO/21/2113; valid up to 18/01/2022, Rev. 18, January 05, 2022].

Certified Compliance report from RO

52.2.18 The status of compliance of earlier EC was obtained from Regional Office, Bangalore vide letter No. EP/12.1/SEIAA/131/KAR/911 dated 03/11/2021 in the name of M/s. Mahamanav Ispat Pvt. Ltd. As per CCR, all EC conditions are reported to be complied.

Observations of the Committee

52.2.19 The Committee noted the following:

i. PP has proposed for 3 MW of Captive Power from waste heat recovery which appears to be lower side as per proposed configuration of the plant. PP needs to revisit the same.
ii. There is no green belt is visible as per the KML file made available. PP needs to clarify the same.
iii. PP has proposed tree density as 1500 trees/ha. Revised green belt development action plan covering 33% of the area with a tree density of 2500 trees per hectare shall be submitted.
iv. Only two ESPs are included with efficiency of 99.6 %. at this efficiency, the ESP cannot give PM emissions less than 30 mg/Nm^3. Pollution control device to be installed at 50 TPD kilns is not clear. PP shall give clarification in this regard.
v. EIA/ EMP report submitted is not as per the appendix III of the EIA notification, 20006. Deficiency in the EIA report as below:
    a. EMP Chapter is generic and has only text. Quantification of project specific impacts has not been done
    b. In Chapter 8 the project benefits have not been quantified.
    c. Chapter 9 as per EIA Notification 2006 is not included.
    d. TOR point 9 has not been addressed.
    e. Chapter 11 has completed in one page only.
vi. Interpretation for baseline data collection is not done in EIA report.
vii. Action plan to address the public hearing issues as per MoEF&CC O.M. dated 30/09/2020 shall be submitted.
viii. Black-Shouldered Kite, Indian Peafowl and Shikra belongs to Schedule I Species as per WL (P) Act, 1972 Schedule were recorded in the study area. Conservation plan with sufficient budget allocated for conservation along with approval letter for same shall be provided.
ix. Valid permission for water withdrawal from competent authority as well as the ultimate source of water is not submitted. PP shall submit the valid permission for water withdrawal for existing and proposed project. PP shall also submit a confirmation letter from the Bellary Municipal Authority (MCA) that MCA is the

competent authority for giving water permission (in case of approval obtained from MCA).

x. During public hearing, majority of respondents have objected to expansion due to very high pollution caused by this unit and no human concern shown by PP during its existence at that site. Ash is spread all around, pollution control systems are not operated at night. There are written responses, majority are against the plant expansion. PP need to be given response for every issue raised during PH.

xi. The sampling locations at baseline data collected for Air, Water, Noise and Soil are not according to the CPCB guideline. Fresh data for at least one month shall be again collected for Air, Water, Noise and Soil after selecting correct sampling stations according to wind rose diagram as per CPCB guidelines.

xii. Capacity of the proposed sewage treatment plant is not provided by PP.

xiii. Iron ore fines shall be sold to pellet plant. PP shall provide a valid MOU with the company for selling Iron Ore fine.

xiv. Performance testing for the pollution control devices is not proposed for post project monitoring schedule.

xv. Bellary Reserved Forest is located at 300 m in South from site. Plan to protect the forest has not been given and the same shall be provided.

Recommendations of the Committee

52.2.20 In view of the foregoing and after deliberations, the Committee recommended that proposal to be returned in its present form to address the technical shortcomings enumerated at para no. 52.2.19 and submit the revised application as per the provisions of EIA Notification, 2006.

52.3 Proposed installation of the Ferro Alloy Plant through setting up of 2x9 MVA Submerged Arc Furnaces for production of Ferro Manganese (18000 TPA) and Silico Manganese (12000 TPA) & Sinter Plant (9000 TPA) by **M/s. Shyam Business Solution Pvt. Limited** located at Raturia, Angadpur Industrial Area, Tehsil- Durgapur**, District- Paschim Bardhaman, West Bengal** [Online Proposal No. IA/WB/IND/166397/2020, File No. J-11011/198/2020- IA.II(I)] – **Environment Clearance – regarding.**

52.3.1 M/s. Shyam Business Solution Private Limited has made an online application vide proposal no IA/WB/IND/166397/2020 dated 03/01/2022 along with copy of EIA/EMP report, Form-2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (Ferrous and Non/ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

Details submitted by Project proponent

52.3.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
11/11/2020	25th meeting of Re-Constituted EAC held on 26/11/2020	Terms of Reference	14/12/2020	13/12/2024

52.3.3 The project of M/s. Shyam Business Solutions Private Limited (SBSPL) located in Raturia, Angadpur Industrial Area, Tehsil – Durgapur, District- Paschim Bardhaman, State- West Bengal isfor setting up of a new 2x9 MVA Submerged Arc Furnaces for production of Ferro Manganese (18000 TPA) and Silico Manganese (12000 TPA) & Sinter Plant (9000 TPA). At proposed project site, earlier a unit of Induction furnace with re-rolling Mill was being operated by M/s. Shyam Sel & Power Limited. Shyam Sel & Power Limited was established in the year 2002 and was involved in the production of Billet, Ingot & TMT Bar. In the year 2016-17, the land of Shyam Sel & Power Ltd. is transferred under a Scheme of Arrangement u/s 391 to 394 of the Companies Act, 1956 by the Order of Hon'le Kolkata High Court on dated 21/08/2016. SSPL has dismantled the Plant & Machinery and shifted to their other manufacturing Unit. So, after dismantling some civil structures, Office and labor quarters are still there. SBSPL will demolish the rest of the structures present on the land and the demolition waste to be used in civil work for the proposed project and steel scrap, if any will be sold out.

52.3.4 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>2.26 ha (22639 sq m)</td><td>Land use: Industrial land</td></tr>
<tr><td>ii.</td><td>Land acquisition Details as per MoEF&CC O.M. dated 7/10/2014</td><td>Complete land is under possession of M/s. Shyam Business Solutions Private Limited.</td><td></td></tr>
<tr><td>iii.</td><td>Existence of Habitation & Involvement of R&R, if any.</td><td><table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Angadpur</td><td>0.75 km</td><td>West</td></tr><tr><td>Raturia</td><td>0.65 km</td><td>South</td></tr></table></td><td>R&R issue is not involved.</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>23°30'49.57"N</td><td>87°16'51.95"E</td></tr><tr><td>B</td><td>23°30'44.91"N</td><td>87°16'50.36"E</td></tr><tr><td>C</td><td>23°30'46.26"N</td><td>87°16'45.69"E</td></tr><tr><td>D</td><td>23°30'51.81"N</td><td>87°16'47.90"E</td></tr><tr><td>E</td><td>23°30'50.58"N</td><td>87°16'50.07"E</td></tr><tr><td>F</td><td>23°30'50.21"N</td><td>87°16'49.91"E</td></tr></table></td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>78 m AMSL</td><td></td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No forest land is involved</td><td></td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td><u>Project site</u>: Nil

<u>Study Area</u>:<table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Damodar River</td><td>1.25km</td><td>SSW</td></tr></table></td><td></td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/</td><td>Nil</td><td></td></tr>
</table>

S No	Particulars	Details	Remarks
	tiger reserve/ elephant reserve etc. if any within the study area		

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

S No	Name	Proposed Units	
		Configuration	ProductionTPA
1	Ferro Alloys Plant	2x9 MVA Submerged Arc Furnace	Silico-Manganese - 12000 Ferro-Manganese - 18000
2	Sinter Plant	--	Sinter - 9000

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

Raw Materials	Quantity (TPA)	Source	Distance from site (Kms)	Mode of Transport
Manganese Ore	76,320	Import from South Africa, Australia, Odisha, Nagpur etc.	Variable	Sea for Import and Road/Rake for Indigenous
Dolomite	3,600	Indigenous from Bhutan	1000	By Road
Coke	18,000	Indigenous from Assam, Vizag and Import from Australia, Vietnam	Variable	Sea for Import and Road/ By Road for Indigenous
Quartz	7,200	Indigenous from Bankura, Purulia	50-120	By Road
Ferro Manganese Slag (For Silico Manganese Production)	12,9960	Captive Generation or Indigenous Purchase from Durgapur, Barjora	Local	By Road
Electrode paste	612	Bihar & West Bengal	Local	By Road

52.3.7 The one-time water requirement for the project is estimated as 133 KLD, out of which 33 KLD of fresh water requirement will be obtained from the DMC and the remaining of 100 KLD will be recycled and reused. The permission for drawl of surface water is obtained from Durgapur Municipal Corporation (DMC) vide Lr. No. DMC/W3/1062 dated 29/05/2019.

52.3.8 The power requirement for the proposed project is estimated as 26MW, which will be obtained from the West Bengal State Electricity Development Corporation Limited (WBSEDCL).

52.3.9 Baseline Environmental Studies:

Period	01/10/2020 to 31/12/2020
AAQ parameters at 8	$PM_{2.5}$ = 20 to 49 μg/m^3

<table>
<tr><td>Locations</td><td>PM_{10} = 62 to 99 µg/m^3
SO_2 = 5 to 21 µg/m^3
NO_2 = 11 to 36 µg/m^3
CO = 0.7 to 1.6 mg/m^3</td></tr>
<tr><td>AAQ modelling (Incremental GLC Level)</td><td>PM_{10} = 0.62 µg/m^3 (at a distance of 2.0 km/ SW)
$PM_{2.5}$ =0.41 µg/m^3 (at a distance of 2.0 km/ SW)
SO_2 = 5.4 µg/m^3 (at a distance of 2.0 km/ SW)
NOx = 1.95 µg/m^3 (at a distance of 0.5 km/ SW)</td></tr>
<tr><td>Ground water quality at 8 locations</td><td>pH: 7.3 to 7.9,
Total Hardness: 228 to 286 mg/l,
Chlorides: 59 to 101 mg/l,
Sulphates: 49 to 72 mg/l.
Total Dissolved Solids: 388 to 522 mg/l.
Phosphate: 0.21 to 0.34 mg/l,
Potassium: 1.7 to 4.1 mg/l,
Sodium: 35 to 61 mg/l,
Calcium: 62 to 48 mg/l,
Magnesium: 27 to32 mg/l,
Fluoride: 0.4 to 0.8 mg/l,
Arsenic: 0.01 to 0.03 mg/l,
Iron is found below detectable limit</td></tr>
<tr><td>Surface water quality at 5 locations</td><td>pH: 7.2 to 7.6;
DO: 5.3 to 5.8 mg/l
TDS: 242 to 288 mg/l
Chlorides: 51 to 62 mg/l,
BOD (27^{0}C, 3Days): 2.3 to 5.4 mg/l,
COD: 24 to 44 mg/l,
Sodium: 31 to 37 mg/l,
Total hardness: 124 to 150 mg/l
Calcium: 27 to 33 mg/l, and
Magnesium: 14 to 17 mg/l,
Potassium: 2.2 to 3.9 mg/l,
Phosphate: 0.24 to 0.41 mg/l,
Fluoride: 0.5 to 0.6 mg/l.</td></tr>
<tr><td>Noise levels Leq (Day and Night)</td><td>47.3 to 69.3 dB (A) for the day time and
39.0 to 60.4 dB (A) for the Night time.</td></tr>
<tr><td>Traffic assessment study findings</td><td>Traffic study has been conducted at the junction of NH- 19 and the connecting road to project location of Shyam Business Solution Pvt. Ltd.
Transportation of raw material, fuel & finished product will be done 100% by road.
Existing PCU is 652.7 PCU/hr on the junction of NH-19 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>NH-19</td><td>652.7</td><td>1500</td><td>0.43</td><td>C (Good)</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td>PCU load after proposed project will be 685.7 (652.7 + 33) PCU/hr and level of service (LOS) will be:
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Proposed V/C Ratio</th><th>LOS</th></tr>
<tr><td>NH-19</td><td>685.7</td><td>1500</td><td>0.45</td><td>C (Good)</td></tr>
</table>
** Note: Capacity as per IRC-106-1990 Guide line for capacity for roads.*

Conclusion: The level of service of the road will remain as "C" after the proposed project that is "GOOD". 40 additional trucks i.e. 80 trips assume to enter and exit during peak hrs for the proposed project (worst case scenario).</td></tr>
<tr><td>Flora and fauna</td><td>No species in the study area belongs to Schedule I, of Wildlife Protection Act, 1972 and there are no endangered species in study area.</td></tr>
</table>

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

S No	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment / Disposal
Solid Waste Generation and its Management				
1	Si-Mn Slag	Ferro alloy plant	34	To be sold to Cement Plant
2	Fe-Mn Slag	Ferro alloy plant	36	Will be used for production of Si-Mn alloys.
3	Mn Ore dust	Mn Ore stockyard	118.1	Will be agglomerated by Sinter Plant of 100 MT/day capacity.
4	Bag filter dust	APC device	5.6	
5	Municipal Solid Waste	Office buildings	25.6 kg/day	To be disposed off as per MSW rules
Hazardous waste generation its Management				
1	used oil	Machineries	0.5	Stored in covered HDPE drums in a designated area and will be given to SPCB authorized recyclers & re-processors.

52.3.11 Public Consultation:

Details of advertisement given	06/08/2021
Date of public consultation	16/09/2021

Venue	P.T. Ground beside Barrack Math, Raturia Angadpur Industrial Area, Raturia Gram, Durgapur, Dist. – Paschim Bardhaman, West Bengal
Presiding Officer	Sri Sandip Tudu, WBCS (Executive), Additional District Magistrate (L & LR), Dist- Paschim Bardhaman
Major issues raised	i. Employment ii. Social Development

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

S. N.	Issues Raised	Response by project proponent (after PH)	2022-23		2023-24		2024-25		2025-26		2026-27		Total cost in lacs
			Physical Terms	Estimated cost, lacs	Physical Terms	Estimated cost, lacs	Physical Terms	Estimated cost, lacs	Physical Terms	Estimated cost, lacs	Physical Terms	Estimated cost, lacs	
1	Jobs & Sustainable employment	Local villagers will be given employment on the basis of their eligibility. However, a training camp in the unit campus will be provided periodically for new recruitments. Suitable local candidates will be selected to ensure 80% of the local employment.	4 nos (Once in quarter) of training sessions at project site with pre-announcement and registration	2	4 nos (Once in quarter) of training sessions at project site with pre-announcement and registration	2	4 nos (Once in quarter) of training sessions at project site with pre-announcement and registration	2	4 nos (Once in quarter) of training sessions at project site with pre-announcement and registration	2	4 nos (Once in quarter) of training sessions at project site with pre-announcement and registration	2	10
2	Greenbelt Development/plantation	Green Belt Development in near by villages (Angadpur, Raturia	Plantation of 1365 Nos of trees in project site	6.8	Plantation of 560 nos of trees in Raturia Primary School and adjusce	2.8	Plantation of 600 nos of trees in Angadpur Hospital and adjusce	3	-	-	Road side plantation of 1080 nos of trees	5.4	18

S. N.	Issues Raised	Response by project proponent (after PH)	2022-23		2023-24		2024-25		2025-26		2026-27		Total cost in lacs
			Physical Terms	Estimated cost, lacs	Physical Terms	Estimated cost, lacs	Physical Terms	Estimated cost, lacs	Physical Terms	Estimated cost, lacs	Physical Terms	Estimated cost, lacs	
		) in consultation with local authorities			nt area		nt area						
3	Infrastructure development and Corporate Environmental Responsibility	1. Financial Aid to Village, Schools including development of toilet facility	Donation to Raturia Primary Schools for construction & maintenance of toilets with running water,	6			basic infrastructure like community dustbin, drinking water facilities for nearby Raturia village	4.5	-	-	Donation to Angadpur High Schools for construction & maintenance of toilets with running water,	6	16.5
		2. Free Health Camp & Supply of Medicine to villagers	Free Health Camp & Supply of Medicine to villagers	2.5	Free Health Camp & Supply of Medicine to villagers	2.5	Free Health Camp to Raturia villagers	2.5	Free Health Camp & Supply of Medicine to Angadpur villagers	2.5	basic infrastructure development of hospital	2.5	12.5
		3. Nearby road & infrastructure development			Construction and development of road in Angadpur industrial area and nearby village	9			Provision for sufficient service water supply and treatment of drinking water	4	Construction and development of road in Raturia village	9	22
		4. Street Solar Lighting in nearby areas	Street Solar Lighting in nearby areas	3	-	-	Street Solar Lighting in nearby areas	4	Street Solar Lighting in nearby areas	4	-	-	11
Total				**20.3**		**16.3**		**16**		**12.5**		**24.9**	**90**

52.3.12 The capital cost of the project is Rs. 45 Crores and the capital cost for environmental protection measures including cost for address to public consultation concerns is proposed as Rs. 245 lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 20.5 lakhs. The employment generation from the proposed project is 128 Nos. The details of cost for environmental protection measures are as follows:

S No	Particulars	Capital Cost (In Lacs)	Annual Recurring Cost (In Lacs)
1	Pollution Control during construction stage (Dust suppression, wastewater disposal, roads, monitoring etc.).	15	-
2	Air Pollution Control System including Noise Pollution Control	90	8.5
3	Wastewater Management and Rain Water Harvesting System	20	3
4	Environment Monitoring and Management	15	5
5	Occupational Health & safety Management	10	3
6	Greenbelt Development	5	1
7	Addressal of Public Consultation concerns	90	--
Total		**245**	**20.5**

52.3.13 Greenbelt will be developed in 0.90 ha (9076 sq m) which is about 40.09% of the total project area. A 15m (Minimum) 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 witha density of 2500 trees per hectare. Total no. of 2250 saplings will be planted and nurtured in 0.90 hectares in 1 years.

52.3.14 PP mentioned that there is no violation under EIA, 2006/ court case/ show cause/direction is pending related to the proposed project.

52.3.15 Name of the EIA consultant: M/s. Ultra Tech [at S No. 88, List of ACOs with their Certificate no. NABET/EIA/2023/RA 0194, valid up to 09/03/2023; Rev. 18, January 05, 2022].

Observations of the Committee

52.3.16 The Committee noted the following:

i. Action plan to address the issues raised during public hearing is not in conformity to the MoEF&CC O.M. dated 30/09/2020.
ii. Area of Sinter plant is not mentioned and same shall be indicated in the EIA report.
iii. On perusal of the KML file, some building structures are visible within the project site. PP responded that the building structures are pertaining to erstwhile M/s. Shyam Sel and Power Limited. In this regard, PP shall submit an undertaking in a non-judicial stamp paper stating that no construction has been undertaken at the site with respect to the project under consideration.
iv. A valid memorandum of understanding (MOU) shall be provided for slag disposal to the cement plant.
v. PM_{10} in the ambient air is reported to be 99 $\mu g/m^3$. Control measures to be adopted by the proponent in this regard shall be furnished.
vi. 33 KLD make up water is required for proposed project. Ultimate water withdrawal source is not provided. PP has obtained water withdrawal permission from Durgapur Municipal Corporation (DMC). In this regards PP shall be provided the ultimate source of water and a submitted letter from DMC to clarify that the MDC is the competent authority to give the permission for water withdrawal.

vii. SO_x values are very low as the project site is located in severally polluted area. One-month additional baseline data for Ambient Air Quality shall be conducted and data interpretation shall be done accordingly.
viii. ToR point #9 pertaining to corporate environment policy has not been addressed.
ix. The project site is located in Severely Polluted Area, PP shall provide the details of the additional measures to mitigate the environmental impacts due to proposed project.
x. Revised layout indicating green belt development all along the periphery of the project site shall be submitted.
xi. Details of briquetting and jigging plant shall be provided.

Recommendations of the Committee

52.3.17 In view of the foregoing and after deliberations, the Committee recommended that proposal to be returned in its present form to address the technical shortcomings enumerated at para no. 52.3.16 and submit the revised application as per the provisions of EIA Notification, 2006.

52.4 Proposed Expansion of Steel Plant by enhancement of existing 2x250 m^3 Blast Furnace volume to 2x300 m^3 Blast Furnace volume, installation of 3x4 MVA Electric Arc Furnaces, 0.6 MTPA Sinter Plant and 2,52,000 TPA DI Pipe Plant by **M/s. Jai Balaji Industries Limited (Unit -III)** Located at Banskopa Village, Kanksa Taluk, **Paschim bardhaman District, West Bengal.** [Online Proposal No. IA/WB/IND/245584/2008, File No. J-11011/724/2008-IA. II(I)] **– Environment Clearance – regarding.**

52.4.1 M/s. Jai Balaji Industries Limited (Unit- III) has made an online application vide proposal no. IA/WB/IND/245584/2008 dated 01/01/2022 along with copy of EIA/EMP report, Form-2 and Certified 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 and Non/ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

Details submitted by Project proponent

52.4.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
15/12/2018	3rd meeting [EAC (Industry-I)], held on 9-11th January, 2019.	Standard Terms of Reference along with Specific and Additional Terms of Reference	17/01/2019	16/01/2023

52.4.3 The project of M/s Jai Balaji Industries Limited (Unit - III) located at Village: Banskopa, P.O.: Rajbandh, Tehsil & P.S.: Kanksa, District: Paschim Bardhaman in West Bengal State is for expansion of steel plant for enhancement of Sinter plant from 6,08,256 to 12,08,256 TPA; hot metal/ Pig Iron from 5,04,000 TPA to 6,12,500 TPA (by increase in volume of existing BF from 2x250 m^3 to 2x300 m^3); DI pipe plant from 2,52,000 TPA to 5,04,000 TPA and new installation of ferro Alloy plant of 39,600 TPA (EAF: 1x60T).

52.4.4 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: 72.84 ha (180 Acres)</td><td>Land use: Industrial</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>The expansion project is proposed in existing 72.84 ha land only. Complete 72.84 ha land is under possession of M/s. Jai Balaji Industries Limited.</td><td>No additional land will be acquired for proposed expansion.</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any</td><td><table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Banskopa Village</td><td>Adjacent to plant boundary</td><td>SE corner and NE corner of project site.</td></tr><tr><td>Air force Base</td><td>4.4 km</td><td>ESE</td></tr></table></td><td>No R&R is involved.</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Points</th><th>Latitudes</th><th>Longitudes</th></tr><tr><td>1</td><td>23°29'26.76"N</td><td>87°22'24.95"E</td></tr><tr><td>2</td><td>23°29'36.47"N</td><td>87°22'13.16"E</td></tr><tr><td>3</td><td>23°29'05.28"N</td><td>87°21'52.30"E</td></tr><tr><td>4</td><td>23°28'52.29"N</td><td>87°22'6.28"E</td></tr></table></td><td>-</td></tr>
<tr><td>V.</td><td>Elevation of the project site</td><td>65 - 73 m above mean sea level</td><td>-</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>Not involved forest land.</td><td>-</td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td><u>Project site</u>: Nil

<u>Study area</u><table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>DVC canal</td><td>0.38 km</td><td>South</td></tr><tr><td>Village Pond</td><td>0.41 km</td><td>SE</td></tr><tr><td>Damodar River</td><td>4.50Km</td><td>SW</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</td><td>-</td></tr>
</table>

52.4.5 The existing project was accorded environmental clearance vide lr.no. F.No. J-11011/724/2008-IA. II (I) dated 30/08/2010. Consent to Operate for the existing units were accorded by West Bengal Pollution Control Board vide Memo No. 1302/dr_co_s/12/0031 dated 31/07/2019. CTO is valid up to 31/07/2024.

52.4.6 Implementation status of the existing EC:

S No	Name of Units	Capacity as per EC dated 30/08/2010 (in TPA)	Implementation status as on 01/01/2022	Capacity as per CTO
1.	Iron ore beneficiation	6,00,000	Dropped	--
2.	Pellet Plant	6,00,000	Dropped	--
3.	Sinter Plant	6,08,256	6,08,256	6,08,256
4.	Rolling Mill	6,00,000	Dropped	--
5.	Blast Furnace	5,04,000 (2x250 m^3)	5,04,000 (2x250 m^3)	5,04,000 (2x250 m^3)
6.	Pulverized Coal Injection (PCI)	97,200	97,200	97,200
7.	Desulpherization	5,04,000	Dropped	--
8.	Electric Arc Furnace for Steel Making	4,50,000 (1x60 T)	4,50,000 (1x60 T)	4,50,000 (1x60 T)
9.	Oxygen Plant	58,320	58,320	58,320
10.	Lime Kiln	54,000	Dropped	--
11.	Ductile Iron Pipe	2,52,000	2,52,000	2,52,000
12.	Producer Gas Plant	4x3000 m^3	Dropped	--

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

S No	Facilities	Capacity as per EC dated 30/08/2010		Proposed Capacity		Final after expansion	
		configuration	Capacity	configuration	Capacity	configuration	Capacity
1	Sinter Plant	--	6,08,256	--	6,00,000	--	12,08,256 TPA
2	Blast Furnace	(2x250 m^3)	5,04,000 TPA	Increasing MBF volume from 2x250 m^3 to 2x300 m^3)	1,08,500 TPA	(2x300 m^3)	6,12,500 TPA
3	Pulverized Coal Injection (PCI)	--	97,200 TPA	--	--	--	97,200 TPA
4	Electric Arc Furnace for Steel Making	(1x60 T)	4,50,000 TPA	--	--	(1x60 T)	4,50,000 TPA
5	Electric Arc Furnace for Ferro Alloy		--	3x4 MVA	Fe-Ch 39,600 TPA	3x4 MVA	Fe-Ch 39,600 TPA
6	Oxygen Plant	--	58,320 TPA	--	--	--	58,320 TPA
7	Induction Furnace with Ductile Iron Pipe Plant		2,52,000 TPA		2,52,000 TPA		5,04,000 TPA

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

S No	Raw Material	Annual Requirement (in TPA)			Source	Distance (in km)	Transportation		
		Under Operation	Expansion / Proposed	Total			Internal	Rail	Road
	SINTER PLANT								
1	Iron ore fines	590000	550000	11,40,000	Barbil-Joda, Orissa	325	-	11,40,000	-
2	Limestone with fines	84000	82000	1,66,000	Katni MP	875	-	1,66,000	-
4	Dolomite	60000	56000	1,16,000	Bhutan	968	-	1,16,000	-
5	Coke Breeze	60000	54000	1,14,000	Local Market	200	-	-	1,14,000
	BLAST FURNACE								
1	Sinter	800000	1,80,000	9,80,000	In house sinter plant	-	9,80,000	-	-
2	Iron ore lump	200000	45,000	2,45,000	Barbil	325	-	2,45,000	-
3	Coke	300000	67,500	3,67,500	Local Market	200	-	-	3,67,500
4	Pulverised coal	85800	24,200	1,10,000	In house PCI plant	-	1,10,000	-	-
5	Quartzite	1000	225	1,225	Local market	200	-	-	1,225
	PCI PLANT								
1	Pulverized Coal	85800	24,200	1,10,000	Imported Haldia Port	260-270	-	-	90,000
					Barbil	325	-	20,000	-
	SMS (EAF ROUTE)								
1	DRI	4,50,000	-	4,50,000	Local Market	200	-	4,50,000	
2	Revert Scrap	18,000	-	18,000	In-house	-	18,000	-	-
3	Lime	41,500	-	41,500	Local market	200	-	-	41,500
	FERRO ALLOY PLANT (EAF ROUTE)								
1	Chrome ore	-	59,500	59,500	Orissa	475-490	-	22,540	36,960
2	Silicon Chrome Alloy	-	25,000	25,000	Local Market	200	-	-	25,000
3	Lime	-	43,500	43,500	Local market	200	-	-	43,500
	DUCTILE IRON PIPE PLANT								
1	Pig Iron	252000	252000	5,04,000	In-house Conveyor		5,04,000	-	-
2	Scrap	5000	5000	10,000	In-house		10,000	-	-
	TOTAL						**16,22,000**	**21,59,540**	**7,19,685**
	Percentage (%)						**36%**	**48%**	**16%**

52.4.9 Existing water requirement is 1267 m^3 /day, water requirement is obtained from Asansol Durgapur Development Authority (ADDA). The total water requirement after proposed project is estimated as 1892 m^3 /day, which will be obtained from ADDA. The permission for drawl of surface water of 3000 m^3 /day is obtained from ADDA vide Memo No. ADDA/DGP/ED/G-02/2021-22/CS-144 dated 02/07/2021.

52.4.10 Existing power requirement of 24 MW is obtained from Damodar Valley Corporation (DVC) supply. Power requirement for the existing & present proposal is estimated as 47.1

MW. Total power requirement will be met from DVC. The permission for power requirement is obtained from DVC vides letter no Coml./PS/JBIL/Durgapur/-4007 dated 25/03/2008.

52.4.11 Baseline Environmental Studies:

Period	01/12/2018 to 28/02/2019
AAQ parameters at 8 locations	$PM_{2.5}$ = 21 - 42 µg/m^3 PM_{10} = 55 - 89 µg/m^3 SO_2 = 5 - 21 µg/m^3 NO_2 = 12 - 42 µg/m^3 CO = 0.184 - 1.345 mg/m^3
AAQ modelling (Incremental GLC Level)	PM = 4.47 µg/m^3 (at a distance of 0.8 km in SSE) SO_2 = 0.49 µg/m^3 (at a distance of 1.2 km in SW) NOx = 1.23 µg/m^3 (at a distance of 1.2 km in SW)
Ground water quality at 8 locations	pH: 6.75 – 7.34, Total Hardness: 148 – 226 mg/l, Chlorides: 86 – 160 mg/l, Fluoride: 0.21 - 0.45 mg/l, Iron: 0.22 – 0.38 mg/l, TDS: 326 – 559 mg/l
Surface water quality at 10 locations (2 River water & 8 pond water samples)	**River Water** pH: 7.34 & 7.42, DO: 7.2 & 7.1 mg/l, BOD: 2 mg/l, COD: 8 & 10 mg/l, Fe: 0.14 & 0.12 mg/l, Coliform: 1310 & 1500 MPN/100ml, TDS: 168 & 187 mg/l, Total Hardness: 98 & 104 mg/l, Chloride: 36 & 39 mg/l **Pond Water** pH: 7.12 - 7.56, DO: 5.9 - 6.8 mg/l, BOD: 3 - 8 mg/l, COD: 16 - 32 mg/l, Fe: 0.17 - 0.27 mg/l, Coliform: 550 - 1110 MPN/100ml, TDS: 267 - 386 mg/l, Total Hardness: 136 - 168 mg/l, Chloride: 66 - 96 mg/l
Noise levels	55.8 - 70.1 dBA for day time and 44.9 - 58.5 dBA for night time.
Traffic assessment study findings	Traffic study has been conducted at NH-19 which is approximately 0.35 km from the plant site. Transportation of raw material, fuel & finished product will be done 64 % by road. Existing PCU is 344.25 PCU/hr on NH-19 and existing

<table>
<tr><td></td><td>level of service (LOS) is:
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>V (Volume in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>NH-19</td><td>344.25</td><td>1500</td><td>0.23</td><td>B (Very good)</td></tr>
</table>
PCU load after proposed project will be 381.2 PCU/hr (344.25 + 36.95) and level of service (LOS) will be:
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>V (Volume in PCU/hr.)</th><th>proposed V/C Ratio</th><th>LOS</th></tr>
<tr><td>NH-19</td><td>381.2</td><td>1500</td><td>0.25</td><td>B (Very good)</td></tr>
</table>
As per IRC:106 – 1990 code, 36,000 PCU/ day is capacity of NH-19
Conclusion: The level of service will remain same as B (very good) after including additional traffic due to proposed project.</td></tr>
<tr><td>Flora and fauna</td><td>No endangered floral species is observed within study area. No Schedule I species of fauna is observed in the study area.</td></tr>
</table>

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

SN	Type	Quantity in Tons/Year			Utilization
		Existing Units	Proposed Units	Total	
1	Slag from MBF	2,04,792	40,958	2,45,750	Will be sold to nearby Cement Plant as per present practice.
2	Dust from GCP and Bag Filters of Blast Furnace	20,417	4,083	24,500	100% to be reused in Sinter Plant as per present practice
3	Slag from EAF	50,000	-	50,000	After metal recovery about 10% metal is recovered from the total slag and the balance 45,000 TPA (as stone chips/ road construction materials) is used for road construction & repairing/ land filling purposes. Considering 3 m width & depth 30 inch (0.75 m) of the road and density of the slag as 3.5 ton/cum, 7875 T slag may be consumed for 1.0 km stretch. Therefore, the entire quantity of slag generated in a year (45,000 TPA) can be utilized for the construction of around 5.7 km roads among which

S N	Type	Quantity in Tons/Year			Utilization
		Existing Units	Proposed Units	Total	
					around 2.3 km are internal roads i.e. within the plant site. As per an estimate, it was found that around 200 km undeveloped (Kuchha) road is existing in the surrounding villages in the 10 km radius area. Hence, there is lot of potential of slag utilisation during construction of these roads.
4	Slag from Ferro Alloy Plant through EAF Route	-	85,000	85,000	The maximum slag generation shall be 85,000 TPA considering 100% production. After metal recovery about 10% metal is recovered from the total slag and the balance 76,500 TPA (as stone chips/ road construction materials) shall be used for road construction & repairing/ land filling purposes after TCLP test. Considering 3 m width & depth 30 inch (0.75 m) of the road and density of the slag as 2.5 ton/cum, 5625 T slag shall be consumed for 1.0 km stretch. Therefore, the entire quantity of slag generated in a year will be utilized for the construction of around 14 km roads. Besides, significant amount of slag will also be used for landfilling purposes both inside & outside the project site.

52.4.13 Public Consultation:

Details of advertisement given	26/10/2019 in Bengali newspaper "Ei Somoy" and English newspaper "The Times of India"
Date of public consultation	03/12/2019
Venue	Meeting hall of Gopalpur G.P. of Kanksa Block, Dist. - Paschim Bardhaman, West Bengal
Presiding Officer	Sri. Prasanta Mandal, Additional District Magistrate, Paschim Bardhaman
Major issues raised	• Development of football/cricket coaching centre • Generation of employment for the local people and youths • Installation at fencing at the playground • Steps to be taken to control environmental pollution especially operation of Air Pollution Control Device during operation of the unit • Solid waste management in the plant

	• Provision of scholarship to the economically poor students • Safety and welfare about the labour/employee of the existing plant • Arrangement of health camp, distribution of medicines etc. at nearby villages • Measures to be taken to control noise of the plant • Environmental pollution at Gopalpur area • Plantation programme in & around the industry • Source of water for the proposed expansion project

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

Concerns raised during Public Hearing	Physical Activity and Action Plan	Particulars	YEAR OF IMPLEMENTATION		
			1st Year	2nd Year	3rd Year
• Development of football/ cricket coaching center	Cricket/Football Coaching Centre at the playground of the nearby villages will be developed in consultation & co-ordination with Local Authorities	Physical Target (3 years)	Cricket/ Football Coaching Centre comprising of all necessary infrastructures like two rooms building, sports items etc. will be developed at the playground.		
		Budget: Rs. 33 Lakhs	Rs. 11 Lakhs	Rs. 11 Lakhs	Rs. 11 Lakhs
• Generation of employment for the local people and youths	In the proposed project, top most priority will be given to the local people based on their academic qualification. Skill development to unemployed local youths through National Skill Development Corporation, Govt. of India Scheme. Construction of a building along with the necessary infrastructures for this purpose like different machineries for industries.	Physical Target (3 years)	Construction of a 4 – room building with infrastructure development like installation of 10 sewing machines, 10 computer systems & 12 machines for making hand craft items along with necessary raw materials for training purpose.		
		Budget: Rs. 43 Lakhs	Rs. 15 Lakhs	Rs. 15 Lakhs	Rs. 13 Lakhs
• Installation of fencing at the playground	Fencing will be created at the playground to protect it from infiltrators.	Physical Target (1 year)	Approx. 7000 sq. ft. (considering 5 ft height) barbed wired fencing will be created at the playground.		
		Budget: Rs. 3 Lakhs	Rs. 3 Lakhs	-	-
• Steps to be taken to control environmental pollution especially operation of Air Pollution Control Device during operation of the unit	• Adequate control measures like installation of ESP, Bag filters, dust suppression system, fume extraction system, sprinklers & stacks of adequate height at relevant places will be installed. • Air borne dust shall be controlled by mobile water tanker inside the plant premises.	Physical Target	The physical Target for the entire activities shall be achieved in 3 years.		
		Budget	Included in the EMP Cost.		

Concerns raised during Public Hearing	Physical Activity and Action Plan	Particulars	YEAR OF IMPLEMENTATION		
			1st Year	2nd Year	3rd Year
• Environmental pollution at Gopalpur area	• Maintenance of air pollution control equipment shall be done at regular intervals. • All roads shall be paved on which movement of raw materials or products will take place inside the plant premises. • No waste water will be discharged outside the plant area. The plant is designed as a zero-discharge plant. The entire wastewater will be recirculated and recycled. • The equipment shall comply with the Statutory limit of 85 dB(A) (at 1 m. from the source). Noise Reduction Systems will be provided.				
• Solid waste management in the plant	• Blast Furnace Slag will be sold to nearby Cement Plants. • Dust collected from ESP of Sinter Plant will be reused for sinter making. The hearth layer is also reused in sinter machine. • Ferro Chrome slag after chrome recovery through the Jigging process will be used in land filling / road construction purpose after TCLP test. • Slag from Magnesium converter will be used for Land filling/Road Construction purpose. • The Runner Scrap will be remelted. Magnesium dust will be used in Sinter Plant. • Core sand in Casting Area as well as the same from the Annealing Furnace will be used in Land Filling purposes. • Zinc Dust will be sold to SPCB certified Paint manufacturer. • Solid waste of domestic / commercial origin generated in the plant will	Physical Target	The physical Target for the entire activities shall be achieved in 3 years.		
		Budget	Included in the EMP Cost.		

Concerns raised during Public Hearing	Physical Activity and Action Plan	Particulars	YEAR OF IMPLEMENTATION		
			1st Year	2nd Year	3rd Year
	be disposed of suitably in consultation with the concerned Civic body.				
• Provision of scholarship to the economically poor students	• Scholarship will be given to the meritorious and needy students.	Physical Target	Scholarship will be given to the economically poor students by sponsoring them for education after conducting competitive examination		
		Budget	Shall be included in the CSR budget of the company		
• Safety and welfare about the labour/employee of the existing plant	• All the plant employees will be forced to use needed safety gears. All contractor personnel and temporary staff will also be advised to use safety equipment. All the safety system will be as per the standards OHSAS 18001: 1999 / OHSAS 18002 / 2002. • All workers & staffs will be covered under ESI &/ Mediclaim subject to ceiling limit	Physical Target	It will be done on regular basis.		
		Budget	Included in the EMP Cost.		
• Arrangement of health camp, distribution of medicines etc. at nearby villages	Periodic health check-up programme will be conducted by arranging camps through Primary Health Care Centers in nearby villages and medicines will be distributed to the economically needy people.	Physical Target	Health checkup camps shall be organized on half-yearly basis, in 5 nearby villages for general body, eyes, blood test and donation along with mass vaccination for polio, dengue, typhoid, malaria, etc. For this purpose, one doctor along with 2 – 3 assistants shall be deputed. This will come under CSR activities of the company.		
		Budget	Shall be included in the CSR budget of the company		
• Measures to be taken to control noise of the plant	The equipment shall comply with the Statutory limit of 85 dB(A) (at 1 m. from the source). Noise Reduction Systems will be provided.	Physical Target	The physical Target for the entire activities shall be achieved in 3 years.		
		Budget	Included in the EMP Cost.		
• Plantation programme in & around the industry	• The company has earmarked 59.4 acres (33% of 180 acres) of land for Green Belt Development within its plant site considering the upcoming EC. 45 acres of greenbelt has already been developed all around the plant boundary area as well as within the project site. Green belt development	Physical Target	The physical Target for the entire activities shall be achieved in 3 years.		
			Development of 1 no. park along with 1000 nos. tree plantation & distribution of saplings.	Development of 1 no. park along with 1000 nos. tree plantation & distribution of saplings.	1500 nos. Tree plantation & distribution of saplings.
		Budget: Rs. 40	Greenbelt development inside the plant included in the EMP Cost.		

Concerns raised during Public Hearing	Physical Activity and Action Plan	Particulars	YEAR OF IMPLEMENTATION		
			1st Year	2nd Year	3rd Year
	programme for the rest 14.4 acres will also be developed simultaneously within the commissioning period of the proposed project. • Development of Parks and Tree Plantation Programme (3500 nos) in the nearby villages will be done and distribution of saplings will be done to the nearby villagers and school students in consultsation with local civic bodies.	Lakhs	Rs.15 Lakhs	Rs.15 Lakhs	Rs.10 Lakhs
Total Budget - Public Hearing related: Rs. 119 Lakhs					

Need based Activities	Particulars	Year of Implementation		
		1st Year	2nd Year	3rd Year
Distribution of Masks, Duster and sanitizer to the local people. COVID vaccination will also be done to the local people	Physical Target:	4,000 nos. Mask and Duster per month, 1000 bottles Sanitizer and COVID Vaccination to the local people		
	Budget: Rs. 30 Lakhs	Rs. 30 Lakhs	-	-
Providing Dustbins (300 nos @Rs. 1000/- per unit) in nearby villages (under Swachh Bharat Scheme) for waste segregation and handling	Physical Target:	100 nos. Dustbins	100 nos. Dustbins	100 nos. Dustbins
	Budget: Rs. 3.0 Lakhs	Rs. 1 Lakhs	Rs. 1 Lakhs	Rs.1 Lakhs
Rain Water Harvesting ponds in nearby villages (4 nos. @ Rs. 5 Lakhs per pond).	Physical Target:	2 Rain Water Harvesting Pond	2 Rain Water Harvesting Pond	-
	Budget: Rs. 20 Lakhs	Rs. 10 Lakhs	Rs. 10 Lakhs	-
Construction of 11 nos. of ground water Recharging system for rainwater in nearby villages (@2.5 lakhs per system).	Physical Target:	4 no. of ground water Recharging system	4 no. of ground water Recharging system	3 no. of ground water Recharging system
	Budget: Rs. 27.5 Lakhs	Rs. 10 Lakhs	Rs. 10 Lakhs	Rs. 7.5 Lakhs
Drainage Development & maintenance - Side drains & Culvert	Physical Target:	Development & maintenance of drains & Culvert on drainage in adjacent villages	Development & maintenance of drains & Culvert on drainage in adjacent villages	Development & maintenance of drains & Culvert on drainage in adjacent villages
	Budget: Rs. 68.5 Lakhs	Rs. 24.5 Lakhs	Rs. 22 Lakhs	Rs. 22 Lakhs

Need based Activities	Particulars	Year of Implementation		
		1st Year	2nd Year	3rd Year
Providing sanitary napkins to women for hygienic awareness.	Physical Target:	It will be done on regular basis.		
	Budget: Rs. 8 Lakhs	Rs. 3 Lakh	Rs. 3 Lakh	Rs. 2 Lakh
Providing transportation to school students of nearby villages	Physical Target:	Provision of bus	Provision of bus	Provision of bus
	Budget: Rs. 24 Lakhs	Rs. 8 Lakhs	Rs. 8 Lakhs	Rs. 8 Lakhs
Total Budget - Need based activities: Rs. 181 Lakhs				
Overall Budget (Public Hearing related + Need based Activities): Rs. 300 Lakhs				

52.4.14 The capital cost of the project is Rs. 258.7 Crores and the capital cost for environmental protection measures including address of public consultation concerns is proposed as Rs. 42 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 400 Lakhs. The employment generation from the proposed project/ expansion is 700 persons. The detail of cost for environmental protection measures is as follows:

S. No.	Description of Item	Proposed Cost (Rs. in Crores)	
		Capital Cost	Recurring Cost
i.	Air Pollution Control/Noise	29.0	2.9
ii.	Water Pollution Control	2.5	0.28
iii.	Green Belt Development	2.0	0.07
iv.	Solid/Hazardous Waste Management	-	0.2
v.	Noise Reduction	1.2	0.12
vi.	Occupational Health Management	1.5	0.15
vii.	Risk Mitigation & Safety Plan	1.0	0.10
viii.	Environmental Management Department	1.8	0.18
ix.	Addressal of Public Consultation concerns	3.0	-
	TOTAL	**42**	**4**

52.4.15 Existing green belt has been developed in 24.04 ha area which is about 33% of the total project area of 72.84 Ha with total sapling of 27,320 Trees. At plant boundary in 18.21 ha area developed as green belt by planted 27,320 trees (@1500 trees/ ha) and 5.83 ha area within project site has been developed with 14,575 trees (@2500 trees/ha). Total 24.04 ha (33% of the project site) area has been developed with 41,895 trees (@ 1742 trees/ha). Gap filling of the green belt with 758 trees/ ha will be done by proponent by December, 2022.

52.4.16 PP mention that there is no violation under EIA, 2006/ court case/ show cause/direction is pending related to the proposed project.

52.4.17 Name of the EIA consultant: M/s. Envirotech East Pvt. Ltd. [at S No. 178, List of ACOs with their Certificate no. NABET/EIA/2124/SA 0145, valid up to 12/09/2022; Rev. 18, January 05, 2022].

Certified compliance report from Regional Office

52.4.18 The Status of review of action taken report (ATR) of earlier EC was obtained from MoEF&CC Regional Office, Kolkata vide letter dated 16/08/2021 in the name of M/s. Jai Balaji Industries Ltd on the basis of site monitored on 25/09/2020 and action taken report (ATR) submitted by PP to IRO, Kolkata on 29/07/2021. Subsequently, site was revisited

on 12/11/2021 to verify the compliance. Review report obtained from IRO, Kolkata based on corrective ATR submitted by PP on 22/11/2021. The point wise examination of reply submitted by PP is given as below:

1	**Observation made during monitoring on 25/09/2020:** It is required to install on-line ambient air quality monitoring station in consultation with State Pollution Control Board, West Bengal at the earliest. **Action taken report submitted by the project proponent on 29/07/2021:** Purchase order for two (2) on-line ambient air quality monitoring stations has already been issued to vendors and they will be installed within October 2021. Copy of purchase order submitted to IRO, Kolkata. **Review of Acton Taken Report dated 16/08/2021: Partially Complied.** As per ATR submitted it is observed that purchase order for two on-line ambient air quality monitoring stations dated 27/02/2021 has been placed. **Action taken report submitted by the project proponent on 22/11/2021** Installation and Commissioning of the CAAQMS have already completed. Photo and Reports are submitted to IRO, Kolkata. **Review of Acton Taken Report and observation made during monitoring on 12/11/2021: Being Complied** During inspection it was observed that CAAQMS has been installed. It is observed from the report of the two CAAQMS monitoring stations that parameters are within the stipulated standard.
2	**Observation made during monitoring on 25/09/2020:** It is required to monitor Chromites in influent and effluent surface, sub-surface and ground water on regular basis and reports to be submitted along with six monthly compliance reports. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to along with six monthly compliance reports. **Action taken report submitted by the project proponent on 29/07/2021:** Monitoring of Chromites is done on regular basis and the monitoring report for the same along with Surface water Analysis is submitted to IRO, Kolkata. **Review of Acton Taken Report dated 16/08/2021: Partially Complied.** As per ATR submitted by the PP, it has been observed that monitoring report of raw water suggests absence of chromite. However, monitoring reports of influent, effluent surface water and leachate study for the effluent generated have not been submitted by the PP. **Action taken report submitted by the project proponent on 22/11/2021** Monitoring reports of influent, effluent surface water, ground water and leachate study for the effluent generated are submitted to IRO, Kolkata. **Review of Acton Taken Report and observation made during monitoring on 12/11/2021: Being complied**.

	PAs have monitored chromites and submitted reports of the same in influent, effluent surface water, ground water and leachate samples.
3	**Observation made during monitoring on 25/09/2020:** It is required to submit the regular report regarding toxic metal content in the waste material and its composition, end use of solid hazardous waste to the Ministry's Regional Office at Bhubaneswar. WBPCB and CPCB, **Action taken report submitted by the project proponent on 29/07/2021:** MBF Slag will be sold to Cement Plant. The invoice for the same has been submitted to the IRO, Kolkata, WBPCB and CPCB. **Review of Acton Taken Report dated 16/08/2021: Partially Complied.** As per ATR, the PP has not submitted monitoring reports pertaining to toxic metal content in the waste material and its composition, end use of solid / hazardous waste to the Ministry's Integrated Regional Office at Kolkata, WBPCB and CPCB. The invoice of slag sold to cement plants has been submitted to IRO, Kolkata. **Action taken report submitted by the project proponent on 22/11/2021** The monitoring report pertaining to toxic metal content in the waste material and its composition is submitted to IRO, Kolkata. There is no toxic metal present in the slag. **Review of Acton Taken Report and observation made during monitoring on 12/11/2021: Being complied.** PAS have submitted the toxic metal content in the slag. As per email dated 14/12/2021, PAs have informed that BF slag is sold to nearby cement plant, dust collected from ESP of sinter making and the hearth layer is reused in the sinter machine, EAF slag is used for road construction and landfilling after metal recovery, dust collected in the dedusting system and magnesium dust is used in sinter plant, slag from Magnesium converter used for landfilling/road construction, core sand in casting area as well as same from Annealing furnace used in land filling purpose, zinc dust is sold to SPCB certified paint manufacturer.
4	**Observation made during monitoring on 25/09/2020:** It is required to develop the green belt all around the plant boundary area and 33% of total plant area as per the CPCB guidelines in consultation with the DFO. **Action taken report submitted by the project proponent on 29/07/2021:** JBIL, Unit-III has earmarked 59.4 acres (33% of 180 acres) of land for Green Belt Development within its plant site considering the upcoming EC. 45 acres (75.76%) of greenbelt has already been developed all around the plant boundary area as well as within the project site, green belt development program for the rest 14.4 acres (24.4%) will also be developed simultaneously within the commissioning period of the proposed project as per the CPCB guidelines in consultation with the DFO. Recent photographs of the existing green belt are submitted to IRO, Kolkata **Review of Acton Taken Report dated 16/08/2021: Partially Complied.**

	As per ATR submitted by the PP. it has been observed that development of greenbelt in 33% of total plant area as per the CPCB guidelines in consultation with the DFO has not been achieved as yet. **Action taken report submitted by the project proponent on 22/11/2021** 3-tier avenue plantation using native species around 33% of total plant area has been developed and data in tabular form has been submitted to IRO, Kolkata. **Review of Acton Taken Report and observation made during monitoring on 12/11/2021:** During monitoring it was observed that PAs have developed green belt within the project site. PAs need to fill gaps along the boundary wall with more plantation. As per report submitted, it is observed that PAs have developed green belt in 24.04 hectare. PAs need to have a survey conducted to assess the number of trees planted and area developed as green belt in the project site by DFO and the survey report submitted to the Regional Office.
5	**Observation made during monitoring on 25/09/2020:** It is required to upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on the company website and should update the same periodically. **Action taken report submitted by the project proponent on 29/07/2021:** The status of compliance of the stipulated environment clearance conditions, including results of monitored data on the company website is uploaded and the same has been updated periodically. Screenshot for the same is submitted to IRO, Kolkata. **Review of Acton Taken Report dated 16/08/2021: Partially Complied.** As per ATR submitted by it is observed, the PP has only submitted the screenshot of the website. The link pertaining to status of compliance of the stipulated environment clearance conditions, including results of monitored data of the company website may be submitted. **Action taken report submitted by the project proponent on 22/11/2021** The link pertaining to status of compliance of the stipulated environment clearance conditions, including results of monitored data of the company website is http://www.jaibalajigroup.com/environment. **Review of Acton Taken Report and observation made during monitoring on 12/11/2021: Being complied.** From the URL it is observed that PAs have uploaded the status of compliance of the stipulated environment clearance conditions in http://www.jaibalajigroup.com/environment/
6	**Observation made during monitoring on 25/09/2020:** It is required to provide the copies of advertisements made in newspapers regarding grant of EC to the project. **Action taken report submitted by the project proponent on 29/07/2021:**

	JBIL, Unit-III are trying to collect the copies of advertisements made in newspapers regarding grant of EC to the project. **Review of Acton Taken Report dated 16/08/2021: Not Complied**. Copies of advertisements made in newspapers regarding grant of EC to the project have not been submitted. **Action taken report submitted by the project proponent on 22/11/2021** The copies of advertisements made in newspapers regarding grant of EC to the project is submitted to IRO, Kolkata. **Review of Acton Taken Report and observation made during monitoring on 12/11/2021: Partially complied.** PAs have submitted a copy of the advertisement in Bengali Newspaper "Jatirkatha" dated 27/09/2012. PAS need to submit a copy of advertisement submitted in another local journal.

Conclusion of review report from IRO, Kolkata:

Action plan/ information need to submit by PP on following point:

1. PAs need to have a survey conducted to assess the number of trees planted and area developed as green belt in the project site by DFO and the survey report submitted to the Regional Office.
2. PAs need to submit a copy of advertisement regarding grant of EC submitted in local journal.

Observations of the Committee

52.4.19 The EAC noted the following:

i. 5 Nos fresh samples of surface water were analyzed as observed by EAC. The results are still same with data of 8400 ppm of coliform and 4.0 mg/l of BOD. Clarification shall be made for the same. This needs to be revisited.
ii. Out of 4 Continuous Ambient Air Quality Monitoring System (CAAQMS), only 2 are installed and remaining 2 are yet to be installed. The locations of the installed CAAQMS is not in consonance with the wind rose diagram.
iii. Continuous Emission Monitoring System (CEMS) for the process stacks are yet to be implemented by the proponent.
iv. Water permission is obtained from Asansol Durgapur Development Authority (ADDA) but PP did not provide any clarification whether ADDA is a competent authority for granting such permissions.
v. Scholarships, health checkups, distribution of masks for COVID-19 are mentioned in action plan to address the issues raised during public hearing. In view of this, revised action plan with physical targets to address the issues raised during public hearing in conformity to the MoEF&CC O.M. dated 30/09/2020 needs to be submitted.
vi. PP did not clarify about type of Submerged Arc Furnace and fume extraction system.
vii. Details regarding Ductile Iron Plant and pollution control devices are not provided.
viii. Project benefits are not quantified in the EIA report.
ix. IRO, Kolkata has made two observations in review of ATR on 28/12/2021 (i) PP need to have a survey conducted to assess the number of trees planted and area developed as green belt in the project site by DFO and the survey report submitted to the

Regional Office (ii) PP need to submit a copy of advertisement regarding grant of EC submitted in local journal. Action plan in this regard has not been submitted by the proponent.

Recommendations of the Committee

52.4.20 In view of the foregoing and after deliberations, the Committee recommended that proposal to be returned in its present form to address the technical shortcomings enumerated at para no. 51.4.19 and submit the revised application as per the provisions of EIA Notification, 2006. Further, EAC recommended that, Ministry may seek clarification from State Government of West Bengal regarding whether Asansol Durgapur Development Authority (ADDA) is a competent authority to give permission for water withdrawal for industrial purpose.

52.5 Expansion of paper Mill from 130000 TPA to 460000 TPA of Newsprint /Paper/Board, new wood pulp mill of 600 TPD (paper & Board) capacity and Coal fired boiler based Captive Power Plant from 20 MW to 140 MW capacity by **M/s. Emami Paper Mills Limited** located at Balgopalpur Village Remuna Tehsil, **Balasore District, Odisha** [Online Proposal No. IA/OR/IND/124371/2019, File No. J-11011/437/2010-IA. II(I)] – **Amendment in Environment Clearance based on ADS reply – regarding.**

52.5.1 M/s. Emami Paper Mills Limited has made online application vide proposal no. IA/OR/IND/124371/2019 dated 25/02/2020 along with addendum in EIA/EMP report, Form 4 and certified compliance report seeking amendment in the Environment Clearance accorded by the Ministry vide letter no. J- 11011/323/2006-IA. II(I) dated 17/05/2007 and J-11011/437/2010-IA-II(I) dated 13/01/2012 under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 5 (i) (Pulp manufacturing and Pulp & Paper manufacturing industry) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

52.5.2 The proposal cited above was considered in the 17th Re-constituted Expert Appraisal Committee (Industry- 1) meeting held on 09/04/2020. The EAC proceedings of the proposal is reproduced as below:

Proceedings of the 17th REAC meeting held on 09/04/2020

52.5.3 M/s. Emami Paper Mills Ltd. is operating a 3,00,000 TPA paper & board plant at village Balgopalpur, District Balasore, Odisha with valid CTO dated 27/03/2019. The paper & board types comprise Newsprint, Kraft, Writing, Printing and Industrial Paper Board/ Packaging Board.

The company had obtained an Environment Clearance as follows:

i. EC letter No. J-11011/437/2010-IA-II (I) dt. 13/01/2012 for a capacity of 4,60,000 TPA paper & board and 140 MW captive power plant.
ii. EC letter No. J-11011/323/2006-IA-II (I) dt. 17/05/2007 for 1,30,000 TPA paper and 20 MW captive power plant.

52.5.4 Implementation status of the existing EC dated 13/01/2012:

S No	Facilities	Unit	As per EC dated 13/01/2012	Implementation status as on 13/01/2022	Production as per CTO
1	Newsprint, Paper & Board	TPD	1400	**1025**	**3,00,000 TPA**

S No	Facilities	Unit	As per EC dated 13/01/2012	Implementation status as on 13/01/2022	Production as per CTO
			(4,60,000 TPA)	**(3,40,000 TPA)**	
2	RCF Pulp	TPD	800	**615**	**615**
3	Wood Pulp	TPD	600 (Inhouse production)	360 (purchasing)	360 (purchasing)
4	Chlorine-di-oxide	TPD	14	Not required	Not required
5	Oxygen Generation	TPD	15	Not required	Not required
6	Evaporation Plant	TPD	280	Not required	Not required
7	Recovery Boiler	solids/day	1300	Not required	Not required
		tph stream	280	Not required	Not required
8	Lime Kiln	TPD	280	Not required	Not required
9	Causticiser Plant – recovered caustic (AA) basis	TPD	300	Not required	Not required
10	Producer gas plant	Nm^3/h	10000	Not required	Not required
11	Power Plant	MW	140	**33.5 (part installed & existing augmented)**	**33.5 (part installed & existing augmented)**
12	Coal fired boiler	TPH	540	**185 (part installed)**	**185 (part installed)**
13	DM/RO plant	m^3/hr	225	**Not installed, existing 75 m^3/h continued**	**Not installed, existing 75 m^3/h continued**
14	Power Evacuation sub station	MVA	65	16/20 MVA, 132/11Kv (part augmented)	16/20 MVA, 132/11Kv (part augmented)
15	Cooling Towers	m^3/hr	29000	8,750 (existing 6000 + part installed 2750)	8,750 (existing 6000 + part installed 2750)
16	Water requirement	m^3/day	82000	11,700 (Reduced due to partial installation of plant)	11,700 (Reduced due to partial installation of plant)
17	Waste water treatment plant capacity	m^3/day	75000	14,500 (Reduced due to partial installation of plant)	14,500 (Reduced due to partial installation of plant)
18	Colony	No. of Houses	975	205 (Existing 175 augmented by 30)	205 (Existing 175 augmented by 30)

Note: Due to lack of success in developing plantation for wood pulp, the Company dropped the project for captive pulping and associated processes. Thus, as on 01/01/2022, the production achieved could only be 3,40,000 TPA paper & paperboard and 33.5 MW captive power plant could be installed. The CTO from OSPCB is for the actually achieved capacities.

It can be seen from the above table that full production at serial 1 to 3 could not be achieved. The units at serial 4 to 10 were not installed at all and units at serial 11 to 18 were partially installed or the units existing at time of EC were augmented. Since the wood pulp could not be produced in-house, therefore, the pulp is purchased.

52.5.5 Due to non-installation of seven of the sanctioned facilities, partial installation of eight facilities and only partial achievement of Newsprint, Paper & Board production i.e., of 3

lakh TPA instead of 4.6 lakh TPA sanctioned the overall reduction in air emission, water consumption, effluent generation, solid waste generation has occurred as follows:

<table>
<tr><th>Parameter</th><th>As sanctioned in EC</th><th>Amendment sought</th></tr>
<tr><td>Water requirement, m^3/day</td><td>82,000</td><td>11,700</td></tr>
<tr><td>Waste Water discharge, m^3/day</td><td>65,500</td><td>7,000</td></tr>
<tr><td>Effluent treatment plant</td><td>75000</td><td>14,500</td></tr>
<tr><td>Power requirement</td><td>100 MW</td><td>33.5 MW</td></tr>
<tr><td>Solid waste</td><td colspan="2">
<table>
<tr><th rowspan="2">SI. No.</th><th rowspan="2">Source</th><th colspan="2">As per EC dt. 13/02/2012</th><th colspan="2">Amendment sought</th><th rowspan="2">Management</th></tr>
<tr><th>Total</th><th>Reuse/ Sale</th><th>Total</th><th>Reuse/ Sale</th></tr>
<tr><td>1.</td><td>Used Oil, TPA</td><td>--</td><td>--</td><td>25</td><td>25</td><td>Sold to authorized vendor</td></tr>
<tr><td>2.</td><td>Ash, TPD</td><td>900</td><td>900</td><td>462</td><td>462</td><td>Used 100% in brick manufacturing</td></tr>
<tr><td>3.</td><td>Primary Sludge, BDMT</td><td>204</td><td>204</td><td>101</td><td>101</td><td>Primary sludge used in company's own power boiler as a fuel</td></tr>
<tr><td>4.</td><td>Secondary Sludge, TPD</td><td>9</td><td>9</td><td>3.5</td><td>3.5</td><td>Used in Plantation/ horticulture as a manure</td></tr>
<tr><td>5.</td><td>Waste Plastic, TPD</td><td>--</td><td>--</td><td>10</td><td>10</td><td>Sent to authorized cement industry for co Processing in lime kiln</td></tr>
<tr><td>6.</td><td>Lime sludge</td><td>50</td><td>50</td><td>Nil</td><td>Nil</td><td>Brick manufacturing & cement grinding plant</td></tr>
</table>
</td></tr>
<tr><td>Air Emission</td><td colspan="2">
All values in μg/m³
<table>
<tr><th></th><th colspan="3">As per EIA</th><th colspan="2">As per amended configuration</th><th></th></tr>
<tr><th>Pollutant</th><th>Baseline air quality values</th><th>Incremental GLC</th><th>Resultant GLC</th><th>Incremental GLC</th><th>Resultant GLC</th><th>Reduction in GLC</th></tr>
<tr><td>PM_{10}</td><td>68.7</td><td>3.8</td><td>72.5</td><td>0.225</td><td>68.925</td><td>3.575</td></tr>
<tr><td>SO_2</td><td>15.5</td><td>16.4</td><td>31.9</td><td>4.742</td><td>20.242</td><td>11.658</td></tr>
<tr><td>NOx</td><td>19.3</td><td>4.3</td><td>23.6</td><td>2.478</td><td>21.778</td><td>1.822</td></tr>
</table>
</td></tr>
</table>

52.5.6 The amendment required in the EC dated 13/01/2012 and 17/05/2007 are furnished as below:

(i) with respect to EC dated 13/01/2012: The plant was envisaged to expand from:

(a) 130000 TPA to 460000 TPA of Newsprint/ paper/ Board was sanctioned but only 3,40,000 TPA is installed till date.

(b) New wood pulp mill of 600 TPD (Paper & board) capacity was sanctioned could not be installed and wood pulp is currently purchased

(c) Coal fired boiler based Captive Power Plant from 20 MW to 140 MW was sanctioned but only 33.5 MW has been installed

The present capacity is lower than that permitted in the EC and no new wood pulp mill was installed due to lack of success in developing plantation for wood pulp. Thus, instead

of manufacturing wood pulp in-house, the company is purchasing wood pulp from various countries to Haldia Port and bringing it to plant by road. Furthermore, due to change in plans, none of the following units have been installed:

- One new de-inking pulp mill of capacity 400 TPD
- ECF wood pulp mill of capacity 600 TPD in two phases
- New plant of Chlorine –di-oxide plant (s) of capacity 14 TPD
- New Oxygen generation plant of capacity 15 TPD
- New evaporation plant (s) of capacity 240 TPD water evaporation
- Two new recovery boiler (s) 1300 tonne of BL solids firing per day
- Two new lime kiln (s) of capacity 280 TPD Lime
- Two new causticiser plant (s) of capacity 300 TPD of recovered caustic (AA)
- New producer gas plant of capacity 10000 Nm^3/h
- New DM/RO plant (s) of Capacity 150 m^3/hr
- New water treatment plant of capacity 75000 m^3/day
- The capacities of following project constituents as per EC dated 13/01/2012 were partly implemented:

S No	As per EC dated 13/01/2012	Actual implementation
i.	One newsprint/ board machine #4 of capacity 400 TPD	One board machine # 4 of capacity 600 TPD. Out of 3 paper/ paperboard machines of 1025 TPD capacity, we have installed only one board machine of capacity 600 TPD
ii.	Two paper /board paper machines (PM#5 & #6) of capacity 600 TPD	
iii.	Two new power plant (s) of capacity 120 MW	One new power plant of capacity 10.5 MW and augmentation of power plant 15 MW to 18 MW
iv.	Three new coal fired boilers of capacity 420 TPH (3 x140 TPH)	One new coal fired boilers of capacity 65 TPH
v.	New cooling towers of capacity 23000 m^3/hr of water	New of 2750 m^3/Hr
vi.	Augmentation of power substation of capacity 50 MVA for receiving and evacuation of power to grid	Augmentation of power substation of capacity 16/20 MVA, 132/11kV for receiving Grid power
vii.	New wastewater treatment plant of 65000 m^3/day	Augmentation of present installed capacity to 14500 m^3/day
viii.	Additional housing colony consisting of 800 houses	Additional 30 new houses in existing colony

- Due to non-installation, and other changes as mentioned above, there is no generation of black liquor, wood chips nor use of furnace oil.
- Ground water consumption has also not increased with respect to that mentioned in 2007 EC due to various water conservation measures implemented over the years. Hence, the proposal to draw additional water from Budhabalanga river through Barrage for expansion project was not required to be implemented as per EC of 2012.
- Accordingly, the project configuration of 2012 EC got changed and subsequently the project cost reduced to Rs 490 Crores from Rs. 2500 Crores and correspondingly ESR expenditure may be replaced with the CER as per MoEF&CC OM dated 01/05/2018.

(ii) ***with respect to EC dated 17/05/2007:*** There is typographical error in the subject matter while the correct figures regarding production are mentioned in the first paragraph of the letter itself. Subsequently, EMPL has not installed captive Digestor Pulping (Kraft process), Recovery Boiler or chemical recovery plant, as mentioned in the EC letter no F.No. J-11011/323/2006-IA-II (I) dt. 17/05/2007 hence there is no conventional pulp bleaching. Consequently, the pollutant emitted through these processes (H_2S, Pb, Mercaptans, Methylene chloride, TOC and AOx), wastes generated (black liquor) and chemicals used in these processes (chlorine and hypochlorite) do not apply.

52.5.7 Detail of Amendment Sought in Environmental Clearance letters are given below:

(1) Amendments required in Environmental clearance letter no. J-11011/437/2010-IA-II(I) dated 13/01/2012:

Reference of approved EC	**Description as per approved EC**	**Description required as per proposal (proposed changes are underlined)**	**Justification of amendment**
(1)	**(2)**	**(3)**	**(4)**
Subject	Expansion of Paper Mill from 130000 TPA to 460000 TPA of Newsprint/ Paper/ Board, new wood pulp mill of 600 TPD (Paper & board) capacity and Coal fired boiler based Captive Power Plant from 20 MW to 140 MW capacity at Balgopalpur village, Remuna Tehsil, Balasore District, Orissa by M/s Emami Paper Mills Limited- regarding Environment Clearance	Expansion of Paper Mill from 1,30,000 TPA to 3,40,000 TPA of Newsprint/Paper/ Board and Coal fired boiler based Captive Power Plant from 20 MW to 33.5 MW capacity at Balgopalpur village, Remuna Tehsil, Balasore District, Odisha by M/s Emami Paper Mills Limited- regarding Environment Clearance	• Due to lack of success in developing plantation for wood pulp the company dropped the project for captive pulping and associated processes • The total production that could be achieved was 3,40,000 TPA paper & paperboard with 33.5 MW installed capacity of CPP
Para 2	The Ministry of Environment and Forests has examined the proposal. It is noted that M/s Emami Paper Mills Limited have proposed for expansion of Paper Mill from 130000 TPA to 460000 TPA of Newsprint/Paper/Board by increasing the production of Newsprint/Printing & Writing Papers from 400 TPD (Newsprint) to 800 TPD capacity, new wood pulp mill of 600 TPD (Paper & Board) capacity and Coal fired boiler based Captive Power Plant from 20 MW to 140 MW capacity at Balgopalpur Village, Remuna Tehsil, Balasore District, Orissa. Total plant area is 967 acres including 69 acres of existing plant area. About 150 acres of the plant area will be developed under green belt. No national park/ wildlife sanctuary / eco-sensitive area is	The Ministry of Environment and Forests has examined the proposal. It is noted that M/s Emami Paper Mills Limited have proposed for expansion of Paper Mill from 1,30,000 TPA to 3,40,000 TPA of Newsprint/ Paper/ Board by increasing the production by using 360 TPD purchased pulp and RCF/balance Deinked pulp 615 TPD. Coal fired boiler based Captive Power Plant from 20 MW to 33.5 MW capacity at Balgopalpur Village, Remuna Tehsil, Balasore District, Odisha. Total plant area is 158.35 acres including 69 acres of existing plant area. About 53 acres of the plant area will be developed under green belt No national park/ wildlife sanctuary / eco-sensitive area is located within 10 km radius of the project. However, Mitrapur reserve forest is located at a distance of 2.5 km. Total cost of the proposed expansion will be Rs. 490 Crores (including Rs.30.00 Crores will be earmarked towards for environmental pollution control measures) in the proposed expansion plan.	• Captive pulping and associated process was dropped as wood plantation project did not succeed.

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
(1)	(2)	(3)	(4)
	located within 10 km radius of the project. However, Mitrapur reserve forest is located at a distance of 2.5 km and 4.3 km in the west and 5.9 km in south west. Total cost of the proposed expansion will be Rs. 2500.00 Crores (including Rs.325.00 Crores will be earmarked towards for environmental pollution control measures) in the proposed expansion plan.		
Para 3	Following additional facilities will be taken up in the proposed expansion:	Following additional facilities will be taken up in the proposed expansion:	
	➢ One newsprint/ board machine #4 of capacity 400 TPD	- One board machine # 4 of capacity 600 TPD	Out of 3 paper /paper board machines of 1025 TPD capacity, we have installed only one paperboard machine of capacity 600TPD.
	➢ Two paper /board paper machines (PM#5 &#6) of capacity 600 TPD		
	➢ One new de-inking pulp mill of capacity 400TPD	-	Not required
	➢ ECF wood pulp mill of capacity 600 tpd in two phases	-	Not required
	➢ New plant of Chlorine –di-oxide plant (s) of capacity 14 TPD	-	Not required
	➢ New Oxygen generation plant of capacity 15 TPD	-	Not required
	➢ New evaporation plant(s) of capacity 240 TPD water evaporation	-	Not required
	➢ Two new recovery boiler (s) 1300 tonne of BL solids firing per day	-	Not required
	➢ Two new lime kiln (s) of capacity 280 TPD Lime	-	Not required
	➢ Two new causticiser plant (s) of capacity 300 TPD of recovered caustic (AA)	-	Not required
	➢ New producer gas plant of capacity 10000 Nm^3/h	-	Not required
	➢ Two new power plant (s) of capacity 120 MW	➢ One new power plant of capacity 10.5 MW and augmentation of power plant 15 MW to 18 MW	Reduced capacity installed. Existing 5 + Augmented 18+ new 10.5 = 33.5 MW total capacity
	➢ Three new coals fired boilers of capacity 420TPH (3x140 TPH)	➢ One new coal fired boilers of capacity 65 tph	Reduced capacity installed. Existing 35 + 85 + new 65 = 185 TPH total.
	➢ New DM/RO plant (S) of capacity 150 m^3/hr	-	Not required
	➢ New cooling towers of capacity 23000 m^3/h of water	➢ New cooling towers of capacity 2750 m^3/h of water	Reduced capacity installed

<table>
<tr><th>Reference of approved EC</th><th>Description as per approved EC</th><th>Description required as per proposal (proposed changes are underlined)</th><th>Justification of amendment</th></tr>
<tr><td>(1)</td><td>(2)</td><td>(3)</td><td>(4)</td></tr>
<tr><td></td><td>➢ Augmentation of power substation-<u>50 MVA</u> for receiving and evacuation of power to grid</td><td>➢ Augmentation of power substation of capacity <u>16/20 MVA, 132/11kV</u> for receiving Grid power</td><td>Reduced capacity installed</td></tr>
<tr><td></td><td>➢ <u>New</u> water treatment plant of capacity <u>75000 m^3/day</u></td><td>-</td><td>Not required</td></tr>
<tr><td></td><td>➢ <u>New</u> wastewater treatment plant of capacity <u>65000 m^3/day</u></td><td>➢ <u>Augmentation of</u> wastewater treatment plant of capacity <u>to 14500 m^3/day</u></td><td>Augmentation of existing ETP capacity</td></tr>
<tr><td></td><td>➢ Additional <u>housing colony consisting of 800 houses.</u></td><td>➢ Additional <u>new 30 houses in existing colony</u></td><td>Augmentation of existing colony with new houses</td></tr>
<tr><td>Table in Para 4</td><td>
<table>
<tr><th>S No</th><th>Section</th><th>Unit</th><th>Existing</th><th>MEP</th><th>Total Post MEP</th><th>Proposal</th></tr>
<tr><td>1</td><td>Newsprint, Paper & Board</td><td>TPD</td><td>400</td><td><u>1000</u></td><td><u>1400</u></td><td>New</td></tr>
<tr><td>2</td><td>RCF pulp</td><td>TPD</td><td>400</td><td><u>400</u></td><td><u>800</u></td><td><u>New</u></td></tr>
<tr><td>3</td><td>Wood pulp</td><td>TPD</td><td></td><td><u>600</u></td><td><u>600</u></td><td><u>New</u></td></tr>
<tr><td>4</td><td>Chlorine - di-oxide</td><td>TPD</td><td>-</td><td>14</td><td>14</td><td>New</td></tr>
<tr><td>5</td><td>Oxygen Generation</td><td>TPD</td><td>-</td><td>15</td><td>15</td><td>New</td></tr>
<tr><td>6</td><td>Evaporation Plant</td><td>TPD</td><td>-</td><td>280</td><td>280</td><td>New</td></tr>
<tr><td>7</td><td>Recovery Boiler</td><td>Solids/ day</td><td>-</td><td>1300</td><td>1300</td><td>New</td></tr>
<tr><td></td><td></td><td>TPH steam</td><td>-</td><td>160</td><td>280</td><td>New</td></tr>
<tr><td>8</td><td>Lime kiln</td><td>TPD</td><td>-</td><td>280</td><td>280</td><td>New</td></tr>
<tr><td>9</td><td>Causticiser plant – recovered caustic (AA) basis</td><td>TPD</td><td>-</td><td>300</td><td>300</td><td>New</td></tr>
<tr><td>10</td><td>Producer gas plant</td><td>Nm^3/h</td><td>-</td><td>10000</td><td>10000</td><td>New</td></tr>
<tr><td>11</td><td>Power Plant</td><td>MW</td><td>20</td><td><u>120</u></td><td><u>140</u></td><td>New</td></tr>
<tr><td>12</td><td>Coal fired boiler</td><td>TPH</td><td>120</td><td><u>420</u></td><td><u>540</u></td><td>New</td></tr>
<tr><td>13</td><td>DM/RO plant</td><td>m^3/h</td><td>75</td><td>150</td><td>225</td><td>New</td></tr>
<tr><td>14</td><td>Power Evacuation sub station</td><td>MVA</td><td>15</td><td>50</td><td>65</td><td><u>Augmentation</u></td></tr>
<tr><td>15</td><td>Cooling Towers</td><td>m^3/h</td><td>6000</td><td>23000</td><td>29000</td><td>New</td></tr>
</table>
<table>
<tr><th>S No</th><th>Section</th><th>Unit</th><th>Existing</th><th>MEP</th><th>Total Post MEP</th><th>Proposal</th></tr>
<tr><td>1</td><td>Newsprint, Paper & Board</td><td>TPD</td><td><u>425</u></td><td><u>600</u></td><td><u>1025</u></td><td>New</td></tr>
<tr><td>2</td><td>RCF pulp</td><td>TPD</td><td><u>400</u></td><td><u>215</u></td><td><u>615</u></td><td>New</td></tr>
<tr><td>3</td><td>Wood pulp</td><td>TPD</td><td>-</td><td><u>360</u></td><td><u>360</u></td><td><u>Purchased Pulp</u></td></tr>
<tr><td>4</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>5</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>6</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>7</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
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<tr><td>8</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>9</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>10</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>11</td><td>Power Plant</td><td>MW</td><td>20</td><td><u>13.5</u></td><td><u>33.5</u></td><td><u>New & augmentation</u></td></tr>
<tr><td>12</td><td>Coal fired boiler</td><td>TPH</td><td>120</td><td><u>65</u></td><td><u>185</u></td><td>New</td></tr>
<tr><td>13</td><td>-</td><td>-</td><td>-</td><td><u>-</u></td><td><u>-</u></td><td>-</td></tr>
<tr><td>14</td><td>Power Evacuation sub station</td><td>MVA</td><td>15</td><td><u>5</u></td><td><u>20</u></td><td><u>Augmentation</u></td></tr>
<tr><td>15</td><td>Cooling Towers</td><td>m^3/h</td><td>6000</td><td><u>2750</u></td><td><u>8750</u></td><td>New</td></tr>
<tr><td>16</td><td>Water requirement</td><td>m^3/ day</td><td>7000</td><td><u>4,700</u></td><td><u>11,700</u></td><td><u>Augmentation</u></td></tr>
<tr><td>17</td><td>Waste water treatment plant capacity</td><td>m^3/h</td><td>10000</td><td><u>4500</u></td><td><u>14,500</u></td><td><u>Augmentation</u></td></tr>
<tr><td>18</td><td>Colony</td><td>No. of Houses</td><td>175</td><td><u>30</u></td><td><u>205</u></td><td><u>Augmentation</u></td></tr>
</table>
</td><td>
• Due to lack of success in developing plantation for wood pulp production, Company had to drop the project for captive pulping and associated processes.
• The total capacity that could be achieved was 3,40,000 TPA paper & paperboard. Accordingly, the capacity of the following units has been reduced commensurate to production:
▪ RCF pulp
▪ Wood pulp to be purchased in place of in-house manufacturing
• Not installed since not required:
▪ Chlorine dioxide
▪ Oxygen generation
▪ Evaporation plant
▪ Recovery boiler
▪ Lime kiln
▪ Causticiser plant – recovered caustic (AA) basis
▪ Producer plant
</td></tr>
</table>

<table>
<tr><th>Reference of approved EC</th><th>Description as per approved EC</th><th>Description required as per proposal (proposed changes are underlined)</th><th>Justification of amendment</th></tr>
<tr><td>(1)</td><td>(2)</td><td>(3)</td><td>(4)</td></tr>
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<tr><td>16</td><td>Water requirement</td><td>m3/day</td><td>7000</td><td>75000</td><td>82000</td><td>New</td></tr>
<tr><td>17</td><td>Waste water treatment plant capacity</td><td>m3/h</td><td>10000</td><td>65000</td><td>75000</td><td>New</td></tr>
<tr><td>18</td><td>Colony</td><td>No. of Houses</td><td>175</td><td>800</td><td></td><td>New</td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>Table in Para 5</td><td>
<table>
<tr><th>Product</th><th>Unit</th><th>Pre-Mill Expansion Plan</th><th>Post Mill Expansion Plan</th></tr>
<tr><td>Paper/ Board</td><td>TPA</td><td>1,30,000</td><td>4,60,000</td></tr>
<tr><td>Wood based pulp</td><td>BD TPA</td><td>-</td><td>2,00,000</td></tr>
<tr><td>De-inked pulp</td><td>BD TPA</td><td>1,30,000</td><td>2,60,000</td></tr>
</table>
</td><td>
<table>
<tr><th>Product</th><th>Unit</th><th>Pre-Mill Expansion Plan</th><th>Post Mill Expansion Plan</th></tr>
<tr><td>Paper/ Board</td><td>TPA</td><td>1,30,000</td><td>3,40,000</td></tr>
<tr><td>Wood based pulp</td><td>BD TPA</td><td>-</td><td>1,18,000 (Purchased Pulp)</td></tr>
<tr><td>De-inked & RCF pulp</td><td>BD TPA</td><td>1,30,000</td><td>2,02,500</td></tr>
</table>
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Due to lack of success in developing plantation for wood pulp production, Company had to drop the project for captive pulping and resort to import of wood-based pulp.
The total capacity that could be achieved was 3,40,000 TPA paper & paperboard.

</td></tr>
<tr><td>Para 6</td><td>Raw materials required for the project will be mixed hard wood & bamboo and waste paper. The mixed hard wood and bamboo will be obtained through social / farm forestry and Govt. plantation. The waste paper will be imported and obtained through local sources. The major chemicals required will be sodium hydroxide, hydrogen peroxide, Sodium silicate, Hydro sulphite, surfactant/DI chemicals, sulphuric acid, polyelectrolytes/flocculants, limestone, sodium sulphate, SO, and Chlorine etc. Black liquor (in chemical recovery boiler), furnace oil (in lime kiln), coal (in co-generation plant) will be used as fuels. The coal will be imported and obtained from MCL.</td><td>Raw materials required for the project will be waste paper and purchased pulp. The waste paper and bleached wood pulp will be imported and/ or obtained through local sources. The major chemicals required will be sodium hydroxide, hydrogen peroxide, Sodium silicate, Hydro sulphite, surfactant/ DI chemicals, sulphuric acid, polyelectrolytes/flocculants, etc. Coal (in co-generation plant) will be used as fuel. The coal will be obtained from MCL.</td><td>

Black liquor will not be generated as there is no captive pulping and recovery boiler.
Furnace oil will also not be required as no lime kiln is installed.
Use of hard wood & bamboo not required as captive pulping project is dropped.

</td></tr>
<tr><td>Para 7</td><td>It is noted that proposed coal-based power boilers will be based on circulating fluidized bed combustion technology. Electrostatic precipitators will be installed to control the particulate emissions from the captive power plants. There will be additional water requirement of 75,000 m3/day for the proposed</td><td>It is noted that proposed coal-based power boilers will be based on Atmospheric Fluidised Bed Combustion (AFBC) technology. Electrostatic precipitators will be installed to control the particulate emissions from the captive power plants. There will be additional water requirement of 4700 m3/day for the proposed expansion in addition to the present water requirement of 7,000 m3/day. The</td><td>

Due to reduction in boiler capacity, CFBC boiler was replaced with AFBC boiler as CFBC is not suitable at this lower capacity
Since the wood pulp mill was dropped the project and additional

</td></tr>
</table>

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
(1)	(2)	(3)	(4)
	expansion in addition to the present water requirement of 13,550 m^3/day. The existing plant has water drawl permission for about 13,550 m^3/day from the river Sona. The additional water for the proposed expansion is proposed to be drawn from River Budhabalanga. The expansion will aim at maximum recycling of back water, thereby minimizing the wastewater discharge from new paper machines. New wastewater treatment plant of capacity 65000 m^3/day will be established for treatment of wastewater generated from the proposed expansion project. Treated wastewater along with cooling tower blow down will be used for irrigation to raise wood plantation and green cover. The mill will have dewatering system to dewater sludge from the ETP and deinking plant. The treated waste water meeting the prescribed standards is proposed to the let out in the Daula nallah drain and meeting Lembunai: It is proposed to develop rain water harvesting structures to recharge the ground water. NCG collection and firing system will be installed as part of proposed expansion project. Treated sanitary waste water / sewage will be used for greenbelt development and maintenance. Black liquor will be completely recovered and burnt in the chemical recovery boiler.	existing plant has water drawl permission for 12,100m^3/day from the Ground water. The additional water for the proposed expansion is proposed to be drawn from ground water. The expansion will aim at maximum recycling of back water, thereby minimizing the wastewater discharge from new paper board machine. Existing wastewater treatment plant will be augmented to a capacity of 14,500 m^3/day for treatment of wastewater generated from the proposed expansion project. Treated wastewater will be used for irrigation, green cover and reused in the non- process areas. The mill will have dewatering system to dewater sludge from the ETP and deinking plant. The treated effluent meeting the prescribed standards is proposed to be let out in the Sapna Nala and meeting Sona River. It is proposed to develop rain water harvesting structures to recharge the ground water. Treated sanitary waste water / sewage will be used for greenbelt development and maintenance.	power generation of 140 MW was not required. Company has installed AFBC based boiler for 33.5 MW (5 MW+18 MW+10.5 MW) power generation. • Water requirement for the project is now 11700 m^3/day, commensurate with present production & configuration. • The existing plant has water drawl permission for 12,100 m3/day from ground water. Hence, the source of water for expansion is changed from River Budhabalanga to ground water. • Wastewater treatment plant capacity has been changed commensurate with production to 14500 m3/day • Treated wastewater discharge point continues to be Sapna Nala. • Quantity of Cooling tower blowdown is reduced substantially. • NCG collection and firing system is not applicable as there is no captive pulping. • Black liquor is not present as no captive pulping is installed.
Para 8	Fly ash generated from the plant will be used in roof sheets manufacturing units, brick manufacturing units, road construction activities, abandoned mines in the surrounding area and captive cement grinding units. Sludge from Deinking plant will be dried and fired in the boiler. Lime sludge will be dried and sold to cement mills.	Fly ash generated from the plant will be used in roof sheets manufacturing units, brick manufacturing units, road construction activities, abandoned mines in the surrounding area and captive cement grinding units. Sludge from Deinking plant and ETP will be dried and fired in the boiler. STP sludge will be used as manure for greenbelt development. Dust generated from coal yard will be suppressed by	• 100% fly ash generated from the plant is being given to fly ash brick manufacturers who are registered in District Industries Centre.

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
(1)	(2)	(3)	(4)
	Chip dust will be fired in boilers/Vermi compost. STP sludge will be used as manure for greenbelt development. Dust generated from coal yard will be suppressed by dust suppression system. Sludge generated from waste water treatment plant (WWTP) will be disposed as per prescribed HWM rules. Waste fibre from DIP will be fired in boiler. Waste pulp from WWTP will be used for card board / fired in boiler.	dust suppression system. Sludge generated from waste water treatment plant (WWTP/ ETP) will be fired in power plant boiler. Waste fibre from DIP will be fired in boiler.	• No captive cement grinding unit is installed • Lime sludge is not present as no recovery unit/ lime kiln is installed • Chip dust is not generated as there is no captive pulping of bamboo/ wood material. • 100% sludge generated from the ETP & DIP is being burnt in power plant boiler.
Para 9	Greenbelt will be developed in about 33% of total plant area. All the new equipments will be designed for low noise level at source. Total power requirement (100 MW) will be met from the proposed 120 MW Captive Power Plant and excess power (40 MW) will be exported to State Grid.	Greenbelt will be developed in about 33% of total plant area. All the new equipments will be designed for low noise level at source. Total power requirement (30MW) will be met from the proposed 33.5 MW Captive Power Plant	• Power requirement has reduced commensurate with the lesser number of machinery and lower production • No excess power generation is there
Specific Condition (i)	The project authority shall install Electrostatic Precipitator to control the emissions from the Chemical Recovery Boiler and Coal Fired Boilers to achieve the particulate emission below 50 mg/Nm^3.	The project authority shall install Electrostatic Precipitator to control the emissions from the Coal Fired Boilers to achieve the particulate emission below 50 mg/Nm^3.	• No chemical recovery boiler is installed
Specific condition (iv)	The water requirement should not exceed 75,000 m^3/day. The industry shall ensure the compliance of the standards for discharge of the treated effluent from the unit as stipulated under the Environment (Protection) act rules or SPCB, whichever is more stringent. The company shall make an effort to limit the water consumption upto 75 m^3/tonne of product. The company shall develop more water recharge structure in addition to the existing recharge structures and shall make barrage on the river in consultation with the state government.	The water consumption should not exceed 11700 m^3/day. The industry shall ensure the compliance of the standards for discharge of the treated effluent from the unit as stipulated under the Environment (Protection) act rules or SPCB, whichever is more stringent. The company shall make an effort to limit the water consumption up to 75 m^3/tonne of product. The company shall develop more water recharge structure in addition to the existing recharge structures.	• Water requirement has reduced commensurate with the production achieved. • No river water withdrawn due to lower requirement off waster in absence of captive pulping. Thus, no separate arrangement for construction of barrage on the river is required since source of water is ground water.
Specific condition (vi)	The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1 kg/tonne of paper production	To be deleted	As no captive pulping has been installed, hence, this condition is not applicable.

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
(1)	(2)	(3)	(4)
Specific condition (vii)	ECF technology shall be adopted and the lime kiln shall be installed to manage lime sludge.	To be deleted	As no captive pulping has been installed, hence, this condition is not applicable
Specific condition (xvi)	At least 5% of the total cost of the project shall be earmarked towards the enterprise social commitment and item – wise details along with time bound action plans shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.	At least 5% of the total cost of the project shall be earmarked towards the Corporate Environment Responsibility and item – wise details along with time bound action plans shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.	Since only part of the project sanctioned in EC dated 13/01/2012 has been installed, the project cost has reduced to Rs 490 Crores.

(2) Amendments required in Environmental clearance letter no. J-11011/323/2006-IA II (I) dated 17/05/2007:

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
Subject	Expansion of Paper Production (45,000 to 136,000 TPA) and Cogeneration Power Plant (4.2 to 15.7 MW) at Balasore, Balgopalpur, Orissa by M/s Emami Paper Mills Ltd.- Environmental Clearance reg	Expansion of Paper Production (45,000 to 130,000 TPA) and Cogeneration Power Plant (5 to 20 MW) at Balasore, Balgopalpur, Odisha by M/s. Emami Paper Mills Ltd.- Environmental Clearance reg	As mentioned in para 1 of EC letter dated 17/05/2007
Specific condition (i)	The gaseous emissions (SPM, RPM, SO_2, NOx, H_2S, CO and Pb) from various process units shall conform to the standards prescribed from time to time. The Orissa State Pollution Control Board (OSPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of industry, its size and location. At no time, the emission level shall go beyond the prescribed stands. In the event of failure of any pollution control system(s) adopted by the unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Ambient	The gaseous emissions (PM_{10}, $PM_{2.5}$, SO_2, NOx and CO) from various process units shall conform to the standards prescribed from time to time. The Odisha State Pollution Control Board (OSPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of industry, its size and location. At no time, the emission level shall go beyond the prescribed standards. In the event of failure of any pollution control system(s) adopted by the unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Ambient air quality shall be regularly monitored and records maintained and reports submitted to the Ministry/ CPCB / OSPCB once in six months	Digester pulping and recovery boiler are not installed hence no H_2S or Pb is generated and there is no gaseous emission from the paper manufacturing process. The parameters of SPM and RPM are now replaced by PM_{10} & $PM_{2.5}$ as per National Ambient Air Quality Standards 2009.

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
	air quality shall be regularly monitored and records maintained and reports submitted to the Ministry/ CPCB / OSPCB once in six months		
Specific condition (ii)	The flue gases from recovery boiler shall be analyzed continuously for SPM, SO_2, NOx, H_2S. Continuous monitoring shall be carried out for H_2S near the major source of emission and in the ambient air near the plant boundary at three locations. No odour should emanate as there will be no captive pulping. In case, any odour from any source is generated, same shall be adequately treated to alleviate the odour problem.	No odour should emanate as there will be no captive pulping. In case, any odour from any source is generated, same shall be adequately treated to alleviate the odour problem.	As per MoEF Notification dated 16/11/2009 on NAAQS standard, H_2S Parameter is not mentioned and in absence of digester pulping and recovery boiler, no odour is being generated. Furthermore, as the mill is using only waste paper for manufacturing of paper neither wood/ bamboo nor any agro residues are being used and there is no black liquor generation and hence, no chemical recovery plant exists. EPML has written to Ministry vide letter dated 18/01/2012 and got acknowledgement that this clause may be exempted.
Specific condition (iii)	The company shall install Electrostatic precipitators to control emissions from the boiler and co-generation power plant, dust extraction system in chemical recovery plant and dust suppression system in conveyors to control gaseous and fugitive emissions. The particulate emissions from the stacks shall not exceed 75 mg/ Nm^3. The efficiency of ESP shall be 99.9%.	The company shall install Electrostatic precipitators to control emissions from the boiler and co-generation power plant and dust suppression system in conveyors to control gaseous and fugitive emissions. The particulate emissions from the stacks shall not exceed 75 mg/ Nm^3. The efficiency of ESP shall be 99.9%.	As chemical recovery plant is not installed hence no corresponding dust extraction system is installed for controlling fugitive emissions.
Specific condition (iv)	The company shall adopt environment friendly Element Chlorine Free (ECF) pulp bleaching process. Existing straw pulping will be ceased to make mill environment	Existing straw puling will be ceased to make mill environment friendly. No captive pulping will be carried out. No straw or forest based raw material will be used. Since new material mix will consist of 60% local waste paper and 40% imported, availability of waste	The mill produces paper using waste paper and neither elemental chlorine nor chlorine products are used in bleaching. Hence, the first sentence is not

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
	friendly. No captive pulping will be carried out. No straw or forest based raw material will be used. Since new material mix will consist of 60% local waste paper and 40% imported, availability of waste paper shall be tied up prior to expansion.	paper shall be tied up prior to expansion	applicable. EPML have requested Ministry vide letter dated 18.01.2012 to delete this condition as it is not applicable.
Specific condition (V)	Total water requirement from borewells shall not exceed 13,525 m^3/day as per the permission accorded by the Central Ground Water Authority (CGWA). The waste water will be treated in the waste water treatment plant (WWTP) and reused in the process or for irrigation purpose. Remaining treated waste water will be discharge into Sona River through Sapna Nullah by a closed pipeline. Reverse Osmosis plant will be installed. The waste water shall be colourless due to absence of captive pulping. No bleaching will be involved. Regular monitoring of Mercaptans, Methylene chloride, TOC and AOx in the treated effluent and AOx level in the river (surface) water shall be carried out once in month. TOC analyzer shall be installed to monitor TOC in the effluent regularly. Domestic sewage will be taken into oxidation pond and treated. The quality of the treated effluent shall be monitored regularly and reports submitted to the Ministry and its Regional Office at Bhubaneshwar.	Total water requirement from borewells shall not exceed 13,525 m^3/day as per the permission accorded by the Central Ground Water Authority (CGWA). The waste water will be treated in the waste water treatment plant (WWTP) and reused in the process or for irrigation purpose. Remaining treated waste water will be discharge into Sona River through Sapna Nullah by a closed pipeline. Reverse Osmosis plant will be installed. The waste water shall be colourless due to absence of captive pulping. Secondary fiber treatment includes bleaching using Hydrogen peroxide and Sodium hydrosulfite. Domestic sewage will be taken into Sewage treatment plant and treated. The quality of the treated effluent shall be monitored regularly and reports submitted to the Ministry and its Regional Office at Bhubaneshwar.	• Mercaptans, Methylene chloride, TOC and AOx are generated in the captive pulping through digester (kraft process) followed by chlorine-based bleaching. Plant does not have such process. Hence, it is not applicable. EPML has already requested to Ministry vide letter dated 18/01/2012 to suitably amend this condition.
Specific condition (vii)	Solid waste generated in the form of boiler ash shall be used for manufacturing bricks in company's own fly ash manufacturing machines and for road construction. Waste pulp from wastewater	Solid waste generated in the form of boiler ash shall be used for manufacturing bricks. Waste pulp (primary sludge) from wastewater treatment plant (WWTP) will be used for firing in the boiler. ETP (secondary Sludge) shall be used as manure for	• 100% of the fly ash as being utilised by outside brick manufacturers • "Primary and Secondary" sludge

Reference of approved EC	Description as per approved EC	Description required as per proposal (proposed changes are underlined)	Justification of amendment
	treatment plant (WWTP) will be used for firing in the boilers. ETP sludge shall be used as manure for green belt development.	green belt development.	have been included for more clarity.

Observations of the Committee held on 9th April, 2020

52.5.8 The Committee noted project proponent has not made available the following:

- Request for ground water abstraction for reduced amount of water consumption not acceptable. PP has not furnished action plan to meet the water requirement from surface water. In view of it, request pertaining to groundwater abstraction even in reduced quantum is untenable. PP should make effort as per specific condition (iv) for making barrage on the river in consultation with the State Government.
- Details of the CER activities carried out based on the findings of the social impact study and public hearing issues along with the expenditure incurred since the grant of EC has not been furnished.
- Impact on the existing traffic due to the transportation of ready pulp to the plant site has not been furnished.
- Action plan for recycle of wastewater being discharged into the Nallah for irrigation has not been submitted.

Recommendations of the Committee held on 9th April, 2020

52.5.9 In view of the foregoing and after detailed deliberations, the Committee deferred the consideration of the instant proposal for want of following additional information for further consideration:

i. Action plan to meet the water requirement from surface water as per specific condition (iv) of the EC dated 13/01/2012 shall be furnished.
ii. Action plan for recycl of wastewater being discharged into the Nallah for irrigation shall be submitted
iii. Details of the CER activities carried out based on the findings of the social impact study and public hearing issues along with the expenditure incurred since the grant of EC shall be furnished.
iv. Impact on the existing traffic due to the transportation of ready pulp to the plant site shall be submitted

52.5.10 The reply of the above ADS was submitted online on 20/05/2020 through PARIVESH. The summary of the ADS reply submitted is given as below:

S No	ADS Raised	Response of PP
i	Action plan to meet the water requirement from surface water as per specific condition (iv) of	The project mentioned in the EC was 4,60,000 TPA paper/ board, 600 TPD wood pulp mill and 140 MW co-generation power plant. The water was required at the rate of 75,000 cum/day for that capacity. However, due to implementation of only 3,00,000 TPA paper/ Board, no wood pulp mill and only 33.5 MW power plant the project water requirement got reduced substantially and is now only 11,700 cum/day on average

S No	ADS Raised	Response of PP
	the EC dated 13/01/2012 shall be furnished.	(15.6% of requirement stated in EC). The specific water consumption is 15 cum/Ton of product which is only 20% of 75 cum/tonne of product sanctioned in EC. The company has been operating on ground water since commencement of its operation. The Company has historical permissions from CGWA to use ground water for plant operation since 2006 for 10525 cum/day till 2015 & for 12100 cum/day since 2015 till date. When paper production was 1,30,000 TPA and power plant was 20MW, the peak water consumption was 10,525 cum/day. When the Paper/ paper Board increased to 2,62,000 TPA and power plant increased to 30.5 MW, the water requirement went up to only 12,100 cum/day i.e 15% increment only due to continuously ongoing self-improving measures to reduce water consumption. The water consumption at no point has exceeded 12,100 cum/day despite the production further increasing by 12.6 % to 3,00,000 TPA and power plant increasing by 9% to 33.5MW. EMPL is continuously endeavouring to reduce fresh water consumption and will continue to do so in the future also. Due to various Water Conservation measures adopted, water requirement has reduced considerably – which is disproportionate (on the better side) to the production achieved i.e. 3,00,000 TPA compared to 4,60,000 TPA with wood pulping and power plant 33.5 MW compared to 140 MW. It may be noted that Balasore area, where the project is located, has high rainfall (~1700-1800 mm/annum) and shallow water table of 2 to 12 m bgl throughout the year. The stage of ground water development in the study area is 17.73%, classified in "safe" category. The ground water studies of EMPL have been approved by CGWB, Odisha. CGWA has been evaluating the renewal applications and the renewal takes place only when project is found to be in compliance to all NOC conditions (including adequacy of rain water harvesting structures). The company has 20 Nos of surface runoff water recharge structures in the mill premises and two piezometers. Emami Paper Mills had been actively exploring the possibility of drawing surface water from river Budhabalanga. The State Government, IDCO & NOCCI Balasore Infrastructure Company are jointly implementing a project to provide surface water from river Budhabalanga to the industries situated near Balasore, amongst which Emami will be one. The present status of the pipeline laying is that 14.85 km out of total 15.7 km has been completed. The work of intake well structure is yet to start although work order has been placed. The project is expected to

S No	ADS Raised	Response of PP
		be delayed as a consequence of COVID -19 lockdown. After the pipeline project completion, Emami Paper Mills has to set up its own surface water treatment plant (which includes sump pit for collection, primary clarifier and other connecting pipeline for distribution to various processes inside the plant as per requirement). Thus, in another 3.5 years' time period, the Company expects to be able to changeover to surface water source from ground water. Till then, the Company may be permitted to operate using ground water, as has been the case since the beginning of the operation of this plant, with due permission from CGWA.
ii	Action plan for recycle of waste water being discharged into the Nallah for irrigation shall be submitted.	Industry is having its wastewater treatment system and after complete treatment about 30% of treated effluent is being recycled and reused for various purposes in the plant premises. The company has explored the option to reduce discharge in nala as follows: • The company has its own land about 35 acres (used for paddy cultivation). • Adjacent to this land, private agricultural land (50 Acres) is being explored for irrigation purpose with the help of local farmers for their own benefit. • In both these areas, about 50% of the present discharge can be reutilised. • However, despite all measures, the entire treated effluent can be only partially utilized for irrigation purpose due to high rainfall: ▪ Balasore district - in excess of 1700 mm (IMD, 1981-2010). ▪ Remuna Tehsil - 1757 mm. (SRC, Govt. Of Odisha, 1995-2018) Therefore, industry will be able to additionally use 50% of its current discharge in non-monsoon season and discharge the balance into the nala.
iii	Details of the CER activities carried out based on the findings of the social impact study and public hearing issues along with the expenditure incurred since the grant of EC	The EC was obtained for a project cost of Rs. 2500 crores out of which only Rs. 490 crores could be spent on project. Thus, 5% of Rs. 490 works out to Rs. 24.5 crores. In line with the assessment based on social surveys, requests received from the Surrounding villages and the points raised in public hearing, the expenditure in excess of Rs. 24.5 crores i.e. Rs. 35.74 crores have been carried out. The activities with the expenditure are Education support to KIDZ High International School (Rs. 12.79 lakhs), Various activities such as promoting education, health awareness, health checkup camp, vocational training, SHG etc. (Rs. 11.11 crores), Expenditure on School at Samnathpur in Collaboration with KISS (Kalinga Institute of Social Sciences) (Rs. 1.57 crores), Construction of Shree

S No	ADS Raised	Response of PP
	shall be furnished.	Jagannath Temple on public demand (Rs. 16.84 crores), Construction of Vehicle Parking & Toilet (Rs. 26.38 lakhs), Construction of Atithi Newas (Rs. 74.61 lakhs), Public Road (RCC) (Rs. 31.72 lakhs) and New residential Tribal School at Samnathpur, Balasore by KISS (Kalinga Institute of Social Sciences) supported by Emami Foundation (Rs. 4.76 Crores)
iv	Impact on the existing traffic due to the transportation of ready pulp to the plant site shall be submitted.	The overall traffic as compared to the scenario that would have risen in the case of full implementation of EC will reduce by 443 trucks.

52.5.11 Based on reply of ADS made by PP, the proposal was re-considered in 20th meeting of Reconstituted Expert Appraisal Committee held on 25-26th June, 2020. The EAC observation and recommendation is given as below:

Observations of the Committee held on 25-26th June, 2020

52.5.12 The Committee was not satisfied with the reply furnished by the project proponent with respect to switch over from ground water usage to surface water and recycle of treated wastewater. Further, the Committee did not accede to the request of PP regarding amendment in the specific condition no. (xvi) of the EC dated 13/01/2012 pertaining to Enterprise Social Commitment as the EC was accorded prior to the CER Office Memorandum dated 01/05/2018.

Recommendations of the Committee held on 25-26th June, 2020

52.5.13 In view of the foregoing and after detailed deliberations, the Committee deferred the consideration of the proposal and sought the following additional information:

i. Revised time schedule to switch over to 100 % use of surface water and stopping GW abstraction shall be furnished.
ii. Finding of a study to be carried out by engaging a technical institute with respect to compliance on revised CREP charter on paper industry along with the feasibility to recycle maximum quantity of the treated waste water.

52.5.14 The reply of the above ADS was submitted online on 17/12/2021 and resubmitted on 05/01/2022 through PARIVESH. The summary of the ADS reply submitted is given as below:

S No	ADS Point	Reply/Response of PP
1	Revised time schedule to switch over to 100% use of surface water and stopping GW abstraction shall be furnished	This to bring to the notice of Hon'ble EAC that from past 10 years, we have been persistently following with State Government, IDCO & NOCCI Balasore Infrastructure Company for jointly implementing the project to provide surface water from river Budhabalnga to Balasore Industrial area, where our unit is situated. We categorically would like to stress that we have been constantly interacting and following

S No	ADS Point	Reply/Response of PP
		with state government on this issue. The work of surface water pipe line laying down has been delayed excessively, thus we have eventual sought NOC from CGWA for withdrawal of ground water vide letter. No.21-4(2)/SER/CGWA/2006-904 dated 12/12/2019 for quantity of 12,100 m^3/day, The block of ground water is safe.
2	Finding of a study to be carried out by engaging a technical institute with respect to compliance on revised CREP charter on paper industry along with the feasibility to recycle maximum quantity of the treated waste water	In compliance to this, we have engaged Veer Surendra Sai University of Technology, Burla, Sambalpur-768018, Odisha to carry out study with respect to compliance on revised CREP charter on paper industry along with the feasibility to recycle maximum quantity of the treated waste water. **Observation of the study:** The paper mill has made significant efforts in reducing the discharge of treated effluent to Nallah and planned to increase the irrigation area neighboring to the surrounding area of the paper mill, so that more volume of treated effluent water can be utilized properly for irrigation purpose with the consent of local farmers. The present treated effluent discharge volume is 6865 m^3/day (2865 m^3 to Nallah & 4000 m^3 for agriculture use) i.e. 7.6 m^3/t which meets the permissible discharge norms of revised CREP charter 10m^3/t. In addition to that, the utilization of treated wastewater for plantation and cultivation of crops is considered as a circular economy, where the treated wastewater is utilized for irrigation and because of which social economic development of the local people is improved in sustainable way. On the basis of the consideration of the present water consumption, volume of the treated water discharge, EPML is meeting the CREP charter norms. **Conclusion of the Study:** Industry is very conscious about water conservations and has setup various inbuilt water recovery, treatment and re-use systems. Twenty numbers of storm/rain water recharge well have been constructed along with gravel filter to maintain ground water table. Besides this, periodical audits of water and wastewater management system are carried out to explore opportunity for recycling, reuse and minimizing freshwater consumption. Thus, Emami paper mills ltd., unit Balasore is complying with the CREP charter.

52.5.15 The application for amendment in Environmental Clearance has made by M/s. Min Mec Consultancy Pvt. Ltd. Presentation on ADS reply was made by M/s. Enkay Enviro Services Pvt Ltd. [S No. 113, List of ACOs with their Certificate/ Ext letter no. NABET/EIA/2023/RA 0183; valid up to 12/12/2023, Rev. 18, January 05, 2022].

Observations of the Committee

52.5.16 The Committee noted the following:

i. M/s. Emami Paper Mills Limited obtained EC from MoEF&CC on 17/05/2007 for 1,30,000 TPA paper and 20 MW captive power plant. Further, EC expansion obtained on 13/01/2012 for paper Mill from 130000 TPA to 460000 TPA of Newsprint / Paper/ Board, new wood pulp mill of 600 TPD (paper & Board) capacity and Coal fired boiler based Captive Power Plant from 20 MW to 140 MW capacity.

ii. Instant proposal is for seeking amendment in the EC dated 17/05/2007 and 13/01/2012 pertaining to pulp manufacturing as PP is not manufacturing the same. The salient features of the proposed amendment are given as below.

S No	Facilities	Unit	As per EC dated 13/01/2012	Amendment sought
1	Newsprint, Paper & Board	TPD	1400 (4,60,000 TPA)	**1025 (3,40,000 TPA)**
2	RCF Pulp	TPD	800	**615**
3	Wood Pulp	TPD	600 (Inhouse production)	360 (purchasing)
4	Chlorine-di-oxide	TPD	14	Not required
5	Oxygen Generation	TPD	15	Not required
6	Evaporation Plant	TPD	280	Not required
7	Recovery Boiler	solids/day	1300	Not required
		tph stream	280	Not required
8	Lime Kiln	TPD	280	Not required
9	Causticiser Plant – recovered caustic (AA) basis	TPD	300	Not required
10	Producer gas plant	Nm^3/h	10000	Not required
11	Power Plant	MW	140	**33.5 (part installed & existing augmented)**
12	Coal fired boiler	TPH	540	**185 (part installed)**
13	DM/RO plant	m^3/hr	225	**Not installed, existing 75 m^3/h continued**
14	Power Evacuation sub station	MVA	65	16/20 MVA, 132/11Kv (part augmented)
15	Cooling Towers	m^3/hr	29000	8,750 (existing 6000 + part installed 2750)
16	Water requirement	m^3/day	82000	11,700 (Reduced due to partial installation of plant)
17	Waste water treatment plant capacity	m^3/day	75000	14,500 (Reduced due to partial installation of plant)
18	Colony	No. of Houses	975	205 (Existing 175 augmented by 30)

iii. The validity of the EC construed to the implemented capacities as mentioned at point no. ii above. PP shall not undertake any project/activity with respect to the unimplemented facilitates as the validity period of the EC got expired.

iv. The Committee satisfied with the additional information submitted by the PP.

v. Emami Paper Mills in co-ordination with the State Government, IDCO & NOCCI Balasore Infrastructure Company are jointly implementing a project to provide surface water from river Budhabalanga to the industries situated near Balasore. The present status of the pipeline laying is that 14.85 km out of total 15.7 km has already been completed.

vi. The Committee agreed upon to the amendments sought at para no. 52.5.7 above. With respect to the ground water consumption, the Committee felt that PP shall gradually shift over to surface water within a time frame of four years as the PP has already completed the pipeline project for withdrawal of water from river Budhabalanga.

Recommendations of the Committee

52.5.17 In view of the foregoing and after detailed deliberations, the committee recommended for amendment in the EC dated 13/01/2012 and 17/05/2007 as mentioned at paragraph no. 52.5.7 above subject to the stipulation of following additional specific conditions.

i. 11700 KLD water requirement shall be met from ground water sources as approved by the Competent Authority. Project proponent shall gradually phase out of ground water in a time frame of four years from the date of issue of EC amendment letter. Further, the project proponent shall take necessary steps to reduce the ground water consumption by reusing the treated wastewater and compliance status in this regard shall be furnished to the concerned Regional Office of the MoEF&CC along with the six monthly compliance report.

52.6 Proposed Expansion Projects at Reliance Industries Limited (RIL) Jamnagar Manufacturing Division (JMD) for extraction of 35 KTA Vanadium and Nickel by **M/s. Reliance Industries Limited** located at Village: Motikhavdi, Lalpur Taluk, **Jamnagar District, Gujarat**. [Online Proposal No. IA/GJ/IND/238889/2021, File No. IA-J-11011/509/2021-IA-II(IND-I)] – **Prescribing of Terms of Reference – regarding**.

52.6.1 M/s. Reliance Industries Limited (RIL) has made an application online vide proposal no. IA/GJ/IND/238889/2021 dated 05/01/2022, the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical Industries (Ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

Details submitted by Project proponent

52.6.2 The project of M/s. Reliance Industries Limited located in Village: Motikhavdi, Lalpur Taluk, Jamnagar District, Gujarat for Proposed Expansion Projects at Reliance Industries

Limited (RIL) Jamnagar Manufacturing Division (JMD) for extraction of 35 KTA Vanadium and Nickel.

52.6.3 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>9.3 ha land
(Private Land: 9.3 ha)</td><td>Land use - Industrial</td></tr>
<tr><td>ii</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>The land is already acquired and in possession of RIL</td><td></td></tr>
<tr><td>iii</td><td>Existence of habitation & involvement of R&R, if any</td><td><table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Padana Village</td><td>0.7 km</td><td>WNW</td></tr></table></td><td>R&R is not involved</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>22°19’45.76”N</td><td>69°51’00.74”E</td></tr><tr><td>2</td><td>22°19’48.07”N</td><td>69°51’10.40”E</td></tr><tr><td>3</td><td>22°19’36.21”N</td><td>69°51’10.51”E</td></tr><tr><td>4</td><td>22°19’36.32”N</td><td>69°51’00.91”E</td></tr></table></td><td></td></tr>
<tr><td>v</td><td>Elevation of the project site</td><td>40 m above MSL</td><td></td></tr>
<tr><td>vi</td><td>Involvement of Forest land if any.</td><td>Not involve forest land</td><td></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>Panna dam</td><td>5 km</td><td>East</td></tr><tr><td>Sasoi dam</td><td>8.9 km</td><td>East</td></tr><tr><td>Gulf of Kutch</td><td>9.5 km</td><td>NNE</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</td><td></td></tr>
</table>

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

Plant Equipment / Facility	Proposed Configuration	Proposed Capacity
Vanadium and Nickel Extraction from Petcoke cinder by proprietary process involving roasting and extraction	--	35 KTA

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

Raw material	Quantity	Source	Mode of Transportation
Petcoke cinder	245 KTA	Captive Petcoke gasification unit	Conveyors

52.6.6 The water requirement for the project is estimated as 9600 m^3/day, which will be obtained from proposed desalination facility.

52.6.7 The power requirement for the proposed project is estimated as 15 MW, out of which 15 MW will be obtained from the proposed 3,000 MW capacity captive power plants.

52.6.8 The capital cost of the overall project is Rs 70,000 Crores and the capital cost for environmental protection measures is proposed as Rs 3,500 Crores. The employment generation from the overall proposed project/ expansion is 1,000.

52.6.9 Proposed Terms of Reference:

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
A. Air				
a. Meteorological parameters	Temperature, Relative Humidity, Wind speed and direction, Rainfall	1	Continuous	
b. AAQ parameters	PM_{10}, $PM_{2.5}$, SO_2, NO_2, CO, O_3, Pb, NH_3, C_6H_6, BaP, As, Ni	8	Twice a week	
B. Noise	L_{eq} (day), L_{eq} (night)	8	Once	
C. Water a. Surface water / Ground water quality parameters	pH, Temp., Turbidity, EC, O&G, BOD, COD, DO, TSS, TDS, Alkalinity, Hardness, Sodium, Potassium, Chlorides, Sulphates, Nitrates, TKN, Fluoride, Heavy Metals, Fecal Coliforms, Total Coliforms	Surface water - 5 Ground water - 13	Once	
D. Land				
a. Soil quality	Particle size distribution, Bulk density, Porosity, Water holding capacity, pH, EC, Salinity, Permeability, Ca, Mg, Na, K, Cl, CO_3^{-2}, HCO_3^-, SO_4^{-2}, SAR, Cation Exchange Capacity, Organic carbon, Available N, P and K, Heavy Metals, Hydrocarbons, Microbiological	13	Once	

Attributes	Parameters	Sampling		Remarks
		No. of stations	**Frequency**	
	characteristics,			
b. Land use	--	--	--	Based on Remote Sensing & GIS
E. Biological				
a. Aquatic	Diversity and distribution of Phytoplankton & Zooplankton	5	Once	
b. Terrestrial	Floral and Faunal diversity	18	Once	
F. Socio-economic parameters	Population distribution and density, Avg. household size, Sex ratio, social structure, Literacy level, Employment pattern, Infrastructure resources and accessibility	30 villages & 1 town	Once	Based on Primary and Secondary data

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

52.6.11 Name of the EIA consultant: M/s. National Environmental Engineering Research Institute [S No 85, NABET Certificate no. NABET/EIA/2124/RA0227 and valid upto 21/07/2024; Rev. 18, January 05, 2022].

Observations of the Committee

52.6.12 The EAC noted the following:

i. Project proponent submitted incomplete application for terms of reference.
ii. Form 1 submitted with generic information no quantified information/ data has been provided by PP. Form 1 shall be resubmitted with all quantified detail.
iii. Pre-Feasibility Report does not give any details related to raw materials consumed, waste generated and other materials required. PP shall submit the PFR as per the Ministry O.M. dated 30/12/2010.
iv. The presentation for the proposal does not give any details of the technical parameters, layout and alternative technologies.
v. Water, power and fuel requirement details furnished in PPT slide 11, are not available in PFR.
vi. No details on environmental aspects on the process, raw materials and products including process routes and operating conditions have been furnished in the PFR.
vii. Baseline data have already been collected. Detail is not furnished about baseline study period, windrows diagram.

Recommendations of the Committee

52.6.13 In view of the foregoing and after deliberations, the Committee recommended that proposal to be returned in its present form to address the technical shortcomings enumerated at para no. 52.6.12 and submit the revised application as per the provisions of EIA Notification, 2006.

52.7 Establishment of Ferro Alloys Plant (Greenfield Project) for production of 32,400 TPA Ferro Alloys (Silico Manganese) through installation of 2x9 MVA Submerged Arc Furnaces by **M/s. Om Shivay Steel & Power Pvt. Ltd.** located at Village: Plot No. IVD-6 (P), Bokaro Industrial Area, Balidih, Village: Gorabali, **District: Bokaro, Jharkhand.** [Online Proposal No. IA/JH/IND/239749/2021, File No. IA-J-11011/484/2021-IA-II (IND-I)] **– Prescribing of Terms of Reference – regarding.**

52.7.1 M/s. Om Shivay Steel & Power Pvt. Ltd has made an application online vide proposal no. IA/JH/IND/239749/2021 dated 04/01/2022 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) under Category "A" of the schedule of the EIA Notification, 2006 and is being appraised at Central Level.

Details submitted by Project proponent

52.7.2 The project of Om Shivay Steel & Power Pvt Ltd will be located at Plot No. IVD-6 (P), Bokaro Industrial Area Phase-4, Balidih, Village: Gorabali, District: Bokaro, Jharkhand and is for setting up of new project for production of 32,400 TPA Ferro Alloys (Silico Manganese) through installation of 2x9 MVA Submerged Arc Furnaces.

52.7.3 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>1.618 ha
[Private: 1.618 ha]</td><td>Land use: Industrial land</td></tr>
<tr><td>ii</td><td>Land Acquisition Details as per MoEF&CC O.M. dated 7/10/2014</td><td>Jharkhand Industrial Area Development Authority (JIADA), Jharkhand has allotted 4 Acres of land to M/s. OSSPPL on 30 years lease vide allotment order No. LA/BO/SW/00664/2020 dated 10/07/2020 and physical possession of allotted land vide POSSESSION/SW/004801/2020 dated 31/07/2020.</td><td></td></tr>
<tr><td>iii</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Nil</td><td>No R&R is required.</td></tr>
<tr><td>iv</td><td>Latitude and Longitude of the project site</td><td>
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>23°41'24.105"N</td><td>86°3'34.219"E</td></tr>
<tr><td>B</td><td>23°41'21.885"N</td><td>86°3'27.454"E</td></tr>
<tr><td>C</td><td>23°41'20.407"N</td><td>86°3'26.906"E</td></tr>
<tr><td>D</td><td>23°41'19.944"N</td><td>86°3'29.797"E</td></tr>
<tr><td>E</td><td>23°41'20.479"N</td><td>86°3'30.389"E</td></tr>
<tr><td>F</td><td>23°41'20.917"N</td><td>86°3'31.876"E</td></tr>
<tr><td>G</td><td>23°41'20.738"N</td><td>86°3'33.424"E</td></tr>
<tr><td>H</td><td>23°41'21.134"N</td><td>86°3'33.719"E</td></tr>
<tr><td>I</td><td>23°41'20.815"N</td><td>86°3'34.82"E</td></tr>
</table>
</td><td></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>J | 23°41'21.709"N | 86°3'35.149"E</td><td></td></tr>
<tr><td>v</td><td>Elevation of the project site</td><td>252 meters 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></td></tr>
<tr><td>vii</td><td>Water body exists within the project site as well as study area</td><td><u>Project site</u><u>:</u> Nil

<u>Study area</u>:
<table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Khanjo River</td><td>4.92 km</td><td>West</td></tr><tr><td>Damodar River</td><td>6.0 km</td><td>NNE</td></tr><tr><td>Garga River</td><td>7.45km</td><td>SSW</td></tr><tr><td>Garga Dam</td><td>4.74km</td><td>South</td></tr></table></td><td>Distance and direction are w.r.t the project site</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>Study area: Nil</td><td>--</td></tr>
</table>

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

S No	Proposed Units	Configuration	Final Production Capacity	Product
1	Submerged Arc Furnaces	2x9 MVA	32,400 TPA	Ferro Alloys (Si-Mn)

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

S No	Raw Materials	Quantity in TPA	Source	Transportation	
				Rail (km)	Road (km)
1	Mn Ore	64,800	MOIL, Nagpur, Maharashtra	870km	4.2 kms (Bokaro Steel City Railway Station)
2	Coke	25,920	Dhanbad or Ramgarh, Jharkhand	-	40kms/59kms
3	Dolomite	9,720	Bhutan	-	500kms
4	Quartz	6,480	Raigarh, Chattisgarh	-	355kms
5	High Fe-Mn Slag	12,960	Durgapur, West Bengal	-	131kms
6	Electrode	650	Giridih, Jharkhand or	-	58 kms Or

S No	Raw Materials	Quantity in TPA	Source	Transportation	
				Rail (km)	Road (km)
	Paste		Durgapur, West Bengal		131kms
Total		**1,20,530**			

52.7.6 The water requirement for the project is estimated as 48.0 KLD which will be met from Garga Dam. Permission for the same has been obtained from Drinking Water and Sanitation Department- Bokaro vide letter dated 12/01/2022.

52.7.7 The power requirement for the project is estimated as 18.50 MW which will be sourced from power utility company DVC.

52.7.8 The capital cost of the project is Rs 46.19 Crores. The employment generation from the proposed project / expansion is 150. There is no Court case/show cause/direction or violation under EIA, 2006 related to the project under consideration.

52.7.9 Proposed Terms of Reference (Baseline data collection period: October 2021 to December 2021):

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
A. Air				
a. Meteorological parameters	Temp., Relative Humidity, Wind Speed, Wind Direction, Rainfall	1 Location	24-hourly sampling for three months	Secondary data from IMD, New Delhi for the nearest IMD station
b. AAQ parameters	PM_{10}, $PM_{2.5}$, SO_2, NOx, CO	8 Locations	24-hourly sampling, twice a week for 12 weeks	Monitoring Network: 2 locations in upwind side, 2 sites in downwind side, 1 in cross-wind, 1 near the PF, 1 at project site and 1 at nearest Village. All the sensitive receptors have been covered.
B. Noise	Leq (Day & Night), Lmax (Day & Night), Lmin (Day & Night)	8 Locations	24-hourly sampling, once in 3 months	Monitoring Network: 1 at Project Site, 2 locations near to project site and other locations covering the other nearby habitation sites. All the sensitive receptors have been covered

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
C. Water				
a. Surface water quality parameters	pH, EC, NO_3, Na, K, Fe, Al, Ca, Cl, Cr, Mg, TDS, TSS, DO, SO_4, F, BOD, COD, Zn, Cu, Mn, Cd, Turbidity, Odour	8 Locations	Once in a day in each month for one season	Grab sampling from the pond in the nearby villages and composite sampling from the Damodar river and Khanjo river.
b. Ground water quality parameters	pH, Ca, Cl, Mg, TDS, SO_4, F, NO_3, Fe, Al, Zn, Cu, Mn, Cd, Pb, Hg, EC, Turbidity, Odour	8 Locations	Once in a day in each month for one season	Grab sampling from the bore wells/hand pumps in nearby villages.
D. Land				
a. Soil quality	pH, Conductivity, Soil Texture, Water Holding Capacity, Cl, Ca, Na, K, Organic matter, Mg, N, Zn, Mn, Phosphorus, Pb, Cd, Cr, Cu	8 Locations	Once in a day in each month for one season	Composite Sampling: One sample from project site & nearby village and others from different land use, each Agriculture, forest, water body and from nearby prime habitation area.
b. Land Use	Agricultural, Industrial, Forest, Waste land, Sandy Area, Waterbody, etc	10km study area	-	Classification of different land uses present in the 10km Study area has been done.
E. Biological				
a. Aquatic	Species of Plants and Avifauna	10 km Radius study area	one season	Secondary data collected from Government offices, NGOs, published literature and primary data from field survey.
b. Terrestrial	Species of Plants and Animals	10 km Radius study area	one season	Secondary data collected from Government offices,

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
				NGOs, published literature and primary data from field survey.
F. Socio-economic parameters	Demographic details and Occupational details	10 km Radius study area	one season	Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. agencies and primary data from field survey.

52.7.10 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.

52.7.11 Name of the EIA consultant: M/s. Vardan EnviroNet [S No 40, NABET Certificate/ Ext. ltr no. NABET/EIA/1922/RA 0166 valid up to 06/11/2022; Rev. 18, January 05, 2022].

Observations of the Committee

52.7.12 The Committee noted the following:

i. The instant proposal is for seeking ToR for undertaking EIA study for setting up of Ferro Alloys Plant for production of 32,400 TPA Ferro Alloys (Silico Manganese) through installation of 2x9 MVA Submerged Arc Furnaces.
ii. Total land of 1.618 ha for proposed project is industrial land under Jharkhand Industrial Area Development Authority and acquired for 30 years on lease.
iii. Water will be obtained from Garga Dam located at about 4.74 km from project site.

Recommendations of the Committee

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

i. A plan shall be incorporated in EIA report to withdrawal water 48 KLD water from Garga Dam with valid permission from competent authority. Ground water abstraction is not permitted for proposed project.
ii. Submerged Arc Furnace shall be of closed type and with fourth hole extraction system.
iii. A plan shall be provided for treatment of domestic waste water shall in sewage treatment plant along with capacity and technology of STP.
iv. Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.
v. Action plan for fugitive emission control in the plant premises shall be provided.
vi. Action plan for green belt development covering 33% of the project area all along the periphery of the project site with a density of 2500 trees per hectare shall be submitted. Locally growing tree species should be planted in the Green belt. This

shall include 30-meter-wide green belt development within the project area towards Village Balidih.

vii. Action plan for rain water harvesting shall be submitted.

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

52.8 5.00 MTPA Iron Ore Processing Plant & 3.0 MTPA Pellet Plant over an area of 26.44 Ha, integrated with Downhill Pipe Conveyor over an area of 16.58 Ha by **M/s. MSPL Limited** located at Village Somalapura, Sandur Taluk, **Bellary District, Karnataka.** [Online Proposal No. IA/JH/IND/239749/2021, File No. IA-J-11011/484/2021-IAII(IND-I)] – **Amendment in Terms of Reference – regarding.**

52.8.1 M/s. MSPL Limited has made an application online vide proposal no. IA//KA/IND/249471/2022 dated 01/01/2022 along with Form 3, revised Form-1 and PFR seeking amendment in standard Terms of Reference accorded by the Ministry vide letter no. IA-J-11011/329/2021-IA-II(IND-I) dated 15/11/2021. The proposed project activity is listed at S. No. 2(b) Mineral beneficiation and 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central level.

Details submitted by the project proponent

52.8.2 M/s. MSPL Limited had proposed for setting up of 5.00 MTPA Iron Ore Processing Plant & 3.0 MTPA Pellet Plant over an area of 26.44 Ha, integrated with Downhill Pipe Conveyor over an area of 16.58 Ha located at Village Somalapura, Sandur Taluk, Bellary District, Karnataka. Application for ToR was submitted to MoEF&CC, New Delhi on 09/10/2021. The proposal was considered by the EAC in its meeting held on 28-29th October, 2021 and accordingly ToR letter was issued vide letter no. IA-J-11011/329/2021-IA-II(IND-I) dated 15/11/2021.

52.8.3 The instant proposal of M/s. MSPL Limited is for seeking following amendment in the ToR dated 15/11/2021:

Reference of approved ToR	Description as per approved ToR	Description as per proposed amendment
The serial number (vi) of table given of para no. 4.	Tungabhadra river: 0.2 km/W.	Tungabhadra river is located at 22.6 Kms from the proposed plant site. Only a small seasonal nallah starts adjacent to the plant area and joins Narihalla seasonal nallah/canal. Narihalla has a dam constructed downstream at a distance of 11.7 Kms In fact the HFL of Tungabhadra dam is at 498m AMSL and the proposed plant site has as elevation of 630m AMSL Therefore there is no impact of flood hazards for the plant site. Hence, this point may be removed.
The serial number (v) of table given of para no. 5	Unit Configuration: 2x0.8 MTPA Production capacities: 1.6 MTPA	Unit Configuration:3.0 MTPA Production capacities: 3.0 MTPA

Reference of approved ToR	Description as per approved ToR	Description as per proposed amendment
The point number (vi) of of para no. 13.	Tailing shall be dewatered and stored in a 1.7 ha area for sale to cement plants, road making and tile manufacturing. Further, the tailings shall be alternatively pumped to a plot of 20.33 ha of Ankammanahal/somalapura village at a distance of 1Km to 7 Kms through pipe lines and dewatering shall be done there. Recovered water will be recycled to the plant.	M/s. MSPL identified an Alternate 101.17 Ha, of area for acquiring for future expansion of the project/ancillaries at Kalingeri village at distance of about 6 Kms from our proposed plant instead of Ankammanahal/somalapura of 7 Kms. We propose to utilize 20 Ha for stocking the filter cake out of this area at kaligera which is 6 km away from our project site and balance land of 81.17 Ha will be Earmarked for future expansion /ancillaries. The tailings will be transported in a slurry form through pipeline to this 20.0 Ha kalingeri site which is subjected to the filtration process for de-watering and collecting the tailings as filter cake for future stocking/disposing to the end user's application. Therefore, we request you to replace Ankammanahal village with Kalingeri village as above.
The point number (i) of para no. 14.	Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished	The equipment will be designed for 30 mg/Nm^3 But the prescribed norms of 50 mg/Nm^3 may be permitted to adhere as per GSR 894 (E) dated 04/12/2019
The point number (viii) of para no. 14.	Ground water abstraction is not permitted	Allotment of surface water from Tungabhadra Reservoir. The Directorate of Industries & Commerce and Karnataka Water Resource Department is considering the allotment, but the time taken for final grant and execution is more than 2 to 3 years subject to availability of surplus water. Hence, requesting to grant the usage of the ground water until the surface water drawl permission is granted, with a detailed Hydrogeological Study of the area and determining the GW Potential with appropriate GW Recharge. Assessment of Ground Water is conducted by CGWB and it is concluded that the area falls in a safe zone.
The point number (xi) of para no. 14.	Hydrological study of the watershed around the Tunganhadra River shall be carried out	Tungabhadra river is located at 22.6 Kms from the proposed plant site. Hence, this point may be removed.
The point number (xii) of para no. 14.)	HFL details of Tunganhadra River from the concerned authority and impact on riverin ecology due to the proposed project shall be submitted in the EIA Report	Tungabhadra river is located at 22.6 Kms from the proposed plant site Tungabhadra dam is at 498m AMSL and the proposed plant site has as elevation of 630m AMSL Therefore there is no impact of flood hazards for the plant site. Hence, this point may be removed.

52.8.4 The proponent has submitted that there is no change in the configuration and capacities of the facilities envisaged in the ToR dated 15/11/2021.

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

Observations of the Committee

52.8.6 The Committee noted the following:

i. Proposal was accorded Terms of Reference on 15/11/2021 for undertaking EIA study for setting up of 5.00 MTPA Iron Ore Processing Plant & 3.0 MTPA Pellet Plant over an area of 26.44 ha, integrated with Downhill Pipe Conveyor over an area of 16.58 Ha located at Village Somalapura, Sandur Taluk, Bellary District, Karnataka.

ii. Instant proposal is for seeking amendment in the ToR dated 15/11/2021 as mentioned at para no. 52.8.3.

Recommendations of the Committee

52.8.7 In view of the foregoing and after deliberations, the Committee recommended for following amendments in ToR dated 15/11/2021. All other terms and conditions prescribed in ToR dated 15/11/2021 shall remain unchanged:

S.No.	As per ToR dated 15/11/2021	Recommended amendment in the ToR dated 15/11/2021
The serial number (vi) of table given of para no. 4.	Tungabhadra river: 0.2 km/W.	Stands deleted.
The serial number (v) of table given of para no. 5	Unit Configuration: 2x0.8 MTPA Production capacities: 1.6 MTPA	Unit Configuration:3.0 MTPA Production capacities: 3.0 MTPA
The point number (vi) of of para no. 13.	Tailing shall be dewatered and stored in a 1.7 ha area for sale to cement plants, road making and tile manufacturing. Further, the tailings shall be alternatively pumped to a plot of 20.33 ha of Ankammanahal/somalapura village at a distance of 1Km to 7 Kms through pipe lines and dewatering shall be done there. Recovered water will be recycled to the plant.	Only 20.33 ha land in Kalingeri Village located at 6 km distance from site shall be used for tailing disposal. Total land in the village Kalingeri, under project is 101.17 ha.
The point number (viii) of para no. 14.	Ground water abstraction is not permitted	Project proponent shall submit an action plan for gradually phasing out of 2491 KLD ground water usage in a time frame of three years from the date of issue of EC for the proposed project.
The point number (xi) of para no. 14.	Hydrological study of the watershed around the Tunganhadra River shall be carried out	Stands deleted
The point number (xii) of para no. 14.)	HFL details of Tunganhadra River from the concerned authority and impact on riverine ecology due to the proposed project shall be submitted in the EIA Report	Stands deleted

28th January, 2022

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

52.9.1 M/s. JSW Utkal Steel Limited [JSW USL] has made an online application vide proposal No. IA/OR/IND/74396/2018 dated 7/01/2022 along with copy of common EIA report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & nonferrous), 4(b) Coke Oven Plants 1(d) thermal power plants and Cement plants 3(b) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at the Central Level.

52.9.2 The following experts from EAC – Infra 1 sector have been co-opted by the Industry 1 sector for appraising the common EIA report.

i. Dr. Manoranjan Hota, Member, EAC – Infra 1
ii. Dr. Sukumaran Jeyakrishanan, Member, EAC – Infra 1

Details submitted by Project proponent

52.9.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
ISP 13/08/2018	35th EAC [Ind-1] 18th September, 2018 & 4th REAC [Ind-1] meeting held on 19th February 2019	Terms of Reference	19/03/2019	18/03/2023

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

52.9.5 Environmental Site Settings:

S.No.	Particulars	Details	Remarks
1.1	Total land for ISP	1125.284 ha [Private: 0.915 ha; Govt:- 1124.369 ha ; Agriculture: nil; and Grazing land: nil]	**Land use:** Land use: Total land is 1125.284 ha out of which 1069.581 ha land is diverted from forest and rest of

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td></td><td>55.703 ha (non-forest land) is allotted by IDCO.</td></tr>
<tr><td>1.2</td><td>Total land for captive jetty</td><td>68.83 ha</td><td>Diverted Forest Land: 14.40 Ha and Barren Coastal Non Forest land: 54.43 Ha</td></tr>
<tr><td></td><td>Total [1.1 + 1.2]</td><td>1194.114 ha</td><td></td></tr>
<tr><td>2.</td><td>Findings of authenticated CRZ map</td><td>The proposed Captive Jetty and related activities is partly located with the CRZ categories such as CRZ IA [De-notified RD-MoEF Order No. 8-63/2007-FC dt. 04.05.2011], CRZ IB [Intertidal Zone], CRZ III [NDZ], CRZ IVA [Sea] and CRZ IVB [River].
The activities proposed are permissible within the CRZ area.</td><td>The CRZ map is prepared in accordance to the CRZ Notification, 2011 and are in harmony with the approved CZMP of Sheet No. F45 U 12/NW [Map Np. 42] of the State of Odisha.</td></tr>
<tr><td>3.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 with respect to ISP project</td><td>Total land is 1125.284 ha out of which 1069.581 ha land is diverted from forest and rest of 55.703 ha (non-forest land) is allotted by IDCO.</td><td></td></tr>
<tr><td>4.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Project Site:Dhinkia [Jogisahi], Dhinkia [Patana], Gobindpur, Nuagaon&Polang.
There are around 142 Project Affected Families (PAF) who would be affected due to the proposed Greenfield project.
Study Area:
<table>
<tr><th>Habitation</th><th>Distance [mtr]</th><th>Direction</th></tr>
<tr><td>Dhinkia-67</td><td>200-300</td><td>N-E</td></tr>
<tr><td>Gobindpur-49</td><td>150-200</td><td>N</td></tr>
<tr><td>Nuagoan-02</td><td>20-50</td><td>W</td></tr>
<tr><td>Polang-96</td><td>100-150</td><td>W</td></tr>
</table></td><td>Status of R&R: Rehabilitation and Resettlement (R&R) shall be carried out as per Odisha R&R Plan.</td></tr>
<tr><td>5.</td><td>Latitude and Longitude of <u>all corners</u> of the project site [ISP & Captive Jetties]</td><td>
<table>
<tr><th>Id</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1</td><td>20° 12' 25"N</td><td>86° 30' 53"E</td></tr>
<tr><td>2</td><td>20° 11' 50"N</td><td>86° 30' 56"E</td></tr>
<tr><td>3</td><td>20° 11' 58"N</td><td>86° 31' 10"E</td></tr>
<tr><td>4</td><td>20° 12' 0"N</td><td>86° 31' 38"E</td></tr>
<tr><td>5</td><td>20° 12' 40"N</td><td>86° 33' 19"E</td></tr>
<tr><td>6</td><td>20° 11' 25"N</td><td>86° 31' 38"E</td></tr>
<tr><td>7</td><td>20° 12' 55"N</td><td>86° 34' 7"E</td></tr>
<tr><td>8</td><td>20° 12' 4"N</td><td>86° 34' 13"E</td></tr>
<tr><td>9</td><td>20° 13' 15"N</td><td>86° 34' 57"E</td></tr>
<tr><td>10</td><td>20° 12' 48"N</td><td>86° 33' 44"E</td></tr>
<tr><td>11</td><td>20° 13' 44"N</td><td>86° 35' 38"E</td></tr>
<tr><td>12</td><td>20° 14' 8"N</td><td>86° 35' 21"E</td></tr>
<tr><td>13</td><td>20° 13' 35"N</td><td>86° 33' 44"E</td></tr>
</table></td><td></td></tr>
</table>

S.No.	Particulars	Details	Remarks
		14 | 20° 13' 53"N | 86° 33' 38"E 15 | 20° 13' 19"N | 86° 32' 28"E 16 | 20° 12' 52"N | 86° 32' 23"E	
6.	Elevation of the project site	13 m (maximum) above MSL The land is low lying and needs to be raised to prevent flooding during cyclones. Maximum storm surge level observed historically was +5.5 m CD. The land is required to be raised to + 6.5 m CD to avoid flooding. Land would be raised using dredged sand from navigational channel of jetties. Estimated requirement of dredged sand is about 27 million m^3.	
7.	Involvement of Forest land if any	Status of Stage-I Forest Clearance: Transfer of Stage II FC granted vide letter no. F.No. 8-63/2007-FC dated 16/10/2019. Area of the forest land involve: 1083.691 ha including Captive Jetty	
8.	Water body exists within the project site as well as study area	Project site: Nil Study Area: Mahanadi – 8.2 km NE Jatadhar Mohan river – Adjacent Mahanganadi – 0.4 km N Bay of Bengal - 0.5 km SE	Distance of nearest flood level is 50 m (Jatadhar Mohan river)
9.	Existence of ESZ/ESA/National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. if any within the study area	Nil	-
10.	Existence of sand dunes, mangroves, mud flats	Existence of Sand Dunes in project site: <u>SAND DUNE 1</u> A. 20^0 13' 41"N , 86^D 35' 30"E B. 20^0 13' 44"N , 86^0 35' 36"E C. 20^0 13' 45"N , 86^0 35' 35"E D. 20^0 13' 45"N , 86^0 35' 32"E <u>SAND DUNE 2</u> E. 20^0 13' 22"N , 86^0 34' 42"E F. 20^0 13' 26"N , 86^0 35' 02"E G. 20^0 13' 28"N , 86^0 35' 07"E H. 20^0 13' 24"N , 86^0 34' 41"E	
11.	Dredging	Quantum of dredged material and its utilization: About 30 million m^3 of bed material would be dredged for creation of the navigation channel and jetty basin.	

S.No.	Particulars	Details	Remarks
		About 27 million m^3 dredged material shall be used for land reclamation/grade improvement of the ISP land as well for protection of the shoreline erosion in the construction period, when the breakwater construction would prevent littoral drift and the remaining would be disposed at the offshore dumping ground identified in the mathematical modelling report.	
12	Interlinked projects	i. Captive jetty handling capacity 52 MTPA (Proposal no: IA/OR/MIS/74417/2018) for which ToR was granted vide letter dated 09/10/2018. The captive jetty project also granted CRZ recommendation by the State CZMA (OCZMA) vide letter no. OCZMA/56/202041/OCZMA dated 01.02.2021. EC/CRZ clearance for the captive jetty project is yet to be accorded by the Ministry. ii. Iron ore grinding and desliming plant with slurry transportation for 30 MTPA iron ore concentrate had been submitted vide proposal no. IA/OR/MIN/179208/2020 for which ToR was granted vide letter dated 29/12/2020.	

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

Sl. No.	Name	Configuration		Production, MTPA
1	Slurry dewatering system	Thickener, Filtration (pressure filter) with water recovery system		30.0
2	Coke oven	8 x 62 ovens block, 6.25 m tall stamp charged, CDQ		6.0
3	Sinter plant	1 x 500 m^2		5.775
4	Pellet plant	4 x 8.0 MTPA Grinding Unit - 180 TPH		32.0
5	DRI	1 x 1.2 MTPA		1.2
6	Blast furnace	3 x 5,350 cum		13.5
7	Steelmaking Shop (SMS)	SMS-1 3 x 350 t BOF 3 x 350 t LF 2 x 350 t RH	SMS-2 2 x 180 t BOF 2 x 180 t LF 1 X 180 t RH	13.49
8	Caster Shop	Slab Caster - 3 x 2 strand Billet Caster - 1 x 8 strand Billet/Bloom Caster - 1 x 6 strand		13.2
9	Flat Product Mills	Plate Mill - 1 x 1.5 MTPA Hot Strip Mill - 2 x 5.5 MTPA Tinplate Coil - 2 X 0.25 MTPA Silicon Steel - 2 X 0.25 MTPA Cold Rolling Mill - 2 x 2.3 MTPA - Pickling line tandem cold mill(PLTCM)-2x2.3 MTPA - Continuous Annealing Line (CAL) - 2x1.0 MTPA		9.74

Sl. No.	Name	Configuration	Production, MTPA
		- Continuous Galvanizing Line CGL - 4x0.5 MTPA - Color coating Line CCL - 4x0.25 MTPA	
10	Long Product Mill	Rebar mill - 1 x 1.2 MTPA Wire Rod Mill - 1 x 0.6 MTPA Medium Section Mill - 1.0 MTPA	2.8
11	Calcining Plant	6 x 600 TPD Lime Calcining Plant 1 x 600 TPD Dolo Calcining Plant	0.97 0.13
12	Cement Plant	Grinding, mixing of slag, clinker & fly ash	10.0
13	Captive Power Plant	By-product gas and coal based 3 x 300 MW	900 MW
14	Air Separation Plant	6 x 2,100 TPD	12,600 TPD
15	Tar processing plant	Distillation units for producing Carbon Black Oil, Anthracene Oil, Naphthalene, Wash Oil and Pitch	300,000 TPA
16	Benzol Refining Plant	Distillation units for producing BTX and other value added products	100,000 TPA
17	Incinerator	1 unit with gas fired	10 TPD

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

Sl No	Raw Material	Quantity, tons/ annum	Source	Distance from site (Kms)	Mode of transport
1	Coking Coal and Pet Coke	7,831,900	International market Potential source- Mozambique, Australia and Canada	0 (Captive jetties)	Sea
2	Anthracite	192,000	International market Potential source- South Africa, Vietnam and Indonesia	0 (Captive jetties)	Sea
3	Iron ore (Lump)	1,187,900	Procured from the Joda-Barbil and Koira mines region, Odisha	330	Rail (50%)/ Road (50%)
4	Iron ore concentrate	30,000,000	Captive Iron ore grinding & desliming plant, Joda/Nuagaon	330	Slurry Pipeline from Joda/ Nuagaon Plant
5	Iron ore fines	4,695,300	Procured from the Joda-Barbil and Koira mines region, Odisha	330	Rail
6	PCI coal	2,700,000	International market Potential source- Australia, South	0 (Captive	Sea

Sl No	Raw Material	Quantity, tons/ annum	Source	Distance from site (Kms)	Mode of transport
			Africa and Indonesia	jetties)	
7	Limestone	4,934,500	BF grade - Purchased from mines in Bagalkot area, Karnataka /Central India (Jukehi-Katni-Niwar area) SMS grade - Imported from Middle-East Countries (UAE & Oman)	1600	Sea (50%)/ Rail (40%)/ Road (10%)
8	Dolomite	2,350,100	International market & Purchases from mines located in Sundargarh district, Odisha &Katni-Bilaspur region, Central India	350	Sea (15%)/ Rail (70%)/ Road (15%)
9	Steam coal	2,700,000	Procured from Mahanadi Coalfields Limited (MCL) and South Eastern Coalfields Limited (SECL)	450	Rail
10	Bentonite	320,000	International market – Russia etc.	0 (Captive jetties)	Sea
11	Quartzite	270,000	International market – Brazil, Domestic – Rajasthan	1900	Sea (10%)/ Rail (50%)/ Road (40%)
12	Clinker	5,116,000	International market – Vietnam, Domestic – Gujarat	0 (Captive jetties)	Sea
13	Gypsum	232,000	Domestic – Rajasthan, Gujarat	1900	Rail 50%)/ Road (50%)

52.9.8 The water requirement for the ISP & Jetty project is estimated as 248,880 m^3 /day, out of which 223,200 m^3 /day of fresh water requirement will be obtained from the Upstream of Jobra barrage of Mahanadi River and the remaining requirement of 25,680 m^3 /day will be met from the recycling of treated effluent. In addition to the above, sea water to the extent of 130,000 m^3/hr will be used in CPP for cooling. The permission for drawl of surface water [99.80 cusec ~ 10174 m^3/hr from Mahanadi River] for the projects is obtained from Dept. of Water Resources, Government of Odisha vide Lr. No. 20873/WR/Irr.II-WRC-44/19 dated 19th Sep 2019.

52.9.9 The power requirement for the proposed project is estimated as 1230 MW, out of which 900 MW from coal and gas fired CPP & 221 MW from CDQ & TRT and rest will be balanced Grid/JSW Energy.

52.9.10 Baseline Environmental Studies:

Period	Primary baseline data during the Apr'19 - Jun'19 period for ISP and three seasons data from Jan'18 to Apr'18, Nov'18 - Feb'19 and Apr'19 - Jun'19 for captive jetties.
AAQ parameters at 8 Locations	$PM_{2.5}$ = 23.5 to 52.8 µg/m^3 PM_{10} = 46.2 to 90.2 µg/m^3 SO_2 = 4 to 9.5 µg/m^3 NO_x = 7.8 to 45 µg/m^3 CO = 0.1 to 0.68 mg/m^3 O_3 = <10 µg/m^3 NH_3 = < 4.18 µg/m^3 Pb = < 0.01 µg/m^3 C_6H_6 = < 0.74 µg/m^3 As = < 0.01 ng/m^3 Ni = < 0.02 ng/m^3 BaP = < 0.36 ng/m^3
AAQ modelling (Incremental GLC Level)	PM = 21.5 µg/m^3 SO_2 = 16.4 µg/m^3 NOx = 32.8 µg/m^3
Groundwater quality at 8locations	pH: 6.5 to 7.1, Total Hardness: 835.8 to 2760 mg/l, Chlorides: 54.6 to 853.1 mg/l, Fluoride: 0.1 to 0.3 mg/l. Heavy metals are within the limits.
Surface water quality at 8 locations	pH: 6.7 to 8.1; DO: 3.25 to 5.5 mg/l BOD: from 5.0 to 57.5.mg/l. COD: from 39.0 to 288.8 mg/l
Noise levels Leq (Day and Night)	52.8 to 75 Leq dB(A) for the day time and 42.2 to 67.2 Leq dB(A) for the Night time
Traffic assessment study findings	Traffic study has been conducted at near Atharabanki after merging of SH 12 & NH 53 in the outskirts of Paradeep which is approximately 9 km from the plant site. Transportation of raw material, fuel & finished product will be done 9 % by road. Existing PCU is 1604 PCU/hr on NH53 and existing level of service [LOS] is

Road	V (Vol in PCU/hr)	C (Capacity in PCU/hr)	Existing V/C Ratio	LOS
NH53	1604	3600	0.44	A

PCU load after proposed project will be 1604(Existing) + 191(Additional) PCU/hr and level of service (LOS) will be

	<table><tr><th>Road</th><th>V (Vol in PCU/hr)</th><th>C (Capacity in PCU/hr)</th><th>V/C Ratio</th><th>LOS</th></tr><tr><td>NH53</td><td>1795</td><td>3600</td><td>0.5</td><td>A</td></tr></table> *Note: Capacity as per IRC:106-1990 Guide line for Capacity for roads. ***Conclusion:*** The level of service will be A after including additional traffic due to proposed project.
Flora and fauna	There are no Schedule I species in the study area.
Coastal Environment parameters	**Physico-chemical characteristics of marine water** Temperature- 19.0 to 24.0 ºC during winter 26.5 to 30.0 ºC during summer 27.0 to 29.0 ºC during post-monsoon Salinity (PSU)- 21.6-26.7 psu during winter 33.2-34.1 psu during summer 1.1-28.2 during post-monsoon BOD (mg/l)- 1.9-2.6 mg/l during winter 3.5-5.0 during summer 1.8-17.7 during post-monsoon season PO_4^{3-}P (µmol/l) - 0.03-0.7 µmol/l during winter 0.1-0.5 µmol/l during summer 0.4-3.2 µmol/l during post-monsoon NO_3^--N(µmol/l)- 0.2 to 0.9 µmol/l during winter 0.2 to 1.0 µmol/l during summer 3.9 to 7.3 µmol/l during post-monsoon **Trace metal concentration in marine water** Cr (ND-6.7µg/l, Zn (0.8-23.8 µg/l), Cu (1.2-14.8µg/l) and Hg (ND-0.02µg/l) **Texture of Sediment** Intertidal sediment is mostly sandy with maximum content of sand (91.5-98.8 %) followed by silt (0.8-5.3 %) and clay (0.4-3.2%). **Heavy metals in Sediments** The analysis of the heavy metals in sediments indicated lithogenic characteristic of the region and varied according to the texture of the sediment. There is no contamination of the sediment with respect to the heavy metals. **Biological Characteristics** Microbial counts (TVC) in the waters collected ranged from 10x102 to 700x102 in winter, 50x102 to 500x102 in

	summer, and 10x102 to 180x102 in post-monsoon season. The microbial counts (TVC) in the sediments ranged from 30x104 to 140x104 in winter, 50x104 to 250x104 in summer, and 10x104 to 300x104 in post-monsoon season. Phytoplankton cell population varied widely from 8.8 to 347.6 x 103 cells/l in winter, 20.6x103 to 950.4x103 cells/l in summer, and 6.0x103 to 55.0x103 cells/l in post-monsoon season. Zooplankton biomass ranged from 0.1 ml/100m³ to 26.8 ml/100m³ (av. 0.88 ml/100m³ to 8.86 ml/100m³). Zooplankton density ranged from 1.4 no.x10³/100m³ to 75.1 no.x10³/100m³ (av. 4.0 no.x10³/100m³ to 19.7 no.x10³/100m³) and total groups ranged from 6 no. to 22 no. (av. 12 no. to 16.2 no.). Macrobenthic standing stock in term of biomass and population in the subtidal region ranged from 0.003 to 44.19 g/m² (av. 0.37 g/m² 7.72 g/m²) and 25 to 6900 no./m² (av. 362 no./m² to 2494 no./m²) Meiobenthic standing stock in term of biomass and population ranged from 0.02 to 3.08 g/m² (av. 0.75 to 0.83 g/m²) and 64 to 2031 no.x103m² (av. 205 to 472 no.x103m²) respectively.

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

S. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment / Disposal/Remarks
1.	BF Slag	Blast Furnace	4050000	Granulation in Slag granulation plant and used in cement manufacturing in captive cement plant. A small quantity would be used internally in the ISP
2.	Steelmaking Slag	SMS	2095000	Recovery of metallics& non-metallics for in-plant use. Balance utilized as railway ballast, in construction aggregrate, after processing.
3.	Flue Dusts	Blast Furnace, SMS, Sinter Plant, Pellet Plant etc.	300000	Reuse in Agglomeration
4.	Mill Scales/Sludge	Mills	150000	Reuse in agglomeration
5.	Fly Ash	Coal based CPP	940000	Used to produce cement in the captive cement plant

S. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment / Disposal/Remarks
6.	Bottom Ash	Coal based CPP	240000	Would be stored in ash pond and used for road making
7.	Chrome Sludge	CRM	80	Disposed in secured landfill in TSDF
8.	Decanter tank & tar storage tank sludge	Coke Oven By product plant	800	Reused in coke oven
9.	Used & Waste oil	Mills and other units	1500	old to Recycled recyclers
10.	Zinc Dross	Galvanising Unit	30000	old to Recycled recyclers

52.9.12 Public Consultation:

Details of advertisement for ISP & Jetties	19/11/2019
Date of public consultation for ISP & Jetties	20/12/2019
Venue	Separately carried out for ISP and Jetty projects. ISP in the forenoon and Captive Jetty in the Late afternoon to the evening**.** Badadanda, in front of Jagannath Temple at Gadakujang village
Presiding Officer	Sri Sangram Keshari Mohapatra Collector & District Magistrate, Jagatsinghpur
Major issues raised for the Projects	• Air pollution (dust pollution) • Ground water contamination • Direct and indirect employment • 200 bedded Super Specialty Hospital in the local area • upgradation of existing govt. hospitals in three Gram Panchayats • upgradation of existing educational institutions • Establishment of technical training institute • vocational training centers • skill development centers • safe drinking water facilities in every village • development of sports infrastructure in the villages • SHGs are to be empowered with skill development and better management of financial implementation and training and establishment of BPO centers in the villages. • Construction or upgradation of road and drainage system

Action Plan as per MoEF& CC O. M. dated 30/09/2020: for ISP

Description- Physical Activity and Action Plan [Name of the Activity & Physical Targets]	Year 1	Year 2		Year 3	Total (in Rs. Lakhs)
Area Development					
Development of village roads	- Dhinkia & Nuagoan 2km in each village	Gobindpur& Raghunathpur 2km in each village.	Garhkujang-3Km, Noliasahi-2Km & Abhay-chandapur- 3km		**2400**
Development of market infrastructure with water & electricity	Garhkujang	Dhinkia	Bayanalkanda &Raghunathpur		**125**
Development of public community center and recreation center	Construction of community hall & procurement of TT board & carrom board in Nuagaon	Construction of community hall & procurement of TT board & carrom board in Dhinkia	Construction of community hall & procurement of TT board & carrom board in Gadrhkujang		**200**
Development of playground and club house with TT, Carrom board, football& cricket accessories in Garhkujang, Gobindpur & Nuagoan	Development of land and fencing at 2 villages. Commencement of club house construction at 2 Villages	Development of land and fencing at 2 villages. Commencement of club house construction at 1 Villages	Completion of club house construction & procurement of all accessories		**1500**
Establishment of library infrastructure facilities with 500 books, 10 bookshelves and 4 numbers of computers with internet facilities	Dhinkia & Pankapal	Balitutha & Unchanuagan	Taladanda, Bhitarandhari,		**200**
Medical					
Infrastructure strengthening of govt. hospital in 4 gram panchayats as per requirement (The upgradation scheme will be finalized with district administration and the approved scheme will be communicated to MoEFCC during 6 monthly compliance)	Balitutha	Dhinkia	Jhimani Kujang		**200**
Establishment of 200 bed hospital in consultation with local authorities	Identification of site and tendering & placement of order for construction	Construction of Hospital building	Development of pathological lab and Procurement of instrument, beds etc		**2000**
Upgradation of health care facilities in peripheral villages	Portable X-ray in Balitutha and Dhinkia	Portable ECG and USG in Balitutha and Dhinkia	Dental chairs in Balitutha and Dhinkia		**200**

Description- Physical Activity and Action Plan [Name of the Activity & Physical Targets]	**Year 1**	**Year 2**		**Year 3**	**Total (in Rs. Lakhs)**
Education					
Establishment of public School at Garhkunjang	Identification of site, Tendering & Placement of Order for Construction	Construction of School Bldg.	Procurement of Chair, Tables, Computers (20 Nos), Books etc.		**500**
Strengthening of library & up gradation of existing village schools by providing Chair, table & books & 4 Nos of computers with internet to each library	Gobinda Chandra High School Noilasahi UP school, Noilasahi Houra Chandi Bidyaptha Govt High School & Sri Aurobindo Shiksya Sadana, Taldana	Kapteswar Bidyapitha & Sri Aurobindo Shiksya Sadana. Janata High School, Kothi AK Bidyapitha UP School Khuranta	Pankapal High School, Balitutha Panchayat High School & Janata High School. Baladevjiew UP School, Sahada.		**180**
Drinking water					
Provision of drinking water through pipelines & installation of portable RO in peripheral villages or contribution to government fund for the same	Naliasahi & Garhkujang	Dhinkia & Raghunath-pur & Nuagoan	Abhaychandra-pur, Bayanalkanda & Gobindpur Balitutha, Unchanua-gan, Chatua & Raghunathpur		**2000**
Livelihood					
Provision of mechanized boat to fishermen community of Noliasahi village for fishing in the near shore area	5 Nos	3 Nos	2 Nos		**300**
Construction of fishing jetty	Identification of site & statutory clearance	Start of construction	Continuation of construction and Commissioning of jetty		**800**
Infrastructure					
Construction/development of road in peripheral villages	2 km in Dhinkia	4 km in Dhinkia	4 km in Nuagaon. 2 km in Noliasahi and 2 km in Bayanala Kandha		**800**
Solar light					
Solar LED street lighting in villages (Dhinkia, Nuagoan, Gobindpur, Raghunathpur Garhkujang, Noliasahi, Pankapal, Bayanalkanda, Raghunathpur, Abhaychandapur & Kujang	200 Nos. covering Dhinkia, Nuagoan, Gobindpur, Raghuna th-pur	200 Nos covering Garhkujang, Noliasahi, Pankapal, Bayanal-kanda	200 covering Raghunathpur, Abhaychandapur & Kujang		**200**

Description- Physical Activity and Action Plan [Name of the Activity & Physical Targets]	**Year 1**	**Year 2**		**Year 3**	**Total (in Rs. Lakhs)**
Swachh Bharat					
Distribution of dust bin in the surrounding villages &Mechanised vehicle for garbage lifting and transportation	1000 coloured bins in Dhinkia, Nuagaon and Gobindpur	4 Nos of mechanized vehicle	500 Coloured bins in BayanalaKandha, Gadkujang, Abhaychandpur		**800**
Environment					
Construction of stone pitching in sea beach	Investigation and ordering	1.0 km	1.0 km		**1000**
Carry out urban plantation and afforestation programs in 11 villages	20000 trees	20000 trees	60000 trees		**500**
Lord Jagannath Temple at Gadakunja will be provided with electrification and maint.	Construction	Construction & handing over			
Development of Sports Infrastructure in peripheral Villages & arrange special training for talented youth	3 Villages	3 Villages	3 Villages		
Vocational training					
Skill development training on welding, electrician course, machinery, carpentry etc. and livelihood program	500 persons	500 persons	1000 persons		**2000**
Skill development for women empowerment on nursing, tailoring, beautician course, animal husbandry at village	Establishment of Skill development center at Kujang	1000 women	2000 women		**1000**
Providing training to SHG members	200 Persons	200 persons	400 persons		**400**
Vocational training					
Establishment of technical training institute for skill development. Location will be decided in discussion with Local administration	Identification of land & tendering	Construction of building	Completion of construction & procurement of tools & tackles		**2000**
Fund contribution towards establishment of BPOs in and provision of employment aid in textile units	BPO-100	Tailoring-100	100		**300**
Total					**19,605**

52.9.13 The capital cost of the ISP & Captive Jetties are Rs. 65,000 Crores and Rs. 2100 Crores and the capital cost for environmental protection measures for ISP. The annual recurring cost

towards the environmental protection measures for the Project area proposed as Rs. 200 Crores. The employment generation from the proposed ISP project is 72,000 (Direct-15000, Indirect-57000). The details of cost for environmental protection measures for ISP is as follows:

Sl. No.	**Description of Item**	**Proposed (Rs. In Crores)**	
		Capital Cost	**Recurring Cost**
1.	Air Pollution Control Measure/Noise Management	1650	115
2.	Water Pollution Control	775	54
3.	Env. Monitoring Management & Laboratory Solid Waste management	90	6.5
4	Greenbelt Development	25	2
5.	Addressal of Public Consultation concerns	196	14
6.	Solid Waste Management	120	8.5

52.9.14 Proposed greenbelt will be developed in 371.34 ha which is about 33% of the total project area. A 10-20 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEFCC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 930,000 saplings will be planted and nurtured in 371.34 Ha in 5 years.

52.9.15 PP has mentioned that there is no violation under EIA, 2006 or court case or any show notice pending related to the proposed project.

52.9.16 Name of the EIA consultant **ISP:** M/s M. N. Dastur& Co. (P)Ltd. [C. No. NABET/EIA/1821/RA0131 extended till 29/03/2022] **Captive Jetties:** WAPCOS Ltd. [C. No. NABET/EIA/2124/RA0222 extended till 09/04/2024] **Common EIA Report:** M/s M. N. Dastur& Co. (P)Ltd. [C. No. NABET/EIA/1821/RA0131 extended till 29/03/2022]

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

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

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

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

A. Public representation

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

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

As per the District Magistrate report dated 29/05/2020, the public hearing for the instant project was conducted by the District Administration on 29/12/2019 as per the guidelines laid down in the EIA Notification, 2006. Further with respect to the common EIA report, it has been responded by OPCB stating that JSW submitted individual EIA reports for both the projects separately along with an integrated EIA report. All the three reports were distributed to the concern offices as per the guidelines of the EIA Notification, 2006 and was uploaded on to the OSPCB website.

52.9.21 M/s. JSW Utkal Steel Limited had again made an online application vide proposal no. IA/OR/IND/74396/2018 dated 02/09/2021. Subsequently, the proposal was considered by REAC in its 44th meeting held on 13 – 14th September, 2021. The EAC recommended to return the proposal in its present form to address the shortcomings. With respect to the public representations listed at point no. 52.9.22 below, the Committee recommended to seek the views of Odisha Pollution Control Board and the project proponent.

52.9.22 Besides above, the EAC has gone through the public representation during 13-14th September, 2021.

Public representations:

S No	Date	Issues raised
1	10/09/2021	• Re-conduct of public hearing as per the procedure established by the EIA notification, 2006 after making relevant information available to the villagers in their local language. • Prior consent from Gram Sabha. • Lack of integrated EIA report • Incomplete public hearing notices
2	11/09/2021	• Incomplete and unlawful public hearing held on 20/12/2019. • EIA Report has not justified the environmental and social impacts.
3	12/09/2021	• Environmental impacts due to the project. • Expressed concerns in the reply provided by the project proponent on the observations made by the Expert Appraisal Committee (Industry-I) in the meeting held on 19th May, 2021.
4	13/09/2021	• Written representations received in favour of project during Public Consultations are fabricated. • Livelihood of the locals likely to be affected.

52.9.23 M/s. JSW Utkal Steel Limited had again made an online application vide proposal no. IA/OR/IND/74396/2018 dated 07/01/2022. Subsequently, the proposal was considered in 52nd REAC (Industry-1) held on 27th, 28th and 31st January, 2022.

52.9.24 It was appraised to the EAC during meeting, that a report was submitted by Odisha Pollution Control Board on 11/10/2021 on public representations and response of PP on 28/09/2021 on public representation given as below:

Report of Odisha Pollution Control Board on public representation and response of Project proponent:

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
1	**Representation dated 10/09/2021**		
i	Quash the public hearings conducted on 20th December, 2019 and require them to be re-conducted as per the procedure established by the EIA notification, 2006 after making relevant information available to the villagers in their local language.	Comment Public Hearing (PH) was organized by the OSPCB with the support of District Magistrate for two projects of JSW USL viz ISP and Captive Jetty at Gadkujang on 20.12.2019. The public hearing was chaired by District Collector, Jagatsinghpur. The PH was conducted as per the procedure laid down in EIA notification 2006 and amendments thereafter. The Common EIA Report as prepared by JSW USL has been received by the Board along with the summary for both the projects (in English & local language, Odia). The summary reports in English and local language Odia have been uploaded in the website of OSPCB and were made available at GP offices, Collector's office, BDO office, DIC office and RO Paradeep for the inspection by the general public. The date and venue of the public hearing was published in one national daily in English i.e. "The Times of India" and one local daily in Odia i.e.	The PH was organized by the regional office of the Odisha State Pollution Control Board as prescribed in the EIA notification of 2006 and amendments thereof. It was cherished by the District Collector. The Common EIA report has been prepared and submitted to OSPCB as per the Office Memorandum dated 24.12.2010. All the relevant information was furnished in the summary report of the EIA in English and vernacular language (Odia) for better understanding of the project and its environmental impacts among the general public. The documents were made available at the respective GP Offices, Collector Office, BDO for wide publicity of the same as per ETA Notification. Besides the summary report in local language and English were uploaded in the OSPCB website. The date of public hearing was published in the daily newspapers in Odia and English.

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
		"Dharitri" 30 days prior to the date of Public Hearing The Board and District Administration had made arrangement of wide publicity of the report as per provisions of EIA notification 2006 and amendment thereafter. The project proponent deliberated about the both projects in details before the public and the questions raised by the public have been answered during the PH. The written representations (1082) have been received by the Board prior to and after the PH, which have been communicated to both MoEF&CC, Govt. of India and the project proponent. The entire public hearing proceedings has been video graphed and submitted to MoEF&CC, Govt. of India	
ii	Ensure that free, prior and informed consent is acquired from the affected villagers for the aforesaid project and give due consideration to both recent and previous Gram Sabha resolutions rejecting diversion of forestland, as per FRA, 2006.	There is no provision in EIA Notification, 2006 and amendment thereafter that prior consent from Gram Sabha is required for seeking prior Environmental Clearance. Hence, it is not acceptable.	The requirement of prior consent from Gram Sabha is as per the FC Act and not for seeking prior Environmental Clearance as per EIA Notification 2006 and subsequent amendments. Further, it may be noted that Jagatsinghpur district does not fall under scheduled area.
iii	Urgently ensure, that individual and community forest rights claims of residents of Nuagaon, Dhinkia	No comments as this is not part of procedure for conducting public hearing for prior EC as per EIA Notification, 2006 and amendment thereafter.	The Forest Clearance was received by the earlier Project Proponent which has been transferred to JSW Utkal Steel Limited

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
	and Gobindpur villages on land taken over for the POSCO project are being processed instead of transferring the land to JSW Utkal Steel		
iv	Initiate immediate measures to restore the massive environmental damages already occurred, e.g. by replanting trees.	No comments as this is not part of procedure for conducting public hearing for prior EC as per EIA Notification, 2006 and amendment thereafter. However, greenbelt development plan as proposed in the EIA report is to be implemented by the Project Proponent with time bound action plan.	The compensatory afforestation as required under the FC Act has already being initiated by the Forest Department. JSW USL will be planting nearly 1 Million trees as a part of Greenbelt/Greenery Development Program within the project area. In addition to the above, JSW USL will be funding for enhancement of greenery in the adjoining area for about 169 Ha. Therefore, there will be net positive improvement in environmental condition in the area
v	Ensure that all of India's commitments under the Convention on Biological Diversity, the Paris Agreement on climate change, and the 2030 Sustainable Development Goals (SDGS), are prioritized and implemented.	No comments as this is not part of procedure for conducting public hearing for prior EC as per EIA Notification, 2006 and amendment thereafter. However, commitment shall be taken from the Project Proponent in this regard.	JSW USL is committed to align with the objective set forth by Government of India towards its international commitments related to Biodiversity, Climate Change com and Sustainable Development Goals. Towards this the following actions have been proposed: Biodiversity: Plantation of local diverse species as a part of greenery development in the area as stated above;

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
			Climate Change: JSW USL will be implementing the state of the art technologies which will be highly productive, energy efficient and environment friendly with reduced carbon footprints; Sustainable Development Goals: The Project has envisaged several schemes for promoting inclusive growth in the surrounding area i.e. employment, infrastructure development, drinking water security, rural electrification and enhance entrepreneurship through supportive ancillary units.
2	**Representation dated 11/09/2021**		
i	Integrated EIA was not made available prior public hearing.	Board after receipt of Common EIA Report along with EIA reports of ISP & Captive Jetties, public hearing was conducted by the Board.	The report was prepared by NABET accredited consultant (M.N. Dastur & Company Private Ltd. Kolkata) The baseline environmental data have been collected by NABL & MoEF&CC recognized/accredited laboratory. So the question of false, misleading and Incomplete cata does not arise.
ii	The report prepared based on incomplete, false and misleading data.	So far as grant of environmental clearance is concerned, the role of this Board is limited only to facilitate conduct of public hearing under the supervision of the district Collector or/his representative not below the rank of ADM and forward	The Individual plant wise water requirement and the total plant water balance diagram has been made and is available in the integrated/individual reports. The requirement of water as indicated in the report is in line with the water requirement study for

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
		the proceedings to the concerned regulatory authority for consideration of environmental clearance. For this case, the regulatory authority is MoEF&CC, Govt. of India to grant environmental clearance on recommendation of Expert Appraisal Committee (EAC). The Board is not empowered to review the EIA report and the data reported in the report.	the steel plant as prepared by MECON on behalf of Govt. of Odisha.
iii	Assessment for water requirement was missing.	No comments as this is not part of procedure for conducting public hearing for prior EC as per EIA Notification, 2006 and amendment thereafter. However, assessment of Water requirement is available in the EIA report for the ISP.	The Paradeep Port is established under the Major Port Act under the Central Government, and the Present Captive Jetty is under the administrative control of the State of Odisha. Hence, NOC from Paradeep Port is not necessary. Based on our request to the Ministry through letter dated 15.03.2021, EAC has recommended to submit an undertaking to the Ministry stating that "the activities proposed for the Captive Jetty(ies) facility shall not overlap the Master Plan the Paraeep Port"
iv	NoC from Paradeep Port	No comments as this is not part of procedure for conducting public hearing for prior EC as per EIA Notification, 2006 and amendment thereafter.	Common EIA Report for 1SP & Captive Jetties was prepared by the accredited consultants and submitted to OSPCB for public hearing per the Terms of Reference mandated by respective EACS. During the appraisal by the committee of these projects, additional clarification was sort which

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
			was submitted by JSW USL to the EAC of MoEF&CC
3	**Representation dated 12/09/2021**		
i	Baseline Environmental quality data not in line with Paradeep Industrial Area (PIA)	No comments. So far as grant of environmental clearance is concerned, the role of this Board is limited only to facilitate conduct of public hearing under the supervision of the district Collector or / his representative not below the rank of ADM and forward the proceedings to the concerned regulatory authority for consideration of environmental clearance. For this case, the regulatory authority is MoEF&CC, Govt. of India to grant environmental clearance on recommendation of Expert Appraisal Committee (EAC). The Board is not empowered to review the EIA report and the data reported in the report	The proposed Project area is located 12 km south of Paradeep port (2km from Paradeep Industrial Area, the nearest boundary of PIA is that of IOCL). The monitoring locations for the proposed project have been selected based on the guidelines of EIA and the data clearly indicates the impacts of industries in PIA on the baseline environment quality.
ii	Solid Wastes and Wastewater management details.	No comments. The Board is not empowered to review the EIA report and the data reported in the report. However, Solid Waste Management has been elaborated in the EIA Report.	The Project envisages maximum utilization of Solid Wastes generated during steel production. Iron and Steel making slag and fly ash from thermal power plant will be utilized for cement making and as construction aggregates. The Iron and carbon bearing waste material will be recycled within the plant. The Project envisages maximum recycle/reuse of wastewater after treatment within the plant. The water recovered from the Iron ore Slurry will also be used after suitable treatment.

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
			The major quantity of water usage in the ISP is in thermal power plant and will be met from sea.
iii	Construction of SFRC pre-cast pretension wall without approval of EC	Temporary Construction of boundary wall(fencing) for the proposed project area is a permitted activity.	Temporary Construction of boundary wall(fencing) is a permitted activity. Permission for using precast slab for fencing has been received from MoEF&CC.
iv	Comprehensive drainage plan to evacuate during cyclonic and rainy seasons	No comments as this is not part of procedure for conducting public hearing for prior EC as per EIA Notification, 2006 and amendment thereafter	From the land use and drainage study, it is seen that a minor stream is passing through the southern edge of plant. In order to evacuate water seamlessly JSW USL has commissioned expert agency to carry out comprehensive drainage plan of the area.
v	Dispute on Mahanadi River between two states (Odisha & Chhattisgarh)	No Comments.	This is an interstate matter and JSW USL has no comments.
vi	Availability of water for the industrial activity from Jobra Barrage	No comments. However, as intimated by the proponent, Water Resource Department of Government of Odisha, has allocated the required quantity of water to JSW USL from Jobra as per the Government guidelines.	Water Resource Department after examining the availability of water from Jobra, has allocated the required quantity of water to JSW USL
vii	Action plan for Socio Economic Development	No Comments JSW USL has indicated an amount of Rs. 196.05 cr towards CER in EIA report.	As per the EIA guideline 2006, socio economic study has been conducted in 10 kms radial coverage from the proposed project site. The Socio Economic Development Plan has been prepared based on the expectation of the local peop as expressed during the public hearing and the need based assessment done

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
			during socioeconomic study. An amount of Rs. 196.05 cr. has been earmarked under CER, over and above the activities that will be carried out under CSR after start of plant operations.
viii	Cutting of tress in the project area	No Comments	The information on the number of trees existing is mentioned in the Stage II Forest Clearance. Project Proponent JSW USL has not carried out any detailed enumeration of trees in the project area. JSW USL also confirms that till date no tree has been cut.
ix	SIA	No comments	The draft Common EIA report was prepared prior to the public hearing and at the beginning of the public hearing the project proponent and the accredited consultant briefed about the project and Common EIA Report. Taking into consideration of the observations and concerns raised in the Public hearing, the Common EIA was finalized and submitted for appraisal by EAC. Nonetheless the response of the Project proponent to the concerns raised during the public hearing is also on record before the EAC.
x	Proposal for BOOT model	No comments as this is not part of procedure for conducting public hearing for prior EC as per EIA Notification, 2006 and amendment thereafter.	In order to manage a large integrated steel plant as proposed, requires different types of technical capabilities and competencies. However, it has now proposed to control

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
			all plant operations under JSW USL only. In view of this the BOOT proposal originally envisaged has been withdrawn.
xi	Environmental impact on transportation of raw materials	No comments as this is not part of procedure for conducting public hearing for prior EC as per EIA Notification, 2006 and amendment thereafter. However, the environmental impact (fugitive dust emissions) due to movement of heavy-duty trucks through the NH, SH and the extension of the Surge Road to the plant has been carried out and included in the EIA report.	The environmental impact of dust due to movement of heavy-duty trucks through the NH, SH and the proposed roads to the plant has been carried out. It may be noted that nearly 90% of the raw materials and the finished products will be transported through sea and pipeline which have insignificant environmental impacts.
xii	Baseline data on fluoride and phenol.	No comments. The Board is not empowered to review the EIA report and the data reported in the report.	The Fluoride and Phenol data as indicated in the report are in microgram/liter and not in milligram/lit so the data indicated in the report is correct.
xiii	Norms for marine discharge	No comments. The Board is not empowered to review the EIA report and the data reported in the report.	The waste water generated from individual process units will be treated in the individual wastewater treatment plants to conform to the respective norms and finally further treated in a common efferent plant for plant reuse. The runoff water during the monsoon season will be taken in catch pits and clear water pumped to raw water reservoir for use. During the heavy rainfall, the overflow from the catch pits will be drained into peripheral drain leading to sea.

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
			The once through cooling water (sea water) will be discharged into the sea through specially designed diffusers maintaining the norms of differential temperature of 5°C by cooling in the cooling towers.
xiv	High level of pollution in Paradeep Industrial Area	Board has prepared an action plan for reducing the levels of air and water pollution from the existing industries in PIA and is being implemented	Please refer our reply given earlier.
xv	SO_2 & NOx emissions	No comments. However, JSW USL confirms to comply with the norms applicable for steel and power plants.	Project has been conceived based on the SO_2 and NO_X standards applicable for integrated steel plant. JSW USL is committed to comply to some units to stricter standards as applicable in developed countries.
xvi	Variance in data of EIA and PPT	No comments. The Board is not empowered to review the EIA report and the data reported in the report.	Observation is generic in nature, inviting no comments.
xvii	Wet land	No comments as this is not related to the Board.	The wetland indicated in the map prepared by ORSAT Is not a designated "wetland" as notified by State Wetland Authorities. The wetland as indicated are natural streams prawn ponds and village ponds and do not require any special conservation efforts.
xviii	Shoreline erosion	No comments. However, the shoreline erosion management plan has been elaborated in the common EIA report	The shoreline erosion conservation plan has been elaborated in the EIA report.

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
xix	Modification of EIA report after public hearing	The EIA notification stipulates that the proponent has to incorporate the comments of public in the final EIA report. They have submitted the final EIA report incorporating the comments of public as informed by the proponent	Common EIA Report for ISP & Captive Jetties was prepared and submitted to OSPCB for public hearing as per the Terms of Reference mandated by respective EACS. During the appraisal of the committee, additional clarification/details was sought which was submitted to the EAC of MoEF&CC
4	**Representation dated 13/09/2021**		
i	Written representations received in favor of project during Public Consultations are fabricated.	The Board has forwarded all the communication received from the public during Public Hearing to MoEF&CC, Govt. of India along with the proceedings of the public hearing	The public hearing was conducted by the Odisha State Pollution Control Board (OSPCB) and District Administration. The objection/suggestions on the proposed project received before, during and after public hearing (PH) has been compiled by OSPCB. The copy of the same was handed over to us along with the proceedings of the Public Hearing by OSPCB. A total 1082 representations received from the individuals during and after the PH which was endorsed by the State Pollution Control Board. Copy of the same has been sent to MoEF&CC along with the proceedings of the public hearing.
ii	Livelihood of the local person likely to be affected due to project activity	No comments as this is not part of procedure for conducting public hearing for prior EC as per EIA Notification, 2006 and amendment thereafter. The	A large integrated steel plant of this size is a major "economic multiplier" leading to generation of multiple opportunities for overall socio economic

S No	Representation points	Comment of OPCB dated 11/10/2021	Response made by PP dated 28/09/2021
		Board is not empowered to review the EIA report and the data reported in the report. However, JSW USL has informed to the public during public hearing that the setting up of the steel plant will open up large opportunities for socio economic development in the surrounding areas and has also committed Rs. 196 Cr towards CER for overall social economic development of the region. JSW USL has also replied positively to the queries raised by the public during the Public Hearing.	development of the surrounding area. It is estimated the project will lead to generation of Direct employment - 3,000 (Construction Phase) & 12,000 (Operation Phase); Indirect employment 12,000 (Construction phase) & 45,000 (Operation Phase). Employment opportunities will be created in downstream activities related to processing of steel products as well. JSW USL has proposed to provide training, skill development to the local youth for gainful employment, entrepreneurship development and other income generating activities. JSW USL will provide a fishing jetty and mechanized boat facilities to the fishing community of Nolia sahi village. JSW USL have proposed to help the farmers in collaboration with the State Govt for better quality farming to enhance the quality and productivity of their produce. JSW USL has allocated Rs. 196 Cr towards CER for overall social economic development of the region

52.9.25 M/s. JSW Utkal Steel Limited made reply to the observation made by EAC meeting held on 13-14th September, 2021 given as below:

S No	Observations of EAC	Response of PP
1.	Common EIA report submitted through PARIVESH and presentation made before the EAC does not have concurrence from WAPCOS, the EIA consultant for Jetty to incorporate their data in Common EIA prepared by M/s. M.N. Dastur& Co. This is a violation of NABET clause of Plagiarism. Team members' details from WAPCOS have also not been included in the Common EIA report.	1. WAPCOS has given a NOC vide letter WAP/ENVT/2021/158 dated 30/09/2021 2. Name of WAPCOS Personnel who worked for the Jetty project is included in Common EIA.
2.	Cumulative impact assessment is not available on Jetty EIA report uploaded on PARIVESH due to steel plant and that of steel plant due to Jetty in the EIA report.	The additional impact due to Jetty operation would be air pollution due to bulk handling of raw materials, if not controlled. The area wise mitigation measures proposed for controlling the air emissions are given in the following text: Mitigation Measures: Bulk Cargo handling at Jetty During project operation phase, one of the major activity would be handling of the bulk cargoes like Coal (Coking, PCI, Thermal), Anthracite, Limestone, Dolomite, Bentonite, Quartzite. These cargos are potential sources of dust and would contribute to fugitive dust emissions. The ISP would require about 25 MTPA of raw material including 16.5 MTPA of Coal Bearing Raw Material (CBRM), 3.7 MTPA of Fluxes (limestone, quartzite) and 5.3 MTPA of clinker, etc. The CBRM requirement of about 16.5 MTPA would include various types of coal such as, Coking coal, Anthracite, PCI coal and Thermal Coal. The coal cargo would be imported and brought to the captive jetty(ies) via ship from foreign countries. The following management plan would reduce the impact of such emissions on the general environment. The impacts due to dust emissions could be substantially managed by containment and reduction of

S No	Observations of EAC	Response of PP
		emissions. The reduction in the emissions is achieved by continuous spraying of water so that the surface remains moist and the dust gets suppressed. In materials where the water spray would change the characteristics of the material by making it muddy and slushy, foam cover has been successfully used elsewhere. It is proposed to install mechanized handling system and other associated equipment such as hoppers, belt conveyors, stacker cum reclaimers equipped with integrated dust suppression systems.
3.	Sand dunes inside the plant boundary measuring 11.53 ha shall be preserved. However, the point raised by EAC related to "in the vicinity of the project" has not been addressed. Please revise the layout with the sand dunes "in the vicinity" as well.	There is one large sand dune adjoining the project area, apart from few smaller patches. The details of the sand dune area are given below. Total area of sand dune is 80.87 Acres. Area of sand dune in plant area is 16.87 Acres. In addition, sand dunes were also found in the vicinity of the plant site as indicated in the CRZ demarcation map. Area beyond plant area is 64 Acres.
4.	27 million cum dredged sand shall be used to raise the plant level by 6.5 meter. Scheme to dispose balance sand and the sand recovered during annual maintenance dredging shall be disposed offshore at two locations in the ocean. The mechanism to control turbidity due to the dredging in the area has not been furnished.	Dredging of the port area and the approach channel would generate about 35 Million Cubic Meter of sand/Silt etc. About 25 Million would be used for reclamation in a manner so as not to contaminate the surface as well as the creek water. The balance material would be pumped back to the sea and disposed at the designated area determined through a model study. There would be no environmental impact and the dredged product would be used for grade elevation of the plant and port area.
5.	Comprehensive drainage study of the area has not been done. It is simply mentioned that there are two streams passing through the property in Northern and Southern side of the plot. These streams shall be diverted and merged with the peripheral drain designed	2D modelling has been carried out using MIKE 21 Flow Model FM, which a modelling software based on a flexible mesh approach. It is used for flood modelling, estimating the flood depths in the study area. The Hydrodynamic Module used for flood modelling is based on the numerical solution of the shallow water equations - the depth-integrated incompressible Reynolds averaged Navier-Stokes equations. Model Scenario: 1. Simulation Period- 2 days (26-08-2020 to 27-08-

S No	Observations of EAC	Response of PP
	to carry cyclonic run off. No details related to the quantity of approximate drainage in the catchment, the size of diverted drains and peripheral drain that would handle this run off have not been furnished as required under comprehensive study asked by EAC in its meeting held on 18-19th May, 2021. The flood modelling study has been carried out by DHI for peak rainfall period.	2020) for baseline and proposed condition. 2. Model is performed by considering the existing ground condition for baseline and ground elevation increased by 7.5 m for proposed condition. 3. The maximum precipitation used in the model is 450 mm. 4. The flood plain on the left bank of Jatadhari river (western side of Jatadhari river) has lower elevation when compared with right bank of the river.
6.	Currently 80 % of the Jobra Dam water is drained into the sea as reported by PP. Proposed plant shall draw 98.1 Cusec water from Jobra (PP says), which will reduce the drainage into sea by maximum 10 %. Hence sea water desalination has not been considered from commercial viability point of view and due to high power cost and its implication on climate change. a. Detailed report validating this claim that 80% water is drained into sea has not been submitted. b. Also, the above claim by PP that enough water is available needs to be confirmed by Authorities managing water in the state.	**a. Water availability** **Mahanadi River:** River in central India, rising in the hills of south-eastern Chhattisgarh State. The Mahanadi ("Great River") follows a total course of 560 miles (900 km) and has an estimated drainage area of 51,000 square miles (132,100 square km). Mahanadi passes through the State of Chhattisgarh and Odisha. The river meets the Bay of Bengal near Paradip. The river is perennial and has sufficient water for the various dependent stake holders and the industries The discharge from Jobra barrage in the past 10 years was zero on 11 days (2 in Jan 2011; 8 in Feb 2011 and 1 in Sep 2017), i.e., there was discharge from the barrage for 99.7% of the time. Barring the year 2011, there has never been an incident in the last 11 years, hence, this could be surmised as a one of incident. The daily discharge data from Jobra barrage at 90%; 85%;80% and 75% confidence level shows that the requirement of 98.1 Cusecs of makeup water for JSWUL can be met for the steel plant. Accordingly, analysis of this fairly long term data, it could be concluded that with the above water availability over a long period of time, the requirements of the ISP proposed to be developed by the JSWUL could be accommodated with ease. The Water Resources Department (WRD),

S No	Observations of EAC	Response of PP
	No calculations are available on the cost of desalination vs the CAPEX and OPEX of water withdrawal from Jobra Barrage	Government of Odisha, after analysis of the available data and the projection carried out by them, has permitted the following. **b. Confirmation on availability from Authorities:** WRD is the nodal agency responsible for managing the water resources in the state and based their analysis and projection in the short, medium and long term recommended that. i) Provided in-principal allocation of 117.1 Cusecs of water for setting up of the employment generating steel plant vide letter 2618/WE dated 31st Jan 2018. ii) WRD has further conveyed that the Committee comprising of Department of the Water Resources (DoWR), Industrial Development Corporation, Bhubaneswar, Odisha (IDCO) and JSWUL has finalised the location of intake well for drawl 99.8 Cusecs (revised by JSWUL) of water from Mahanadi near Jagatpur (upstream of Jobra). The above documents from WRD, clearly indicate the availability of 99.8 Cusecs of water from Mahanadi (near Jagatpur) for the proposed ISP. **c. Desalination Plant in-lieu of the water from Jobra Barrage** Based on the requirements of the committee the option of having a desalination plant in place of Jobra barrage water was also examined by comparing installed SWRO systems to meet the drinking water requirements of Chennai and other suburbs. From the comparison usage of fresh water from Jorba barge will save electricity of 34.2 MW Hence, carbon release controlled would be 248,600 t CO2/year.
7.	WHR from Sinter Cooler for preheating of combustion air in ignition furnace has been proposed. No Power recovery as part of energy efficiency has been considered. The benefits of the proposal over the	1. In integrated steel plants, large quantity of process steam is required in Coke Ovens (distillation, purging etc); Blast Furnace (Humidification); Steel Making (Vacuum generation) and Cold Rolling Mil l (Heating applications). 2. Traditionally from an energy efficiency point of view, process steam is generated from low quality waste heat (sensible heat of waste gases) for

S No	Observations of EAC	Response of PP
	provision of power generation from Sinter Cooler Waste Heat have not been given. PP has ignored the suggestions of EAC w/o giving any reason	generation of process steam. In case of power plants, and CDQ (where the temperatures are high) HP steam (> 120 bar) is generated which is then used for power generation. 3. The waste heat in case of sinter cooler is used for generating process steam, which is Blast humidification. 4. JSWUL proposes to use medium pressure steam as "process steam" than convert it to "electrical power", which is more energy efficient. 5. JSWUL, has in addition to the above included a Waste heat recovery from waste gases (temp: 150-160 0C), like EOS which helps in: a) reducing the coke rate by 4-5 kg per ton of sinter. b) ~50% reduction in emission volume with commensurate reduction of gaseous pollution like CO, SO2, dioxins & Furans and dust.
8.	MEROS like technology has been proposed for control of dioxins and furan in Sinter plant. Guaranteed emissions per Nm3 of flue gas based on this technology have not been furnished	1. In Sinter Plants, Dioxins and Furans are formed by de novo reactions, primarily due to presence of oils and chlorides. 2. Dioxins and Furans are volatile compounds which condense on dust particles, which act as nuclei for their condensation 3. The focus of their control of emission is by: a) By reducing the dust emissions (condensed dioxins/Furans on dust) by high efficiency ESP/Bag Filter and b) Adsorption (for non-condensed dioxins & Furans) by activated carbon, anthracite, sodium bicarbonate etc 4. EU-BAT: In Europe, the recommendations are through a combination of Primary Controls i) Stable & Consistent operation of SP

<table>
<tr><th>S No</th><th>Observations of EAC</th><th>Response of PP</th></tr>
<tr><td></td><td></td><td>ii) Raw material quality control (oil content < 0.2%)
Secondary Controls
i) Carbon adsorption
ii) Waste gas recirculation (~50%)
iii) Control of dust emission (Advanced ESP/MEROS type Bag filter)

5. The control of Dioxins and Furans is by a combination of the above measures and normally suppliers of bag filters do not guarantee for the emissions of Dioxins & Furans.

6.The system proposed by JSWUL is designed to guarantee <0.2 ng/Nm3 of Dioxins & Furans in waste gases.</td></tr>
<tr><td>9</td><td>Details of the effluent to be generated from Cold Rolling Mill and mechanism to be adopted for the disposal of hazardous waste from CRM has not been submitted</td><td>The wastewater generated from 2X2.3 MTPA units of CRM is divided into the following three streams for separate treatment in the Effluent Treatment Plant (ETP):

i) Emulsion(oily) water treatment system:
Treatment: Equalisation-PH reduction to separate oil - Oil removal in DAF- BOD Plant for reduction of BOD - Treated water tank

ii) Alkali/Acid wastewater treatment:
Equalisation-pH Correction-Iron removal by pH correction- Clarifier- pH Correction- Treated water tank

iii) Chrome water Treatment:
Equalisation- (SMBS, Acid addition for ORP control)-Precipitation- PSF-treated water tank.

The combined treated water is passed in an RO plant to recover water. The rejects are sent to CETP for further treatment, to ensure Zero Liquid discharge.</td></tr>
<tr><td>10.</td><td>Details of Hazardous wastes from CRM</td><td>
<table>
<tr><th>Sl. No.</th><th>Hazardous Waste</th><th>Generation (annual)</th><th>Disposal Method</th></tr>
<tr><td>1</td><td>Waste Oil</td><td>40 KL</td><td>Sale to authorized re-processor</td></tr>
<tr><td>2</td><td>Used Oil</td><td>20 KL</td><td>Sale to authorized re-processor</td></tr>
<tr><td>3</td><td>Waste Pickled Liquor</td><td>18000 KL</td><td>Treatment in ARP for recycle</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S No</th><th>Observations of EAC</th><th>Response of PP</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>4</td><td>Acid Residue</td><td>300 t</td><td>Treatment in ETP. Salt from ZLD to authorised TSDF</td></tr>
<tr><td>5</td><td>Alkaline Residue</td><td>200 t</td><td>Treatment in ETP. Salt from ZLD to authorised TSDF</td></tr>
<tr><td>6</td><td>Oil-soaked cotton wastes</td><td>160</td><td>Incinerate</td></tr>
<tr><td>7</td><td>ETP Sludge</td><td>1500</td><td>Recycle through Sinter Plant</td></tr>
<tr><td>8</td><td>Oil Skimming Residue</td><td>800</td><td>Incinerate</td></tr>
<tr><td>9</td><td>Spent Ion Exchange resin</td><td>20</td><td>Recycle through coke oven.</td></tr>
<tr><td>10</td><td>Spent activated Carbon</td><td>100</td><td>Recycle through coke oven.</td></tr>
<tr><td>11</td><td>Zinc Dross</td><td>14000</td><td>Sale to authorized re-processor</td></tr>
<tr><td>12</td><td>Filters and filter materials</td><td>100</td><td>Incinerate</td></tr>
<tr><td>13</td><td>Discarded MS container</td><td>3000 Nos.</td><td>Sale to authorized re-processor</td></tr>
<tr><td>14</td><td>Discarded Plastic Container</td><td>5000 Nos.</td><td>Sale to authorized re-processor</td></tr>
<tr><td>15</td><td>Magnetic separator oil slurry</td><td>1400 t</td><td>Incinerate</td></tr>
</table>
An incinerator (1000 kg/d) is proposed to incinerate hazardous wastes,
</td></tr>
<tr><td>11.</td><td>Physical targets of EMPs for socio economic development as per OM of 30th Sept 2020 to be completed @ 196.05 Cr in 4 years have been given. However, EAC recommended to complete in three years. Accordingly, revised action needs to be submitted.</td><td>An amount of Rs 196.05 Cr has been earmarked for addressing the issues raised in the Public Hearing and physical targets has been revised considering 3 years. The details under different heads are given below and the activities are elaborated in the following table;
1. Area Development in villages Rs. 44.25 Cr
2. Medical facilities Rs. 24.00 Cr
3. Education Rs. 6.80 Cr
4. Drinking Water facilities Rs. 20.00 Cr
5. Livelihood improvement of fishermen Rs. 11.00 Cr
6. Solar lamps/electricity Rs. 2.00 Cr
7. Infrastructure Development Rs. 16.00 Cr
8. Eco restoration Rs. 15.00 Cr
Vocational Training Rs. 57.00 Cr</td></tr>
</table>

S No	Observations of EAC	Response of PP
		Total Rs. 196.05 Cr
12.	Nearly 1.3 lakh trees likely to be removed to set up the facility. Scheme to ensure felling of trees to bare minimum and the compensatory afforestation against the felling of trees needs to be submitted. Scheme to ensure felling of trees to bare minimum and the compensatory afforestation against the felling of trees needs to be submitted.	A. A comprehensive plantation is planned under this project of ISP. The details are given below. i) Compensatory afforestation(CA) plan has been approved and plantation has already been done over 745 ha as reported by DFO Cuttack. ii) CA in mangrove area has been carried out in an area of 81.94 ha by DFO Rajnagar iii) Balance CA over an area of 256.751 ha is under implementation by both the DFOs iv) In addition, JSWUSL will bear the cost of regeneration of degraded forest of area 1254 ha as per the scheme prepared by DFO Rajnagar v) Additional 169 ha of forest land adjoining to the project area to be regenerated nearly 33% of project area will be developed under green belt and greenery enhancement with 2500 trees per Ha. B. Felling of trees to be bare minimum: It would be our endeavour to minimise felling of trees and the detailing of the plant would be suitably modified based on the site condition and the type of tree involved.
13	Justification to select 8 Numbers of AAQ monitoring stations on land has been given. Desulfurization of COG and Power Plant flue gases has been proposed and Low NOx burners and DENOX facility using Ammonia has been proposed. On review of DMP in Chapter seven of EIA report, HIRA for NH3 has not been done	The NOx reduction in waste gases from 3x300 MW Thermal Power Plants (CPP) is carried out by the traditional SCR process, using ammonia as a reagent. i)Ammonia storage tanks-2 Nos. Horizontal storage tanks ii)Capacity of each tank-50 tons Liquid storage iii)Location -Near stack of CPP for DeNOx HIRA has been carried out for the ammonia storage The consequence analysis for leakage from ammonia tank was carried out using DNV Phast Lite 7.1. As seen from the model output graph, the concentration of interest (35 ppm) corresponding to the STEL value of Ammonia extends up to a maximum distance of around 620 m downwind. Given the proposed location of the ammonia storage tank, it may be concluded that the impact due to accidental leakage of ammonia would be contained within the plant boundary.
14	The land use pattern for the diverted forest land as	i)No change in status of forest land as per FC ii)No activity started till date

<table>
<tr><th>S No</th><th>Observations of EAC</th><th>Response of PP</th></tr>
<tr><td></td><td>per FC of 10/10/2019 has been given. In this regard, updated status has not been furnished.</td><td>iii)Boundary wall construction to start. Permission received from MoEFCC
<table>
<tr><th>Sl. No.</th><th>Facilities</th><th>Forest</th><th>Non-Forest</th><th>Greenbelt</th></tr>
<tr><td>1.</td><td>Raw material storage & landing yard for Ore & Flux, Iron ore slurry, Thermal coal yard</td><td>52.630</td><td>-</td><td>9.086</td></tr>
<tr><td>2.</td><td>Raw material storage & landing yard for Imported coal, PCI, Lime stone and Pellet</td><td>22.790</td><td>20.073</td><td>7.826</td></tr>
<tr><td>3.</td><td>Iron making plant</td><td>178.310</td><td>2.780</td><td>26.466</td></tr>
<tr><td>4.</td><td>Steel making Plant</td><td>73.305</td><td>-</td><td>9.379</td></tr>
<tr><td>5.</td><td>Rolling Mill</td><td>183.447</td><td>-</td><td>22.349</td></tr>
<tr><td>6.</td><td>Captive Power Plant</td><td>51.330</td><td>-</td><td>8.510</td></tr>
<tr><td>7.</td><td>Disposal Area</td><td>20.740</td><td>-</td><td>3.334</td></tr>
<tr><td>8.</td><td>Water/waste water treatment plants, Treated Waste water holding pond</td><td>60.240</td><td>-</td><td>4.501</td></tr>
<tr><td>9.</td><td>Cement plant</td><td>33.500</td><td>-</td><td>5.024</td></tr>
<tr><td>10.</td><td>Main Admin office and common facilities</td><td>7.680</td><td>-</td><td>1.191</td></tr>
<tr><td>11.</td><td>Railway siding/ Truck Handling & Raw material unloading</td><td>30.820</td><td>-</td><td>4.540</td></tr>
<tr><td>12.</td><td>Captive Jetty</td><td>14.400</td><td>54.177</td><td>22.700</td></tr>
<tr><td>13.</td><td>Supporting Auxiliaries comprising of MRSS, Stores &</td><td>40.630</td><td>0.493</td><td>6.376</td></tr>
<tr><td>14.</td><td>Roads, Parking & drains</td><td>43.894</td><td>3.970</td><td>5.801</td></tr>
<tr><td>15.</td><td>Peripheral Green Belt</td><td>239.720</td><td>13.030</td><td>252.750</td></tr>
<tr><td>16.</td><td>Water Reservoir</td><td>30.255</td><td>15.760</td><td>4.367</td></tr>
<tr><td colspan="2">Total Land</td><td>1083.691</td><td>110.283</td><td>394.200</td></tr>
</table></td></tr>
<tr><td>15.</td><td>Details of sea water requirement for once</td><td>The Integrated Steel Plant (ISP) on the Bank of Jatadhari Muhan, consists of 3 x 300 MW power plant,</td></tr>
</table>

S No	Observations of EAC	Response of PP
	through cooling for a max temperature increase of 5℃ has been given. Maximum 130000 cum/Hr. water shall be required. Water shall be discharged in the sea 2.25 km away from the shore. Details of the scientific assessment carried out for selecting the location of the sea water discharge has not been made available.	using combination of coal and surplus By-Product Fuel gases from the steel plant. Due to the abundance of water in the vicinity, it was considered apt to adopt once through cooling system for the power plant. Accordingly, about 130,000 m3/hour sea water would be pumped into the cooling water circulation system of the power plant and after re-circulation the water would get heated up by 70C to 80C, the hot water would be cooled in the cooling tower to the permissible $\Delta t < 5$ ℃ before getting discharged into the ocean at the out-fall location through a series of diffusors. 1. Locate a Pump house on Piles in deeper water at the end of Jetty No. 1. 2. Pump house on the rubble mound alongside the breakwater, with an intake channel leading to the intake sump form where the cooling water would be pumped to the power plant. Both the alternatives for the intake well discussed above is possible to adopt at the proposed location. However, the final decision on the same would be based on the detailed examination of the site and design of Jetty. Mathematical modelling study, performed to assess and evaluate the effluent dispersion in the surrounding coastal waters. The discharged water from outlet condenser of the power plant is 36 m3/s. The discharged water at the outfall location is included in the model as an isolated source in the immediate coastal environment at the disposal location with an excess temperature in the order of 3-5℃, the dissipation is rapid and over a very small area
16.	Green belt shall be proposed with a tree density of 2500 trees per ha. Plantation shall be completed in 5 years. During discussions it emerged that only 25 % green belt has been proposed inside the plant and balance 8 %	The greenbelt plan is determined based on the following: i) Greenbelt to the extent of 33% of total project area would be maintained ii) Greenbelt: 394.2 ha (Including Jetty) area with a density of 2,500 trees per ha iii) A three-tier plantation scheme would be adopted in

<table>
<tr><th>S No</th><th>Observations of EAC</th><th>Response of PP</th></tr>
<tr><td></td><td>plantation shall be done outside the plant boundary. The land outside does not belong to PP. EAC does not accept this proposal. PP needs to submit revised action plan for green belt development covering 33% of the project area under green belt development with a tree density of 2500 trees per hectare.</td><td>the periphery of the plant
<table>
<tr><th>Plan period</th><th>Area, Ha</th><th>No. of Trees</th><th>Plantation Area</th><th>Tree Species</th></tr>
<tr><td>1st year</td><td>100</td><td>250000</td><td>Along the periphery</td><td>Amaltas, Copperpod, Gamga imli, Indian tulip,Jau, Jarul, Jamun, Kadamba, Kachnar, Khajur, Neem, Peepal, Sisua.</td></tr>
<tr><td>2nd year</td><td>72</td><td>180000</td><td>Along the periphery</td><td>Amaltas, Copperpod, Gamga imli, Indian tulip,Jau, Jarul, Jamun, Kadamba, Kachnar, Khajur, Neem, Peepal, Sisua.</td></tr>
<tr><td>3rd year</td><td>100</td><td>250000</td><td>Avenue plantation and between the shop area</td><td>Bakul, Bougainvillea, Jarul, Joba, Kachnar, Karabi Kadamba, Neem, Yellow oleander.</td></tr>
<tr><td>4th year</td><td>50</td><td>125000</td><td>Avenue plantation and around the slag storage area</td><td>Amaltas, Bakul, Devdaru, Jarul,Joba, Kadamba, Khajur, Kachnar, Karabi, Neem, Tagar, Rangan, Yellow oleander.</td></tr>
<tr><td>5th year</td><td>50</td><td>125000</td><td>In between the shop area</td><td>Amaltas, Bakul, Devdaru, Joba, Kadamba, Khajur, Kachnar, Karabi, Tagar, Rangan, Yellow oleander.</td></tr>
</table></td></tr>
<tr><td>17.</td><td>Plant runoff water shall be treated for TSS and Oil and Grease. The capacity of the treatment plant based on worst case cyclonic scenario has not been furnished.</td><td>The plant layout has been firmed up considering drains all along the plant roads and these drains would lead to 5 Nos. of concrete open channels of size 2.3 m wide and 1.6 m depth to discharge into Jatadhar Mohan river/Sea. It is also proposed to construct 15 Nos. catchpits of size 10 m (length) x 2.5 m (width) x 4 m (depth) to settle the suspended solids. These catchpits would also be equipped with oil skimmers to remove Oil & Grease from the surface run off. The water impounded in the catchpit would be pumped to the raw water treatment plant for utilization to the extent possible and the balance storm water would be drained</td></tr>
</table>

S No	Observations of EAC	Response of PP
		to the Jatadhar Mohan River/Sea.
18.	Sodar Study Details have not been furnished	SODAR study details submitted
19.	Wet lands have been described and marked by PP on map. However, conservation plan to protect the wet land has not been made available by the proponent.	The Wetlands (Conservation and Management) Rules, 2017 define wetland as - "an area of marsh, fen, peatland or water; whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters, but does not include river channels, paddy fields, human made water bodies/ tanks specifically constructed for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation purpose.". Coastal wetlands include mangrove, coral reefs, mudflats and estuaries, act as a physical barrier that limit the damage of storm and tidal surges. In the study area diameter of 10 km a small patch of natural coastal wetland was observed. The Wetlands Division of the Ministry of Environment, Forest & Climate Change (MoEF&CC) have identified the site as "Other Wetland Area". **Mangrove system** The seaweeds, sea grass and mangroves ecosystem was studied by National Institute of Oceanography, Regional Centre, Mumbai at three intertidal transect along with other nearby areas perpendicular to the shores for evaluating marine vegetation. No seaweeds were observed in the study area during the study period. A small patch of seagrass species Holodule sp. of family Cymodoceaceae was observed in the intertidal region near the mangroves. Mangroves are absent at the three intertidal transects of the study area. Only a scanty patch of Avicennia spp was observed on the opposite shore about 2 km away from the proposed location was observed. **Wetland Conservation Plan:** The identified wetland is at about 3 km from the site. No construction activity is proposed near the wetland. The probable impacts on the wetland can be due to;

<table>
<tr><th>S No</th><th>Observations of EAC</th><th>Response of PP</th></tr>
<tr><td></td><td></td><td>a) Change in the natural hydrological regimes that will change or alter the availability of the water.
b) Water pollution

As a part of the mitigation measure and conservation of the wetland JSWUL has proposed the following:

a) An open pile construction the jetty is proposed. This will permit unhindered flow of water.
b) Major construction activities will be carried out on the land away from the creek to avoid spillages into the water body. The wash off from the construction site will be collected in the drains and treated (settling of mud) before released to the estuary.
c) No solid/ municipal waste will be released into the creek/ water body. MoU will be signed with competent authorized agencies to collect and disposed solid waste (municipal, hazardous etc.) as per the Solid Waste Management Rules, 2016 (SWMR).
d) Effluents and domestic wastewater will be treated in the ETP and STP to meet the guidelines of the CPCB and SPCB and released at the location as identified by DHI through the model study.
e) Oil Spill Contingency Plan will be prepared as per the requirement of National Oil Spill – Disaster Contingency Plan (NOS-DCP) and will be available at the jetty. Inflatable booms, containment booms, portable pumps, oil skimmers, absorbent pads and oil spill dispersants will be procured and stored at the Jetties to contain dispersion of oil in case of spills.</td></tr>
<tr><td>20.</td><td>Details of access road to NH5 and NH 12 have not been described along with impact of project on the roads</td><td>The details of four roads connecting the proposed steel plant to the nearest state and highways and the Impact assessment of vehicular movement for raw materials and finished products has been addressed in Section 4.5.4 of the Common EIA Report

The Projected Average daily traffic (ADT) in study area is given below.
<table>
<tr><th>Vehicle type</th><th>NH 55 connector</th><th>SH 12 connector</th><th>NH 53 connector</th><th>Surge Road</th></tr>
<tr><td>HMV</td><td>3352</td><td>1064</td><td>865</td><td>747</td></tr>
<tr><td>LMV</td><td>838</td><td>266</td><td>465</td><td>611</td></tr>
<tr><td>Total</td><td>4190</td><td>1358</td><td>1330</td><td>1330</td></tr>
</table>
</td></tr>
</table>

S No	Observations of EAC	Response of PP
		MSA | 91.4 | 29.6 | 29 | 29 The roads shall be implemented as below. i) All internal roads shall be of Concrete roads designed for 25-year life and to carry heavy loads ii) All connecting roads shall be of bituminous type designed as per IRC guidelines taking into account the msa value corresponding to the type and number of vehicles proposed in the roads
21	Impact of thermal discharge into sea and mechanism to control the Delta T within 5 Degree C has been furnished. Details of scientific study carried out in this regard to be submitted.	Mathematical modelling study, performed to assess and evaluate the effluent dispersion in the surrounding coastal waters.
22	Committee recommended to seek the views of Odisha Pollution Control Board and the project proponent	1. EAC taken note of the public representations received 2. Views of Odisha Pollution Control Board and the project proponent. a) **Views of OSPCB**: Sent vide letter no. 15836/IND-II-PH-810 dated 11/10/2021 b) **Views of Project Proponent**: Communicated vide letter no. JSW/U/O/2021/172 dated 23/09/2021

52.9.26 Details of the additional studies carried out as a part of the Environmental Impact Assessment (EIA)/ EMP study, the various studies undertaken are as follows;

i. LTL/HTL Demarcation and CRZ Mapping Study by NCSCM, Chennai (MoEFCC, Govt. of India).
ii. Marine Biodiversity Impact Assessment and Management Plan by CSIR-NIO, Mumbai.
iii. Risk Analysis and Disaster Management Plan by WAPCOS Ltd. (Govt. of India Undertaking).
iv. Met-oceanic (Wave, Current, Tide) and Geophysical (Bathymetry, Sub-bottom profile) Survey by M/s Indomer Coastal Hydraulics (P) Ltd.
v. Geotechnical survey was carried out by M/s COMACOE, Mumbai.
vi. Mathematical Model Studies (marine discharge of treated wastewater; storm water management; Shoreline studies) by M/s. DHI India Ltd.
vii. Traffic Management Study by M/s. M N Dastur & Company (P) Ltd. [MND]

viii. Navigation Simulation Study by HR Wallingford, UK.
ix. Sodar studies for assessing the mixing heights in the proposed project area by MND
x. SIA study carried out by Starr Organization, Bhubaneswar.

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

S No	Date	Issues raised
1	25/01/2022	• Conduct comprehensive studies to understand the existing pollution load and carrying capacity of the region around Paradip Port and Dhinkia village. • A recently released report by CREA titled Health impacts Assessment and Assessment of the EIA report of Integrated Steel Plant, JSW Utkal Steel Limited, Odisha, India by Sunil Dahiya and Lauri Myllyvirta expose the serious short comings in the EIA report for the project leading to fraudulent representation of actual environment impact due to the project, as well as serious health impacts of the proposed project are highlighted in this report.
2	27/01/2022	• To give scrutiny to the recent submission of additional study reports by JSW Utkal Steel Limited based on following points 1. Public hearing was not conducted according to stipulated procedure. 2. Non-settlement of forest rights and questionable forest clearance 3. Water requirement and source sustainability 4. Health impacts
3	26/01/2022	• Human rights violations by the police at the behest of the Odisha Government which on acquiring the land for JSW • JSW project will destroy the local communities' lives and sustainable livelihoods from betel and fruit cultivation and prawn culture
4	27/01/2022	• Social Impact Assessment • Coastal Area Violation • Placed two containers at coastal area and started office • Made temporary roads by damaging sand dunes
5	28/11/2021	• There has been tremendous movement of police forces (more than 20 platoon) and some heavy construction activity has been envisaged on the proposed area making the situation tenser and unstable.
6	27/01/2022	• To stop adding any more polluting industries to the area near Paradip Port and Dhinkia. • The EIA compares the three-season average to daily PM_{10} levels. This comparison is skewed as there is a significant difference between the aforementioned data points. While the

S No	Date	Issues raised
		daily PM_{10} standard is 100 µg/m^3, the annual standard is 60 µg/m^3. Therefore, seasonal and cross-seasonal averages should always be compared to annual rather than daily standards.
7	25/01/2022	• The EIA report misses out on accounting for incremental $PM_{2.5}$ from the plant operation. Air pollution dispersion model which doesn't account for secondary particulate formation, $PM_{2.5}$ formed from SO_2 and NOx emissions.
8	22/01/2022	• Misleading and Incomplete data in Integrated EIA and in response to the EDS details etc.

52.9.28 The representations referred at para no. 52.9.27 have been made available to the project proponent. The response given by the proponent are given as below.

Sl. No.	Concerns	JSW USL's Responses
Reply to Representations dated 25/01/2022 (Sl. No. 1), 27/01/2022 (Sl. No. 6) and 25/01/2022 (Sl. No. 7) of table at para 52.9.27 above		
1.0	**Shortcomings in EIA report:**	
1.1	The EIA compares the three-season average to daily PM10 levels. This comparison is skewed as there is a significant difference between the aforementioned data points. While the daily PM10 standard is 100 µg/m3, the annual standard is 60 µg/m3. Therefore, seasonal and cross-seasonal averages should always be compared to annual rather than daily standards.	The guidelines issued by MoEFCC for Integrated Steel Plant mandate monitoring of base line data and impact assessment based on the one season data [summer or winter]. The common EIA report has been prepared considering the one season data and therefore, daily avg. values of pollutant have been computed. In view of this, only one season data has been taken into consideration and three seasons data have not been considered as it is not mandated in the ToR of EIA. Accordingly, 24 hrs daily avg. values have been compared.
1.2	As part of the EIA report, 50 readings per station were collected across seasons to assess ambient air quality. According to the CPCB protocol, 50 or more days of monitoring in a year should be compared to the average annual concentration (CPCB, 2020).	One season [12 weeks] data is to be collected as per ToR for Integrated Steel Plant.
1.3	The EIA report misses out on accounting for incremental PM2.5 from the plant operation. These emissions are the most harmful part of the particulate pollution and should be integral to Environment and Health Impact Assessments	The emission from the process stack are monitored as total dust expressed in mg/Nm3. To carry out the modeling for PM10 and PM2.5, the emission data from the individual stack need to be monitored. Currently, there is no authenticated data for PM2.5 from the stack for carrying out dispersion modelling for PM2.5. The PM values indicated constitute of PM10

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		and PM2.5 and therefore, the impact of 2.5 is already included in the ground level concentration
1.4	The EIA report also misses out on accounting for Mercury (Hg) or any other heavy metal from the plant operation, which should have been reported in the Environment and Health Impact Assessments.	The NAAQ standard does not stipulate Mercury in Ambient Air and therefore, the Mercury emission has not been considered. Moreover, the Mercury emission from ISP is insignificant. Other heavy metals such as As, Ni and Pb as mandated in NAAQS have been monitored.
1.5	The EIA report uses an air pollution dispersion model which doesn't account for secondary particulate formation, PM2.5 formed from SO2 and NOx emissions. These formed secondary PM2.5 make up a more significant component of the total PM2.5 emission load from any fossil fuel combustion facility (Dahiya & Myllyvirta, 2021). Accounting for secondary particulates make the predicted PM levels from the plant multiple times higher (CREA, 2021). Therefore, the ignorance of secondary particulate formation leads to a significant underestimating of the total pollutant concentrations.	The secondary emissions are formed over a longer period of time from. The formation of secondary pollutant depends upon serval other parameters like moisture, Temp, locality etc. There is no accredited dispersion model for predicating the secondary emissions from the ISP. The accounting of secondary pollutants are not mandated in ToR as it required longer period of time for assessment. EIA report preparation is a pre-project activities to be completed with one season data.
1.6	Lime Kiln, Cement Plant, and a few other combustion sources have entirely omitted data on NOx emissions without any explanation. Combustion of any fuel produces NOx emissions, which should be accounted for to ensure environmental impact assessments are comprehensive and nuanced.	Lime kiln proposed in this project utilizes the mix gas as fuel and emissions are mainly PM and insignificant amount of NoX. This has been confirmed from the operating data of kiln of similar capacity of other units of JSW. The proposed cement plant is for production of puzzalona cement from fly ash and slag which are generated as waste in steel making. Only grinding and mixing unit are planned. Since burning of fuel is not there and hence NOx from Cement Plant has not been considered.
2.0	**High Emission Load in Critically Polluted Area**	
2.1	Paradip, Jagatsinghpur (~5- 10 km aerial distance from the proposed ISP site) is known as one of the most polluted geographies in India and has been classified as a severely polluted area under the Comprehensive Environmental Pollution Index (CEPI) (OSPCB, 2020). The average PM10 and PM2.5 levels in 2018 for Paradip area were respectively reported at 119 (36-317) ug/m3 and 48 (16-161) ug/m3 as monitored by the	The proposed project site is 12 Km SE of Paradip and is not a part of any Severely Pullulated area as notified by CPCB. The impact assessment has been carried out, based on the present level of the pollutants in the study area.

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	Odisha State Pollution Control Board, which are higher than the prescribed annual permissible limits of 60 ug/m3 and 40 ug/m3 for the pollutants.	
2.2	The total emission load was at 12,700 kg/day for PM; and 43,600 kg/day for SO2 for the entire industrial cluster of 15 Red category industries in the area at Paradip. On the other hand, the emission load from the proposed ISP is estimated at ~25,800 for PM and ~31,900 kg/Day for SO2, respectively, Making the project a highly polluting source within the same district. The above-presented data highlights that:	The values indicated are max allowable emissions as applicable for ISP. However, the actual emission will be much lesser due to adaptation of state of art technologies like Meros, High Efficient back filters/ESPs, flue gas de-sulpherization in Sinter and Thermal Power Plant in addition to coke oven gas de-sulpherisation.
2.3	The proposed project site is just 5-10 km away from the already severely polluted area of Paradip and receives pollution from the region resulting in already high air pollution levels at the proposed project site as reported in the EIA report and mentioned in the earlier section.	The replies are given at S. No. 2.2.
2.4	The emission load of the proposed plant will be ~2 times the emissions for the entire cluster at Paradip for PM and 2/3rd for SO2, which means that the air quality will deteriorate further, resulting in severe health impacts and extension of the intensity and geographical reach of already existing CEPI area in the Jagatsinghpur district.	The replies are given at S. No. 2.2.
3.0	**Health Impacts:**	
3.1	The air pollutant emissions would be responsible for an estimated 94 deaths per year (95% confidence interval: 65 - 129). Air pollution would also lead to a projected 180 emergency room visits due to asthma, 160 preterm births and 75,000 days of work absence per year. Additionally, this is to be noted that the affected villages in Dhinkia Charidesh has a population of more than 22,000 people who will be forced to bear the brunt of dangerous cumulative emissions of greenhouse gases along with scarcity of clean drinking water. Hence, we demand the withdrawal of the proposal of JSW Utkal Steel Limited's proposed project site near the Paradip port in Jagatsinghpur district, Odisha based on the inadequate and fraudulent EIA report.	The health impact assessment is not a part of EIA as per ToR as its requires longer period of time. The health impact assessment model used by CREA is primarily for thermal power plant. It may be noted that the emissions from the thermal power plant and other steel plant operations are in variance and therefore, this model may not be applicable in Indian conditions. Further, it may be noted that the proposed Thermal Power Plant utilizes a combination of de-sulpherized fuel gas and coal leading to substantial reduction in pollutants emissions. Thermal Power Plant will also have De-SOX and De-NOX technologies to further reduce the emissions.
3.3	We also demand an independent assessment based on understanding the comprehensive environment and health impacts of the	This is not prescribed in approved ToR.

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	proposed project on the surrounding areas including human settlements to be carried out before proceeding any further.	
Reply to Representations dated 27/01/2022 (Sl. No. 2) of table at para 52.9.27 above		
1.1	The Public hearing not conducted according to stipulated procedures; According to the Community members, the two public hearings conducted on 20th December 2019 at Gadakujnga by the State Pollution Control Board, Odisha upon the application of JSW Utkal Steels Limited to obtain Environment clearance from the ministry of Environment, Forest and Climate Change did not adhere to the procedure stipulated for obtaining the environment clearance for integrated and interlinked projects. In contrast to what is stipulated under the Office Memorandum (OM) dated 24-12-2010 (No-J-11013/41/2006IA.II (I), it appears that the components of an integrated and inter-linked projects were selectively clubbed and broken up to bypass the detailed scrutiny and comprehensive assessment by all applicable Expert Appraisal Committee (EAC). The OM also mandates holding of the Public Hearing of each component of such an integrated and inter-linked project. Moreover, required information was not made available in the local language. Consequently, the necessary public hearings are required to be re-conducted following due procedure as per the provisions of EIA Notification, 2006.	**In line with the guideline of Public Hearing issued by MoEF & CC, a common EIA has to be prepared and public hearing has to be conducted for each of the component of the Project**. Accordingly, a common EIA Report and Executive Summary in both Odia and English languages for the interlinked project (ISP and Captive Jetty) was prepared and submitted to the Odisha State Pollution Control Board for the purpose of conducting Public Hearings. Further, all necessary documents were uploaded on OSPCB website for public review. The date of public hearing was announced in the daily newspaper both in Odia and English. The EIA reports were provided to all designated office as prescribed by Odisha State Pollution Control Board. The Public Hearings for ISP and Captive Jetties was conducted on 20.12.2019 at Gada Kujang adjacent to the project site under the Chairmanship of Dist. Collector, Jagatsinghpur as per the provision of EIA Notification. Therefore, the entire public hearing process was conducted as per procedure laid down in the EIA Notification.
1.2	**Non-settlement of Forest rights and questionable Forest clearance:** As most part of the land sanctioned for the steel plant in Jagatsinghpur district is officially classified as forest land and significant documentary and oral evidence has indicated the presence of forest dwelling Scheduled Tribe (ST) and other traditional forest dwellers in the proposed forest area , it is imperative that the rights and claims of the affected communities under FRA, 2006 are settled and consent of the affected villages via Gram Sabha resolutions is secured before advancing any project. On several occasions in the past, , the Gram Sabhas of the affected area have passed majority resolutions against	The MoEFCC has already examined the issue for the earlier project proponent prior to the grant of final forest clearance dated 4.5.2011 and also FAC examined the same issue prior to allowing the transfer of the forest clearance to JSW USL. The claim is not tenable.

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	any handover of their lands and community forest resources, which have been routinely disregarded by the Government. Three different official reports i.e. Saxena Committee, the POSCO Enquiry Committee and the Forest Advisory Committee have highlighted the blatant disregard of Gram sabha resolutions and other statutory rights under FRA, 2006 by the State Government. Obtaining the consent of Gram sabha before diverting Forest land is a statutory requirement. Failure to do so will entail liability upon the government under FRA as well as Scheduled Caste and Scheduled Tribes (Prevention of Atrocities Act 1989. Against this backdrop, the accordance of Forest Clearance to JSW by MoEF & CC on 16th October 2019 is highly questionable, and subject to revocation and reconsideration in line with statutory and legal provisions.	
1.3	**Water Requirement and source sustainability:** According to the EIA Report for the Integrated Steel Plant, power and cement plant prepared by JSW Utkal Steel Limited, water needed for operations is supposed to be brought from Mahanadi river through a 87 km long pipeline- in spite of rising evidence that this river is already water stressed. Environment ministry's K Roy Paul Committee report, which was set up to review the viability of the steel plant and port of M/s POSCO was advised to look for other sources to augment water availability. The Committee had also recommended that a Source Sustainability study of water requirement' be carried out . Respective through information and analysis is missing in the EIA report of JSW Utkal Steel Limited and therefore remains unclear , from where and how the necessary water supply is supposed to be ensured.	Based on the recommendation of the K Roy Paul Committee report, the water resource department of the Govt. Of Odisha conducted a detailed water availability study at Jobra Barrage. Based on the report findings, WRD allocated 117.3 Cusecs of water from Jobra Barrage and based on this allocation, the MOFCC accorded the Environmental Clarence to the earlier proponent (POSCO). The water requirement for JSW Utkal Steel is estimated at 98.1 Cusecs of water from Jobra Barrage which is less than the earlier allocation made to POSCO. Hence, the question of sustainable water availability does not arise.
1.4	**Health Issues:** The proposed project site is in close vicinity to an already severely polluted area of Paradip and is already impacted by high air pollution levels. Due to the anticipated massive additional emission load of the proposed JSW Utkal Steel Limited, the air quality is expected to deteriorate further, resulting in severe health impacts. As the area is densely	The replies are given at S. No. 3.1

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	populated, air pollutant emissions would cause numerous additional deaths per year., increase cases of asthma as well as preterm births and would cause thousands days.	
A	EAC Infra 2 had asked to provide a No Objection Certificate (NOC) from Paradip Port. However, respective information is not provided for in the revised EIA Report by JSW Utkal Steel Limited.	The proposed captive Jetty is beyond the port limit of Paradip Port and therefore, seeking NOC from Paradip Port Trust is not applicable.
B	As numerous recent media reports show, there has been growing and brutal police repression, severely injuring numerous people (including women and children), which made villagers unable to go to their place of work and access livelihood resources. Several complaints of Human Rights violations were already filed in that regard at the Odisha High Court as well as before the National Human Rights Commission. It is commendable to know that the Orissa High Court issued directions to the Home Department and the Jagatsinghpur district administration to submit status report on the matter. It also directed to immediately stop police excesses and ensure villagers free movements to ensure essential provisions.	Three PILs have been filed where the Hon'ble High Court has issued notice to the State Government only in one case. All these PILs have been posted to 31st January 2022. Filing of PILs does not intervene in the process of grant of EC.
C	Diversion of Forest land and Community resources like trees and Betel vineyards on which villagers, a majority of whom are marginalized groups like Dalits and Adivasis, are directly dependents has thereby negatively impacted their ability to secure adequate food and sustain themselves. Forcible eviction of people is tantamount to depriving them of their means of subsistence and violating their right to adequate food and nutrition.	Half of the government forest land was made encroachment free by paying compensation by the erstwhile project proponent in 2013. To initiate the encroachment removal process for JSW USL project, the district administration has fixed the R &R Compensation vide its proceedings dated 10.11.2021 subsequent to a collaborative discussion with the PRI members and villagers. The betel vine removal process started by the district administration in December 2021 after obtaining individual consent from the betel vine owners.
D	The inhabitants of Dhinkia, Gobindpur, Nuagaon, Bayanalkandha, Polang and Nolia Sahi villages have long struggled to secure their lands and livelihood and their situation is likely to worsen if their land, a vital livelihood resource for them, is transferred to JSW Utkal Steel without addressing underlying Human Rights concerns and settling existing legal claims as per statutory procedures. It is extremely important to ensure that their basic human rights, including the right to food and	Besides providing adequate and acceptable R&R Compensation to Betel vine owners, the project proponent provides financial assistance to the left out ration card holder families of the land losing villages. During the village meetings, a concern was raised by the villagers to provide engagement to one member of each ration card holder family to continue with the livelihood resources. In this regard, it was proposed by the project proponent that

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	nutrition, are fully realized and restored. India is a state party to the International Covenant on Economic, Social and Cultural Rights under which the right to adequate food is enshrined as fundamental right. The Indian government is thus duty bound to respect, protect and fulfil the obligations deriving from this Covenant.	1. A Door-to-Door survey will be conducted in the land losing villages to identify the eligible persons for engagement. 2. To map the gap and to derive the required level of training. 3. The project proponent would try to provide engagement to the eligible one member of the ration card holder family anywhere in India, in any of its factory/plant, either directly or indirectly, or under any agency or any of the establishment. By this, engagement can be given to the people even prior to commencement of construction.
Reply to Representations dated 26/01/2022 (Sl. No. 3) of table at para 52.9.27 above		
1	Incident dated 08.12.21 & 12.01.2022	Deployment of police is administration's decision to protect villagers. JSW has nothing to comment.
2	Concern on local communities lives and sustainable livelihoods from betel cultivation and prawn culture.	By proceedings dated 10.11.2021, this issue has been vividly dwelt with. This proceeding provides for compensation against betel vine and prawn cultivation, also for list of CSR activities for better standard of living of the people and to ensure livelihood, this proceeding provides for scope of engagement to the ration card holder families. The modus of engagement is described as above.
3	Local Gram Sabhas have not consented to the JSW project in their jurisdiction which is requirement of EC.	EIA Notification for 2006 does not prescribe for any consent in any form of the Gram Panchayat. It only prescribes for conducting the Public Hearing to invite the concern of the people and give a scope to the project proponent to address the same.
4	Violation of Forest Rights Act, which are yet to be granted to the local people and communities merely to facilitate the acquisition of the land for JSW.	The issue of the FRA was examined by the MoEFCC prior to the grant of final clearance vide letter dated 4.5.2011 and further this issue has been examined by FAC prior to allowing transfer of forest clearances. So, this allegation is baseless.
5.	A public hearing was held in Nov, 2021 for the Captive Thermal Power Project, which saw strong protest by the local people.	The public hearing was conducted on 20.12.2019 for the ISP and Captive Jetty. There was no such public hearing in November 2021 as alleged.
Reply to Representations dated 27/01/2022 (Sl. No. 4) of table at para 52.9.27 above		
SIA study for EIA		
1.	The agency STARR (Society for training action research & rehabilitation) that carried	SIA is a prerequisite for acquisition of private land under the Land Acquisition Act 2013

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	the SIA study is not a registered agency	read along with Orissa Rules, 2016. So far as the JSW USL is concerned, the extent of private land is 2.26 acre which will be purchased directly. So, there is no requirement of SIA. However, the Honorable members wanted to know the demographic and socio-economic scenario of the project area for which STARR was engaged. Nonetheless, this is an accredited agency of the Nabakrushna Choudhury Institute to conduct SIA. Subsequent to the issuance of proclamation, Xavier Institute of Management has been asked to carry out the socio-economic survey as warranted under Odisha R & R Policy. The District Collector has approved the agency to do the same.
2.	Photos shown in SIA study report are not from SIA meetings	Information furnished based on the survey conducted among the displaced families.
3.	The meetings with Collector, Tehsildar, BDO, PRI members, Sarpanch, Teachers, etc. mentioned in the study report never took place.	
4.	Demographic details of affected population in the SIA study are contradictory to State data - Annual income report & SS schemes	
5.	Information provided in the SIA report is false.	
Coastal Area Violation		
1.	Encroached the coastal zone & started office with 2 containers & 300-400 police force with temporary camp.	The Containers has been placed beyond the project area. Maintaining law and order situation, is the responsibility of Police administration and the project proponent refrained from commenting on the same.
2.	- Damaged sand dunes & made roads -	False allegation. No construction has been started at site.
3.	Demolished the maximum & larger part of sand dunes	
4.	Cut down the flora & bushes along the coast prior to EC for road construction	
5.	Applicable schedules under EIA 2006 shall be mentioned. PP mentioned Metallurgical industries, Cement Plants, Thermal Power plants, Coke oven plants, ports, harbors, etc. to EDS- These come under Red category as prescribed by MoEFCC – Deliberate omission of this fact in PH	The proposed project is an integrated steel plant where regeneration of power is a mandatory requirement and cement grinding and mixing unit is for utilization solid waste generated within a steel plant. Since steel plant is a complex with multiple units operation like Coke Oven, Sinter Plant, Pellet plant, Blast Furnace, Basic Oxygen Furnace,

Sl. No.	Concerns	JSW USL's Responses
		Lime Calcination Plant, Mills, Power Plant etc. Traditionally, integrated steel plants apprised by EAC Industry-1.
6.	Not taking into consideration of other polluting industries in the area	Cumulative impact assessment is not part of ToR of EIA.
Public Hearing on 20.12.2019		
1.	Allegations of fabricated representations by JSW. Enquiry of allegations	The Public Hearing was conducted in a transparent manner wherein opportunity was given to everyone for expressing their opinion. The complete event has been video-graphed and is available with MoEF. The proceedings have been prepared by the Odisha State Pollution Control Board independently.
2.	False & fabricated written representations machinated by PP sent for EAC	False Allegation
Surface Water		
1.	Final copy of water withdrawal permission pending. PP has not complied to Water dept cess, requisite fees & Form J	The agreement with the Water Resources Department will be executed prior to the drawl of the water.
2.	Huge surface water allocation to PP in the face of Water unavailability, drought like situation in Jagatsinghpur	The water has been allocated by the Department of Water Resources of the Odisha government considering the surface water available at the point of drawl.
Consultative Meetings		
1.	False & Fabricated- Status of R&R	Prior to commencement of encroachment removal activities from the government land, the District Collector initiated the discussion on R &R: Quantum and Scope with all the stakeholders. On 10.11.2021, the first meeting was held at the Collectorate followed by four more meetings at the Panchayat Office of three Gram Panchayats namely, Gadakujanga, Nuagaon & Dhinkia. And one more meeting was held in village Gobindpur. The meetings were attended by the villagers, PRI members, the project proponent, local MLA, District Collector & SP. The R &R compensation was finalized in the proceedings dated 10.11.2021. This has been widely accepted by villagers and after that people offered their betel vines voluntarily to vail the additional bonus of Rs. 50,000 along with betel vine compensation calculated at the rate of Rs. 17.5 lakh per acre.
2.	No mention of R & R in the collector's letter, misleading the public	
3.	Invitees were hand picked	
4.	Meeting held on 10.11.21 was failure but the meeting proceedings in support of PP	
5	No communication on purpose of the meeting dated 10.11.2021.	
6	List of attendees of 3 panchayat getting affected by the proposed project is questionable.	
7	Opposed by villagers of 3 panchayat and villages in meeting held on 10.11.21.	
Forest Clearance		
1.	Clarification on transfer of FC from POSCO India to JSW Utkal	The final forest clearance was accorded for the erstwhile project of POSCO on 4.5.2011. JSW USL applied for transfer of the forest clearance which was affirmatively recommended by IDCO and the State
2.	Or, IDCO to JSW	
3.	Can IDCO be considered as User Agency from 2011 to 2019	

Sl. No.	Concerns	JSW USL's Responses
4.	Validity of FC	government to MoEFCC. FAC examined the proposal of JSWUSL and recommended for transfer of the forest clearance. MoEFCC allowed the transfer of forest clearance vide letter dated 16.10.2019 followed by which the reason order was passed by the state Forest Department vide letter dated 30.10.2019. The said order was published in Odia and English Newspapers for wide dissemination.
5.	Is lease transfer as per 2.8 of FC Act vis-a vis transfer of FC approval as per 5.1 amended FC Act has been considered during transfer of FC	
6.	Why PP in its forms applied to the MoEFCC did not mention about the final FC granted on 30.10.19	
Securing of Land		
7.	Permission for fencing the project site without consultation with REAC	Considering the peculiarity of the site, lose sandy soil and to keep the land free from encroachment, MoEFCC allowed fencing of the site using pre-fabricated structures. This is temporary in nature. No other construction activity has been started at site. No sand dunes have been damaged in the area.
8.	Floating of Tender dated 29.06.21 for Fencing with prefab structures by IDCO before obtaining the permission of MoEFCC.	
9.	Construction activities prior to EC	
10.	Construction of roads by damaging sand dunes	
11.	Violation of OM dated 19.08.2010	
12.	JSW with involvement of police force is forcefully demolishing betel vines	The betel vine owners are voluntarily offering to remove the betel vines to avail the additional bonus and R & R Compensation. There is no involvement of cohesion on part of the betel vine owner.
13.	14th Jan incident	
14.	Police Atrocity	
15.	3 PILs filed in HC where PP is a party	Three PILs have been filed where the Hon'ble High Court has issued notice to the State Government only in one case. All these PILs have been posted to 31st January 2022. Filing of PILs does not intervene in the process of grant of EC.
16.	Impact on existing drainage system, water bodies & local habitat by elevating apprx 1300 ha upto 6.5 m has not been clarified	Detailed storm water , drainage study has been conducted through DHI and based on the model study Storm water drain network will be constructed for evacuation of storm water even during the cyclone
17.	Presence of wildlife & endangered species to be confirmed by the Forest Dept.	The proposed project area does not witnessed any endangered species (Flora and fauna)
18.	Effect on shoreline erosion & coastal instability	Details shoreline study has been conducted by DHI and the shoreline management plan is included in the Common EIA Report
19	Violation of FRA	The MoEFCC has already examined the issue for the earlier project proponent prior to the grant of final forest clearance dated 4.5.2011 and also FAC examined the same issue prior to allowing the transfer of the forest clearance to JSW USL. The claim is not tenable.
20	Setting up of new project near highly polluted	The proposed project site is 12 Km SE of

Sl. No.	Concerns	JSW USL's Responses
	area	Paradip and is not a part of any Severely Pullulated area as notified by CPCB. The impact assessment has been carried out, based on the present level of the pollutants in the study area
21	The 3 affected panchayats & more than 50,000 people nearby relying on betel, agriculture, fishing will be affected	JSW will provide the fishing Jetty to the fishing community at the location to be decided by the community. Access to the sea will be ensured.
22	Affecting the livelihood of fishing community	-do-
23	Request for another PH due to modification of EIA/EMP	Public Hearing have been carried out as per the EIA Notification, 2006 based on the draft common EIA Report. The final EIA Report was prepared by incorporating the proceedings of the public hearing and submitted to MoEFCC. Hence the question in unwarranted
24	Approval of HLCA without signing of MoU	There is no practice of signing of MoU after 2012.
Reply to Representations dated 28/11/2021 (Sl. No. 5) of table at para 52.9.27 above		
1.	Seeking information on How permission can be granted for heavy deployment of police and construction work before the grant of EC & no such permission has been reflected on the website	Deployment of police is administration's decision to protect villagers. JSW has nothing to comment.
Reply to Representations dated 22/01/2022 (Sl. No. 8) of table at para 52.9.27 above		
01	Both Industry-1 and Infra-1 EACs would have pressed upon M/s JSW Utkal to carry conduct integrated EIA. Urge not to accept post facto assessments and repeated misuse of the provisions of the EIA notification and award a company disrespectful of the EIA notification with an environmental clearance.	As per the office memorandum dated 24.12.2010 of MoEFCC the respective EAC will consider this sector specific proposal based on the common EIA Report and will make their recommendation relating to that particular component. Accordingly the common EIA Report has been prepared and submitted to MoEFCC
02	**Misleading and Incomplete data in Integrated EIA and in response to the EDS details sought by EAC:** "Water body area is going to be encroached upon by the ISP".	The Integrated Steel Plant is not encroaching into the water bodies and this has been confirmed through KML file and the CRZ Map duly certified by NCSCM, an nodal agency of MoEFCC
03	**Illegality of a Post Facto Integrated EIA:** The project proponent has submitted a fresh Form 2 and a completely new integrated EIA report, which is being appraised by the EAC. This is not in consonance with the procedures mandated under the EIA notification, 2006 reiterated through judgments of the Supreme Court (SC).	As per the office memorandum dated 24.12.2010 of MoEFCC the respective EAC will consider this sector specific proposal based on the common EIA Report and will make their recommendation relating to that particular component. Accordingly the common EIA Report has been prepared and submitted to MoEFCC

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	SC has emphasised that the need for an integrated EIA following the issuance of ToR and prior to public hearing (PH).	
04	**Extraction of water from Jobra Barrage against the caution of environment ministry committee report:** K. Roy Paul committee report which had observed that "Therefore, adequacy of the water available for the project needs very close scrutiny. The Committee came to know that the State Water Resources Department has advised POSCO to look for other sources of to augment water availability". Further, the committee had also recommended that a "Source sustainability study of water requirement "be carried out. This has not been done so far.	Based on the recommendation of the K Roy Paul Committee report, the water resource department of the Govt. Of Odisha conducted a detailed water availability study at Jobra Barrage. Based on the report findings, WRD allocated 117.1 Cusecs of water from Jobra Barrage and based on this allocation, the MOFCC accorded the Environmental Clarence to the earlier proponent (POSCO). The water requirement for JSW Utkal Steel is estimated at 98.1 Cusecs of water from Jobra Barrage which is less than the earlier allocation made to POSCO. Hence, the question of sustainable water availability does not arise.
05	**Public Hearing dated 20.12.2019 Invalid:** First, the document being passed off as an integrated EIA was not available prior to the public hearing. Second, the public hearing was carried on incomplete, false and misleading data which has been repeatedly brought to the notice of the two EACs dealing with different components of this project.	Public hearing (PH) was organized by the OSPCB with the Support of District Magistrate for two Projects of JSW USL viz ISP and captive Jetty at Gadkujang on 20.12.2019. The public hearing was chaired by District Collector, Jagatsinghpur. The PH was conducted as per the procedure laid down in EIA notification 2006 and amendments thereafter. The Common EIA Report as prepared by JSW USL has been received by the board along with the summary for both the projects (in English & local language, Odia). The summary reports in English and local language Odia have been uploaded in the website of OSPCB and were made available at GP offices, Collector's office, BDO office, DIC office and RO Paradeep for the inspection by the general public. The date and the venue of the public hearing was published in one national daily in English i.e. "The Times of India" and one local daily in Odia i.e"Dharitri"30 days prior to the date of public hearing. The Board and District Administration had made arrangement of wide publicity of the report as per provisions of EIA notification 2006 and amendment thereafter. The project proponent deliberated about the both projects in details before the public and the questions raised by the public have been answered during the PH, which have been communicated to both MoEF&CC, Govt. of India and the project proponent. The entire public hearing proceedings has been

Sl. No.	Concerns	JSW USL's Responses
		video graphed and submitted to MoEF&CC, Govt. of India.
06	**No Objection from Paradip Port:** None of the proceedings and information provided by the M/s JSW Utkal indicates that this information has been provided, and therefore the important requirement remains valid and unaddressed.	The proposed captive Jetty is beyond the port limit of Paradip Port and therefore, seeking NOC from Paradip Port Trust is not applicable.

Observations of the Committee

52.9.29 The Committee noted the following:

i. Terms of Reference for the green field project was accorded on 19/03/2019.
ii. Proposal for grant of EC was considered by the EAC in its meeting held on 18-19th May, 2021 and 13-14th September, 2021.
iii. Total land is 1125.284 ha out of which 1069.581 ha land is diverted from forest and rest of 55.703 ha (non-forest land) is allotted by IDCO. Transfer of Stage II FC granted vide letter no. F.No. 8-63/2007-FC dated 16/10/2019.
iv. As per the communication received from Odisha State Pollution Control Board, the Common EIA Report as prepared by JSW USL has been received by the Board along with the summary for both the projects (in English & local language, Odia). The public hearing for the project was conduce as per the procedure prescribed in the EIA Notification, 2006.
v. There are 142 PAFs and R&R shall be carried out as approved R&R plan.
vi. There are no water bodies in the project site. Adjacent to site is Jatadhar Mohan River and Mahanga Nadi flows in the study area. Bay of Bengal is 500 m SE.
vii. There are two sand dunes inside the plant and one adjacent to proposed plant boundary.
viii. About 30 Million Cum of river bed shall be dredged for navigation of cargo and 27 M Cum of this shall be used to raise the plant site level by 6.5 M. Remaining material and also the material dredged during regular maintenance of the Jetty shall be disposed offshore at sites identified through modelling.
ix. 1.3 lacs trees are proposed to be removed from the proposed site.
x. Reason for high fluorine and phenol in sea water has not been given.
xi. 1500 Nm^3/hr water recovered from iron ore slurry shall be discharged into sea. Mechanism for reuse of the said recovered water has not been furnished.
xii. Shoreline changes shall be studied throughout the project period and suitable measures shall be taken to maintain it as per action plan recommended by NCSCM.
xiii. On perusal of the KML file, the committee noted that there is patch of forest land exist between the jetty and plant site. The details of the said forest area and its conservation measures have not been submitted by the proponent.
xiv. On perusal of the plant layout, north eastern portion of the layout is very close to the High Tide Line which needs to be revisited. Further, the sand dunes needs to be indicated on the plant layout.
xv. Interlock control measures to be provided on dredging machines to maintain turbidity level within limits has not been provided.

xvi. Land acquisition details for the proposed project as per MoEF&CC Office Memorandum dated 7/10/2014 along with the requisite supporting documents have not been furnished.

xvii. The EAC deliberated upon the reply furnished by the proponent on the public representations. It is noted that in one of the representations it is stated that project proponent is making roads and the sand dunes exist at the site are being disturbed. The factual status in this regard needs to be obtained from Regional Office of the MoEF&CC.

xviii. Details of the court cases pending if any consequent upon the submission of application through Parivesh has not been made available.

Recommendations of the Committee

52.9.30 In view of the foregoing and after deliberations, the Committee deferred the consideration of the proposal and sough following additional information from the proponent for further consideration of the proposal.

i. Land acquisition details for the proposed project as per MoEF&CC Office Memorandum dated 7/10/2014 along with the requisite supporting documents shall be submitted.

ii. Revised plant layout indicating the exclusion of north eastern portion situated towards High Tide Line and sand dunes existence.

iii. There is patch of forest land exist between the jetty and ISP plant site. The details of the said forest area and its conservation measures to be adopted shall be submitted.

iv. Interlock control measures to be provided on dredging machines to maintain turbidity level within limits has not been provided.

v. Reason for high fluorine and phenol content in sea water shall be submitted.

vi. Factual report from Regional Office of the MoEF&CC shall be submitted regarding the construction of roads and disturbance to sand dunes caused if any at the project site, as stated in the public representation dated 27.1.2022, shall be submitted.

vii. Details of the court cases pending pertaining to the proposal under consideration along with its present status shall be submitted.

viii. Action plan for reuse of water recovered from iron ore slurry shall be submitted.

ix. Details of 1.3 lacs trees proposed to be felled down and the compensatory afforestation measures to be adopted shall be submitted.

x. An undertaking in a non-juridical stamp paper shall be submitted by the proponent stating that no construction activities related to the ISP project will be undertaken in the CRZ area.

52.10 Proposed Ferro Alloys Plant for Production of 15400 TPA Ferro Silicon/ 32000 TPA Ferro Manganese/ 7200 TPA Ferro Silicon Manganese by installation of 2x11 MVA SAF of **M/s Sumangalaya Balaji Steels limited** (SSBSL) at Khasra No. 1823 & 1824, Village- Riwiang BPO Seinduly, Near Riangdo, via Nongstoin, **West Khasi Hills, Meghalaya** [Online Proposal No. IA/ML/IND/243760/2021, File No. **IA-J-11011/9/2022-IA-II(IND-I)**] **– Prescribing of Terms of Reference – regarding.**

52.10.1 It was apprised to the EAC that the project proponent vide email dated 18/01/2022 expressed their inability to participate in the meeting and requested for withdrawal of the proposal cited above.

52.10.2 In view of the above and after detailed deliberations, the Committee recommended that proposal to be returned in its present form.

52.11 Proposed Modification in Existing Plant by installing Auxiliary Facilities without increasing Plant Capacity by **M/s. ArcelorMittal Nippon Steel India Limited (AMNS)** India Limited located at Hazira Notified Industrial Area at Village Hazira, Taluka Choryasi, **District Surat, Gujarat** [Online Proposal No. IA/GJ/IND/28742/2014, File No. J-11011/44/2004-IA II(I)]- **Environment Clearance – regarding**

52.11.1 M/s. AM/NS India Ltd has made an online application vide proposal no IA/GJ/IND/28742/2014 dated 07/01/2022 along with copy of EIA/EMP report, Form – 2 and Certified 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. (all schedules pertaining to the project) 3(a) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

52.11.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
24/12/2020	28th meeting of EAC held on 18th January 2021	Terms of Reference	08/02/2021	07/02/2024

52.11.3 The project of M/s ArcelorMittal Nippon Steel India Limited located in Surat-Hazira Road, Village: Hazira, Tehsil: Chorasi, District: Surat, State: Gujarat is for Proposed Modification in Existing Plant by installing Auxiliary Facilities without increasing Plant Capacity (9.6 million tons).

52.11.4 Environmental Site Settings:

Sr. No.	Particulars	Details	Remarks
i.	Total land	770 ha [Private land: 770 ha]	Land use: Industrial - Hazira Notified Industrial Area.
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	No additional land is required for the proposed modernization project	
iii.	Existence of habitation & involvement of	**Project site:** - Nil **Study Area:** -	There is no R&R activity involved

<table>
<tr><th>Sr. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td>R&R, if any.</td><td>
<table>
<tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Hazira</td><td>0.07 km</td><td>South</td></tr>
</table>
</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° 5'48.99"N</td><td>72°39'24.95"E</td></tr>
<tr><td>B</td><td>21° 6'10.39"N</td><td>72°37'40.26"E</td></tr>
<tr><td>C</td><td>21° 7'9.01"N</td><td>72°37'50.26"E</td></tr>
<tr><td>D</td><td>21° 7'33.55"N</td><td>72°38'41.73"E</td></tr>
<tr><td>E</td><td>21° 8'7.52"N</td><td>72°39'17.79"E</td></tr>
<tr><td>F</td><td>21° 7'2.17"N</td><td>72°39'18.42"E</td></tr>
<tr><td>G</td><td>21° 6'33.77"N</td><td>72°39'11.85"E</td></tr>
<tr><td>H</td><td>21° 6'33.35"N</td><td>72°39'35.31"E</td></tr>
</table>
</td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>6 m maximum above mean sea level</td><td></td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>Nil</td><td>No forest land is involved</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>Tapi Estuary</td><td>0.5 km</td><td>East</td></tr>
<tr><td>Arabian sea</td><td>2 km</td><td>South</td></tr>
<tr><td>Hazira pond</td><td>2.2 km</td><td>South</td></tr>
<tr><td>Suvali pond</td><td>3.3 km</td><td>NNW</td></tr>
<tr><td>Mora pond</td><td>2.7 km</td><td>North</td></tr>
<tr><td>Junagam Pond</td><td>1.4 km</td><td>West</td></tr>
</table>
</td><td>1. As per the letter received from additional collector no flood occurred in last 50 years
2. As per the hydrographic chart the site is 2 meter above maximum tide level of Tapi estuary</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:
▪ Hazira Reserve Forest 1.72 SSW
▪ Open Forest near Dumas Village 5.42 SE
▪ Open Forest near Vasava Village 6.40 NNW</td><td></td></tr>
</table>

Sr. No.	Particulars	Details	Remarks
ix	Existence of sand dunes, mangroves mud flats	The project premises were identified with the help of GPS data derived from satellite image and No Mangrove species were found to be present within the project premises. The presence of mangrove species has been observed in areas outside the AMNS premises, within the study area and far away from project site. The species Avicennia marina is found to be dominant in these areas	

52.11.5 The existing project was accorded environmental clearance vide lr.no. J-11011/381/2014-IA II (I) dated 9/03/2016. Consent to Operate for the existing unit was accorded by Gujarat Pollution Control Board vide lr.

i. GPCB/CCA-SRT-340(15)/ID_20680-587320 (HRC Division) dated on 01/04/2021, The validity of CTO is up to 31/12/2024,
ii. GPCB/CCA-SRT-1190(6)/ID_14186/587373 (CONARC Division) dated on 01/04/2021, The validity of CTO is up to 31/12/2024,
iii. GPCB/CCA-SRT-1082(5)/ID_28839/586881 (Pipe mill Division) dated on 25/03/2021, The validity of CTO is up to 31/12/2024,
iv. GPCB/CCA-SRT-1162(2)/ID_22968/586882 (Plate mill Division) dated on 25/03/2021, The validity of CTO is up to 31/12/2024.
v. GPCB/CCA-SRT-1599/ID_24199/598293 (Power Division) dated on 18/08/2021, The validity of CTO is up to 31/03/2024.

52.11.6 Implementation status of the existing EC - **EC 2016**

S No	Plant / Product	Unit	Capacities as per EC dated 09/03/2016			Proposed Modification for which EC is being sought	Total capacity	Remarks
			Existing	Proposed	Total Capacity			
1	HBI Plant (DRI Mod I to VI)	MTPA	7.83	-4.0	3.83	4.0	7.83	Earlier planning was to remove HBI Modules (1 to 4) totaling 4 MTPA and replace it with Blast Furnace of 3.0 MTPA. This could not be implemented due to fund constraints and legal cases at the NCLT. *****Original capacity prior to EC 2016 was 7.83 MTPA only. It is now proposed to maintain this original capacity.
2	Blast Furnace (BF)	MTPA	2.04	3	5.04	-3	2.04	Existing operational BF of capacity 2.04 MTPA in operation

S No	Plant / Product	Unit	Capacities as per EC dated 09/03/2016			Proposed Modification for which EC is being sought	Total capacity	Remarks
			Existing	Proposed	Total Capacity			
								, 3.0 MTPA couldn't be implemented due to fund constraints and legal cases at the NCLT, now dropped.
3	Sinter Plant	MTPA	1.48	7	8.48	0	8.48	7.0 MTPA plant could not be implemented due to fund constraints and legal cases at the NCLT.
								Now, will establish the 7.0 MTPA Plant approved vide 2016 EC. (It will comprise of 02 number plants).
4	Coke Oven (Recovery Type)	MTPA	1.2	1.35	2.55	-1.2	1.35	1.2 MTPA plant could not be implemented due to fund constraints and legal cases at the NCLT. *2016 EC approved for 2.55 MTPA, AMNSI is proceeding only with 1.35 MTPA since 1.2 MTPA originally secured in 2010 EC has now lapsed.
5	Air Separation Plant	Nm^3/hr	4,24,744	0	4,24,744	0	4,24,744	3,60,544 Nm3/hr plants are in operations, balance 64200 Nm^3/hr plant will be established as per 2016 EC
6	Steel Melt Shop- (EAF 4 Nos.)	MTPA	4.6*	0	4.6	0	4.6	Earlier planning was to remove 4.6 MTPA EAF -4 nos. and replacing with BOF-3 nos. in its place but that could not be implemented due to fund constraints and legal cases at the NCLT.
								*Original capacity prior to EC 2016 was 4.6 MTPA only and it is now submitted to retain this original plant configuration.
8	Steel Melt Shop-2	MTPA	5	0	5	0	5	5.0 MTPA plant in operation
9	Corex Plant	MTPA	1.7	0	1.7	0	1.7	1.7 MTPA plant in operation

S No	Plant / Product	Unit	Capacities as per EC dated 09/03/2016			Proposed Modification for which EC is being sought	Total capacity	Remarks
			Existing	Proposed	Total Capacity			
10	Lime Plant (Lime/Dolime)	MTPA	0.93	0	0.93	0.27	1.2	(1 x 200+ 1x 500 TPD)= 0.27 MTPA new plants are proposed
11	CPP	MW	604	0	604	-48	556	31 MW CPP and 525 MW CPP in operation
12	Plate Mill	MTPA	1.5	0	1.5	0	1.5	1.5 MTPA plant in operation
13	Pellet plant	MTPA	4	0	4	-4	0	Dropped
14	CSP	MTPA	3.5	0	3.5	0	3.5	3.5 MTPA approved vide 05.07.2010 EC
	HRC	MTPA	4.5	0	4.5	0	4.5	4.5 MTPA approved vide 29-05-2008 EC Total 8.0 implemented, but inadvertently mentioned 3.5 MTPA only in 2016 EC
	Rebar mill	MTPA	1.6	0	1.6	-1.6	0	Dropped
	Wire rod mill	MTPA	0.7	0	0.7	-0.7	0	Dropped
15	Slab caster	MTPA	4.9	0	4.9	0	4.9	In operation
	Billet caster	MTPA	2.37	0	2.37	-2.37	0	Dropped
16	CRM-1 & 2	MTPA	1.5	0.54	2.04	3.2	5.24	CTO taken for additional 0.54 MTPA from GPCB & new CRM of 3.2 MTPA is proposed
17	Jetty	Meter	734 + 456	0	734 + 456	0	1190	As per 2016 EC. 734 and 456 meters capacity was sanctioned in 2006 EC. This was implemented although inadvertently mentioned 734 m only in 2016 EC.
18	Waste Heat Recovery based Power Plant	MW	25	20	45	0	45	25 MW in operation
Pipe Mill								
19	H Saw Pipes	MTPA	0.15	0.15	0.30	0	0.3	0.15 MTPA as per 2016 EC and CTO taken for additional 0.15 MTPA from GPCB.
	L Saw Pipes	MTPA	0.33	0	0.33	0	0.33	In operation
	Coating Plant	MTPA	0.48	0	0.48	0	0.48	In operation – CTO taken from GPCB

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

Sr. No	Plant / Facility	As per EC dated :09/03/2016 (A=A1+A2)							Proposed Modification (B)		Final after Modification (A+B)		Remarks
		Total (A)		Implemented (A1)		Un-implemented (A2)		As per CTO	Config.	Capacity	Config.	Capacity	
		Config.	Capacity	Config	Capacity	Config.	Capacity	Capacity					
1	HBI Plant (DRI Mod I to VI) (in MTPA)	Mod I-IV: 4.0 Mod: V - 1.98 Mod VI: 1.85	7.83 (- 4.0* =3.83)	Mod I-IV: 4.0 Mod: V -1.98 Mod VI: 1.85	7.83		-	7.83	-	-	Mod I-IV: 4.0 Mod: V -1.98 Mod VI: 1.85	7.83	* Earlier planning was to remove HBI Modules (1 to 4) totalling 4 MTPA and replace it with Blast Furnace of 3.0 MTPA. This could not be implemented due to fund constraints and legal cases at the NCLT. *Original capacity prior to EC 2016 was 7.83 MTPA only. It is now proposed to maintain this original capacity. CTO has been sanctioned for 7.83 MTPA.
2	Blast Furnace (BF) (in MTPA)	1 x 2.04 (2200 m^3) 1 x 3.0	5.04	1 x 2.04	2.04*	1 x 3.0	3.0#	2.04	-	-	1 x 2.04	2.04	# 1 x 3.0 MTPA couldn't be implemented due to fund constraints and legal cases at the NCLT, now dropped.
3	Sinter Plant	1x 1.48 (1 x 120 m^2) 2 x 3.5 (~ 325 m^2 each)	8.48	1 x 1.48	1.48	2 x 3.5	7.0*	1.48	-	-	1x 1.48 (1 x 120 m2) 2 x 3.5 (~ 325 m2 each)	8.48	* 7.0 MTPA plant could not be implemented due to fund constraints and legal cases at the NCLT. Now, will establish the 7.0 MTPA Plant approved vide 2016 EC. (It will comprise of 02 number plants).

Sr. No	Plant / Facility	As per EC dated :09/03/2016 (A=A1+A2)							Proposed Modification (B)		Final after Modification (A+B)		Remarks
		Total (A)		Implemented (A1)		Un-implemented (A2)		As per CTO	Config.	Capacity	Config.	Capacity	
		Config.	Capacity	Config	Capacity	Config.	Capacity	Capacity					
4	Coke Oven (Recovery Type)	1 x 1.20 1 x 1.35	2.55	2 x 59 Ovens	1.35#	-	1.20*	-	-	-	1 x 1.35	1.35	# Under implementation *1.2 MTPA plant could not be implemented due to fund constraints and legal cases at the NCLT. *2016 EC approved for 2.55 MTPA, AMNSI is proceeding only with 1.35 MTPA since 1.2 MTPA originally secured in 2010 EC has now lapsed.
5	Air Separation Plant (Nm3/Hr)	1x343 TPD 1x257 TPD 1x785 TPD 3x1714 TPD 1x700 TPD (Only oxygen) 1x2200 TPD	424,744	1x343 TPD 1x257 TPD 1x785 TPD 3x1714 TPD 1x700 TPD (Only oxygen)	360,544	1 X 2200 TPD*	64,200*	360,544	-	-	1x343 TPD 1x257 TPD 1x785 TPD 3x1714 TPD 1x700 TPD 1x2200 TPD (Only oxygen)	424,744	* 64200 Nm3/hr plant will be established as per 2016 EC
6	SMS-1 (EAF 4 Nos.)	4 x 150 MT Heat size	4.6*	4 x 150 MT Heat size	4.6*		-	4.6	-	-	4x150 MT Heat size	4.6	*Earlier planning was to remove 4.6 MTPA EAF -4 nos. and replacing with BOF-3 nos. in its place but that could not be implemented due to fund constraints and legal cases at the NCLT. Original capacity prior to EC 2016 was 4.6 MTPA only and it is now submitted

Sr. No	Plant / Facility	As per EC dated :09/03/2016 (A=A1+A2)							Proposed Modification (B)		Final after Modification (A+B)		Remarks
		Total (A)		Implemented (A1)		Un-implemented (A2)		As per CTO	Config.	Capacity	Config.	Capacity	
		Config.	Capacity	Config	Capacity	Config.	Capacity	Capacity					
													to retain this original capacity. CTO has been sanctioned for 4.6 MTPA.
7	SMS-2	4 x 200 MT Heat size	5.0	4 x 200 MT Heat size	5.0		-	5.0	-	-	4 x 200 MT Heat size	5.0	
8	Corex Plant	2 x 0.85	1.7	2 x 0.85	1.7		-	1.7	-	-	2 x 0.85	1.7	
9	Lime Plant (Lime/ Dolime	1 x 0.45 (4 x 300 TPD) 1 x 0.48 (3 x 500 TPD)	0.93	1 x 0.45 1 x 0.48	0.93		-	0.93	1 x 0.27* (1 x 200 + 1x 500 TPD)	0.27	1 x 0.45 1 x 0.48 1 x 0.27*	1.2	
10	Plate Mill	1 x 1.5	1.5	1 x 1.5	1.5		-	1.5	-	-	1 x 1.5	1.5	
11	CSP and HRC	1 x 3.5	3.5*	1 x 3.5 1 x 4.5#	8.0*		-	8.0	-	-	1 x 3.5 1 x 4.5#	8.0	* 3.5 MTPA approved vide 05.07.2010 EC # 4.5 MTPA Approved vide 29-05-2008 EC Total 8.0 implemented, but inadvertently mentioned 3.5 MTPA only in 2016 EC
12	CRM	1 x 1.5	1.5	1 x 1.5 1 x 0.54*	2.04			2.04	1 x 2.2 1 x 1.0	3.2	1 x 1.5 1 x 0.54* 1 x 2.2 1 x 1.0	5.24	* CTO taken for additional 0.54 MTPA from GPCB.
13	**Pipe mill:**												
	H Saw Pipes (in MTPA)	1 x 0.15	0.15	1 x 0.15 1 x 0.15*	0.30		0	0.3	-	-	1 x 0.15 1 x 0.15*	0.30	0.15 MTPA as per 2016 EC *CTO taken for additional 0.15 MTPA from GPCB. (0.15+0.15=0.30) .
	L Saw Pipes	1 x 0.33	0.33	1 x 0.33	0.33		0	0.33	-	-	1 x 0.33	0.33	

Sr. No	Plant / Facility	As per EC dated :09/03/2016 (A=A1+A2)							Proposed Modification (B)		Final after Modification (A+B)		Remarks
		Total (A)		Implemented (A1)		Un-implemented (A2)		As per CTO	Config.	Capacity	Config.	Capacity	
		Config.	Capacity	Config	Capacity	Config.	Capacity	Capacity					
	(in MTPA)												
14	CPP (in MW)	1 X 475 MW 1 X 31 MW 1 X 40 MW 1 X 10 MW 1 X 48 MW	604	1 X 475 MW 1 X 31 MW 1 X 40 MW 1 X 10 MW	556	1 x 48 MW	48	556	-	-	1 X 475 MW 1 X 31 MW 1 X 40 MW 1 X 10 MW	556	
15	Waste Heat Recovery based Power Plant (in MW)	1 x 25 MW 1 x 20 MW	45	1 X 25 MW	25	1 X 20 MW	20	25	-	-	1 x 25 MW 1 x 20 MW	45	
16	Jetty (length in m)	456 m+ 734 m	1190 m	456 m + 734 m	1190 m	-	-	734 m*	-	-	456 m + 734 m	1190 m	* 734 and 456 meters capacity was sanctioned in 2006 EC. This was implemented although inadvertently mentioned 734 m only in 2016 EC and CTO also mentioned the same 734m length.

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

Sr. No.	Name of Raw Material	Requirement, TPA			Source	Distance (W.R.T. Plant) In Km	Mode of Transportation
		Existing	Proposed	Total			
1	DR Grade Pellets	1,18,23,300	-	1,18,23,300	AMNSI's pelletization plants located at Vizag and	Vizag: 1170 Paradeep: 1450	Sea Route
2	BF Grade Pellets	54,00,000	-	54,00,000			

Sr. No.	Name of Raw Material	Requirement, TPA			Source	Distance (W.R.T. Plant) In Km	Mode of Transportation
		Existing	Proposed	Total			
					Paradeep		
3	Oxide Fines	1,85,000	-	1,85,000	Goa, Odisha, NMDC fines	Goa: 650 Odisha : 1450	Sea Route
Total Iron Bearing Material		**1,74,08,300**	**-**	**1,74,08,300**			
4	Coal-PCI-BF	4,08,000	1,02,000	5,10,000	Australia (mainly) and Canada, USA and Russia	Australia : 7500 Canada : 11000 Russia: 5500	Sea Route
5	Coal for Corex	27,70,000	0	27,70,000			
6	Metallurgical Coal	0	19,57,500	19,57,500			
7	Coke	12,55,000	- 12,55,000	0			
Total Coal & Coke		**44,33,000**	**8,04,500**	**52,37,500**			
8	BF and Sinter Grade Flux (Limestone + Dolomite + Pyroxenite + Quartzite)	6,90,000	0	6,90,000	Dubai and Oman	Dubai: 1800 Oman : 1700	Sea Route
9	SMS grade Limestone and Dolomite	13,23,000	5,40,000	18,63,000			
Total Flux and Additives		**20,13,000**	**5,40,000**	**25,53,000**			

52.11.9 The Existing Water requirement is 145,839.00 m^3/day, water requirement is obtained from Tapi river and permission for the same has been obtained from Narmada Water Resources Water Supply and Kalpsar Department vides letter no -248/1444 dated 27/07/2021. The water requirement for the proposed project is estimated as 7,489 m^3/day, out of which 7,489 m^3/day of fresh water requirement will be obtained from the Tapi river. The permission for drawl of groundwater / surface water is obtained from Narmada Water Resources Water Supply and Kalpsar Department vides letter no -248/1444 dated 27/07/2021.

52.11.10 The Existing power requirement of 1038 MW is obtained from Power system operation corporation limited. The power requirement for the proposed project is estimated as 125 MW. Power is being sourced from Captive generation 556 MW (500+31+25), From EPHL 270 MW and additional (337 MW) will be availed from 400 KV- PSOCL (National Grid).

52.11.11 Baseline Environmental Studies:

Period	1st October 2020 to 31st December 2020
AAQ parameters at 8 Locations	$PM_{2.5}$ = 20.21 to 67.90 µg/m^3 PM_{10} = 43.12 to 124.85 µg/m^3 SO_2 = 12.44 to 42.20 µg/m^3 NOx = 16.11 to 48.30 µg/m^3 CO = 0.1 to 1.21 µg/m^3

<table>
<tr><th>Period</th><th>1st October 2020 to 31st December 2020</th></tr>
<tr><td>Incremental GLC level</td><td>PM_{10} = 20.7 µg/m^3 (Level at 1.2 km in SW Direction)
SO_2 = 13.5 µg/m^3 (Level at 1.2 km in SW Direction)
NOx = 8.43 µg/m^3 (Level at 1.2 km in SW Direction)</td></tr>
<tr><td>Ground water quality at 8 locations</td><td>pH: 7.08 to 7.61,
Total Hardness: 450 to 530 mg/l,
Chlorides: 130 to 302 mg/l,
Fluoride: 0.42 to 2.13 mg/l.
Heavy metal likes Mercury, Lead, Nickel, Zinc found bellow detectable limits.</td></tr>
<tr><td>Surface water quality at 8 locations</td><td>pH: 7.12 to 8.62;
DO: 4.1 to 5.1 mg/l and
BOD: <5 mg/l.
COD from 8.1 to 40.3 mg/l</td></tr>
<tr><td>Noise levels Leq (Day and Night)</td><td>41.0 to 65.0 for the day time and
45.0 To 51.0 for the Night time.</td></tr>
<tr><td>Traffic assessment study findings</td><td>• Traffic study has been conducted at NH-06 which is approximately 0.6 (distance) from the plant site.
• Transportation of raw material, fuel & finished product will be done ~18 % by road.
• Existing PCU is 354 PCU/hr on NH 06 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>NH 06</td><td>354</td><td>521</td><td>0.68</td><td>D</td></tr></table>• PCU load after proposed project will be 354 (Existing) + 30 (Additional) PCU/hr and level of service (LOS) will be:
<table><tr><th>Road</th><th>V (Volume In PCU/hr.)</th><th>C (Capacity In PCU/hr.)</th><th>Proposed V/C Ratio</th><th>LOS</th></tr><tr><td>NH 06</td><td>384</td><td>521</td><td>0.73</td><td>D</td></tr></table>Conclusion: The level of service will D after including additional traffic due to proposed project.</td></tr>
<tr><td>Flora and fauna</td><td>Peacock, White rumped vulture, leopard, white spoonbill
Conservation plan has been prepared and submitted to the State Forest Department.</td></tr>
</table>

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

Solid Waste generation and its management

Sr. No.	Solid Waste	Quantity (TPA)			Treatment before Disposal	Action Plan for Disposal / Management
		Existing	Modification	Total		
1	**HBI (Module I-VI)**					
	Iron Ore Fines	10,91,248	0	10,91,248	Screening / Drum mixer	Consumed in Sinter Plant
	DRI Fines	1,69,000	0	1,69,000	As received	Consumed in SMS & Sales to authorized agencies / units for Iron recovery
	Sludge Pond Fines	2,60,000	0	2,60,000	Micro Pelletisation	Used as a raw material in micro palletization plant and recycled to sinter plant / Sales for recycling & Fe recovery units.
	Quartzite Fines	84,000	0	84,000	As received	Sales for Iron recovery units
2	**HRC Plant - Caster, HSM, CSP & Plate Mill**					
	Mill Scale	3,00,600	0	3,00,600	Oil skimming	Used in Sinter Plant & BF plant/ Sales for thermic welding manufacturing application/ recyclers/ steel plants.
3	**Lime Plant**					
	Lime Stone/Dolomite Chips	3,75,000	0	3,75,000	Screening	Used in BF/Corex/Sinter plant/SMP1&2 as Raw Material / Sales for application in cement plant
	Lime Fines / Do lime Fines	1,26,000	0	1,26,000	Screening	Used in CRM ETP/Sinter Plant/Micro-Pelletization/ Sales for application in cement plant, brick plant
	Off Grade Lime/Dolomite	40,000	0	40,000	Screening	Using in Sinter Plant, CRM & Corex / Sales for application in cement plant
4	**CRM** - Iron Oxide	8,000	22800	30800	-	Consumed in Sinter Plant/ External Sales to authorized

Sr. No.	Solid Waste	Quantity (TPA)			Treatment before Disposal	Action Plan for Disposal / Management
		Existing	Modification	Total		
						vendor for recycling, paint & chemical industry .
5	**SMP-1**					
	Slag (LF Slag, Desulphurization (HMDP) Slag, Furnace Debris)	11,76,000	0	11,76,000	Cooling/magnetic separation/sorting	Used for internal roads as a subbase material Used for internal railway as ballast material Under CSR activities used for making internal village roads / Sales for road making, construction works, as an aggregate, land filling, Bricks, Cement, paver blocks /used in sinter Plant / metal Separation.
	Iron Fines	84,000	0	84,000	Micro pelletisation	Used as a raw material in micro palletization plant and recycled to sinter plant
	Scarfing Waste	2500	0	2500	As received	Use in sinter Plant/ Sales for recycling application
	Plant Fines (Combustion Dust + Furnace Debris + Muck Waste)	45,000	0	45,000	As received	Use in sinter Plant/ Sales for recycling application
6	**SMP-2 (CONARC)**					
	Slag (LF Slag, Desulphurization (HMDP) Slag, Furnace Debris)	10,00,000	0	10,00,000	Cooling/magnetic separation/sorting	Used for internal roads as a subbase material Used for internal railway as ballast material Under CSR activities used for making internal village roads / Sales for road making, construction works, as an aggregate, land filling, Bricks, Cement, paver

Sr. No.	Solid Waste	Quantity (TPA)			Treatment before Disposal	Action Plan for Disposal / Management
		Existing	Modification	Total		
						blocks /used in sinter Plant / metal Separation.
	Iron Fines	96,000	0	96,000	Micro pelletisation	Used as a raw material in micro palletization plant and recycled to sinter plant
	Scarfing Waste	2500	0	2500	As received	Use in sinter Plant/ Sales for recycling application
	Plant Fines (Combustion Dust + Furnace Debris + Muck Waste)	45,000	0	45,000	As received	Use in sinter Plant/ Sales for recycling application
7	**Refractories**: MgO-C, Castable, Magnesite bricks, Alumina bricks, Tundish Grog, High Alumina Grog	32,000	-	32,000	-	Sales to Authorized Agencies / Units
8	**COREX**					
	Granulated Slag	6,40,000	0	6,40,000	Natural Drying	Being sold to authorized vendors
	CDP /De-dusting Dust	94,000	0	94,000	-	Consumed in Sinter Plant
	Limestone/ Dolomite Fines	50,000	0	50,000	Screening	Consumed in Sinter Plant /PCI in BF
	Ore + Pellet Fines	3,50,000	0	3,50,000	Screening	Consumed in Sinter Plant
	Sludge	1,20,000	0	1,20,000	Thickening/ de-watering/ granulation	Used as a raw material in Granules and recycled to sinter plant / Sales for Brick manufacturing, Coal blending, road making, land filling, Cement.

Sr. No.	Solid Waste	Quantity (TPA)			Treatment before Disposal	Action Plan for Disposal / Management
		Existing	Modification	Total		
	Coal Fines	11,75,000	0	11,75,000	Screening/ Briquetting/ Drying	Used in Blast Furnace/ Sales to authorized vendor / Briquetting for recycling back to Corex.
	Coke Fines	54,000	0	54,000	Screening/ crushing	Used in Sinter plant / SMP1 / SMP 2
	Hot metal skull	6000	0	6000	Lancing	Sales to Authorized Agencies / Units
9	**Plate Mill** -Shots Dust	0	65	65	Micro pelletisation	Consumed in sinter plant/ TSDF Site.
10	**Blast Furnace**					
	Granulated Slag	6,40,000	0	6,40,000	Natural Drying	Being sold to authorized vendor
	Air Cooled Slag	1,28,000	0	1,28,000	Crushing/ screening	Used for internal roads / Sold to for road making, rockwool manufacturing, construction works..
	BF Return Fines	6,25,000	0	6,25,000	As received	Consumed in Sinter Plant
	Bag Filter Dust	12,000	0	12,000	SAP granulation	Consumed in Corex Plant
	Flue Dust (Dust Catcher Fines)	70,000	0	70,000	As received	Consumed in Sinter Plant
	Coke Fines	1,26,000	0	1,26,000	Crushing	Used in Sinter plant and SMP1 & SMP 2
	Lump ore + Pellet fines	6,00,000	0	6,00,000	Screening	Consumed in Sinter Plant
	Gas Cleaning Plant Sludge	36,000	0	36,000	Thickening/ filter press	Used as a raw material in Granules and recycled to sinter plant / Sales for Brick manufacturing, Coal blending, road making, construction works, Cement.
	Hot Metal Skull	8000	0	8000	-	Sales to Authorized Agencies / Units

Hazardous Waste generation and its management

Sr. No.	Name of Hazardous Waste	Existing (TPA)	Proposed (TPA)	Total Quantity (TPA)	Action plan for Disposal / Management.
1	Chemical Sludge from Waste Water Treatment (ETP Sludge)	18100	19900	38000	Collection, Storage, Transportation and disposal at GPCB authorized TSDF site / Co-processing / Micropelletization
2	Used Oil	2775	225	3000 KL/Year	Collection, Storage, Transportation and Disposal by selling to Registered Vendors.
3	Oily Waste (Waste oily water + sludge + Magnetic sludge + Grinding Sludge + Coolant Sludge)	7	2493	2500	Collection, Storage, Transportation and Disposal by selling to Registered Vendors/TSDF/Recycle in process (Sinter plant/Blast Furnace), Briquetting, Co processing in cement units.
4	Discarded Container / Barrels / Liners / Paint Drums	15505	14495	30000 Nos/Year	Collection, Storage, Transportation and Disposal by selling to Authorized vendor.
5	Discarded Resin	8.3	191.7	200	Co-processing in DRI / HBI units as per CPCB guidelines / Disposal at TSDF
6	Zinc Dross & Zinc Ash	2340	3660	6000	Selling to authorized recycler.
7	Contaminated cotton rags (Oily socked cotton waste)	0	500	500	Collection, Storage, Transportation and Disposal by selling to authorized Vendor or disposal at GPCB approved TSDF site.
8	Paint Dust & Sludge	0	500	500	Collection, Storage, Transportation and Disposal by selling to authorized Vendor or disposal at GPCB approved TSDF site
9	Spent Acid	766500	91250	857750 M3/year	Maximum acid will be recovered from this Spent acid in Acid Regeneration Plant (ARP) and balance spent Acid disposal to Authorized Recyclers. Recovered acid will be Reuse as a Raw Material
10	Tar Sludge (Coke Oven)	0	120	120	Tar sludge will be mixed with coal blend before feeding it to coke oven batteries
11	ETP (BOD Plant) Sludge (Coke Oven)	0	160	160	ETP (BOD Plant) sludge will be mixed with coal blend for charging in the coke oven batteries.
12	Ceramic based fiber waste (Glass wool) + Insulation wool	0	800	800	Collection, Storage, Transportation and Disposal at GPCB approved TSDF site
13	Waste	0	350 Packets	350	Collection, Storage, Transportation

Sr. No.	Name of Hazardous Waste	Existing (TPA)	Proposed (TPA)	Total Quantity (TPA)	Action plan for Disposal / Management.
	photographic film disposal		(1 packet 100 sheet) Packets / Year	Packets (1 packet 100 sheet) Packets /Year	and disposal by selling to authorized recyclers.
14	Waste photographic solution	0	5	5	Collection, Storage, Transportation and disposal by selling to authorized recyclers.
15	Oil Emulsion Waste	0	100	100	Collection, Storage, Transportation and Disposal at GPCB approved TSDF site
16	Alkali Waste Source	0	10	10	Collection, Storage, Transportation and Disposal at GPCB approved TSDF site
17	Chromic Sludge	0	8	8	Selling to Outside Agency

52.11.13 Public Consultation:

Details of advertisement given	Newspapers "Indian Express" and "Gujarat Mitra 17th August, 2021
Date of public consultation	21/09/2021 at 11:00 hrs
Venue	ArcelorMittal Nippon Steel India Limited, Plant B Security Gate, Hazira Bypass Road, Hazira-394270, Ta. Choryasi, Dist. Surat
Presiding Officer	Sh. Y. B. Jhala (GAS) Additional District Magistrate & Residential Additional Collector
Major issues raised	Setting up of Hospital, Providing Health Services, Supporting to Cancer Patients, Providing Education to Locals, Quality Teachers in Schools, Development of Greenery around Plant, Emission to Village Temple, Generation of Employment to locals, Business to Local, Permanent Employment for Contractual persons. , Pay Increase for Women working in CSR activities ,Risk due to Plant Operation ,Land Payments ,Water logging / Drainage of Rainwater, Traffic Congestion Road Accidents, Infrastructure development of Village, Emergency Route / Disaster, Management Unit, Sports Activities, CSR Activities, Animal Husbandry

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

S No	Physical activity and action plan		Year of implementation (Budget in INR in lakhs)					Total Expenditure (Rs. in Lakhs)
	Name of the Activity	Physical Targets	1st	2nd	3rd	4th	5th	
1	**Education**	High School Transformational Project (smart class, science lab, tinkering lab etc under digital education) in partnership with Govt.	20	20	20	20	18	98
		Improvement in basic amenities & teaching learning materials in Anganwadi center	15	15	15	15	15	75
		Improvement in basic amenities & teaching learning materials in Primary and Middle School	20	20	20	20	20	100
2	**Health & Sanitation**	Health Camps - Free Doctor consultation and medicine	12	12	12	12	12	60
		Health Awareness program on AIDS, Malaria, TB, Anaemia etc.	6	6	6	6	6	30
		Haemophilia Care Center at New Civil Hospital Surat	15	17	19	21	24	96
3	**Infrastructure Development**	Drinking Water supply through pipe line	97	97	97	97	97	485
		Construction of Community Centre in 4 villages	15	15	15	15	-	60
4	**Sustainable Livelihood**	Vocational Skill Training for youths- Setting up Digital/Computer skill centre in partnership with NSDC.	20	20	20	20	20	100

S No	Physical activity and action plan		Year of implementation (Budget in INR in lakhs)					Total Expenditure (Rs. in Lakhs)
	Name of the Activity	Physical Targets	1st	2nd	3rd	4th	5th	
		Setting up Paper Recycling Unit	24	24	24	24	24	120
		Promotion of Income Generation Activities- Poultry, Dairy, Pickle, Tailoring & embroidery, vegetable Cultivation etc.	25	25	25	25	25	125
5	**Sports and Youth Development**	Supporting village youths for sports tournaments and materials	10	10	10	10	10	50
		Annual Freedom Cup Cricket Tournament for differently abled person	6	5	5	5	5	26
6	**Environment**	Plantation and Greening Drive in villages and School premise	**15**	**15**	**15**	**15**	**15**	**75**
7	Contingency	Contingency Measures	**20**	**20**	**20**	**20**	**20**	**100**

52.11.14 The Existing capital cost of project was 35000 Crores. The capital cost of the proposed project is Rs 6413.13 Crores and the capital cost for environmental protection measures is proposed as Rs 1687.26 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 378.28 Crores. The employment generation from the proposed modernization is 1770 Nos. The details of cost for environmental protection measures is as follows:

Sr. No.	Description of Item	Existing (Rs. In Crores)		Proposed (Rs. In Crores)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
I	Air Pollution Control / Noise Management	244.0	143.0	400.00	15.60
II	Water Pollution Control	313.0	16.5	77.50	5.50
III	Environmental Monitoring and Management	27.5	1.50	12.60	1.0
IV	Green Belt Development	6.5	0.75	11.22	0.70

Sr. No.	Description of Item	Existing (Rs. In Crores)		Proposed (Rs. In Crores)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
V	Occupational Health	2.5	4.0	0.86	0.36
VI	Capital Cost which is part of new projects			1185.08	355.12
VII	Addressal of Public Consultation concerns			21.0	3.0
	Total			**1687.26**	**378.28**

52.11.15 Existing green belt has been developed in 171 ha area which is about 22.21 % of the total project area of 770 ha with total sapling of 2,87,429 Trees. Proposed greenbelt will be developed in 83 ha which is about 10.78 % of the total project area. Thus, total of 254 ha area (about 33 % of total project area) will be developed as greenbelt. A 9 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 634978 (E 2,87,429 + P 3,47,549 saplings will be planted and nurtured in 254 hectares in next 5 years.

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

Particulars	As per EC dated 9th march 2016	After proposed amendment	% Increase
Land	770 ha	770 ha	**0**
Greenbelt	171 ha	254 ha	11
Water	203976 m^3/day	153328 m^3/day	-25
Power	623 MW	1163 MW	86
Raw materials	Total Iron Bearing Material : 15508000	Iron Bearing Material: 1,74,08,300	11
Products	Flat Steel 9.6 million ton per annum	Flat Steel 9.6 million ton per annum	0

52.11.17 The Pollution load assessment

Particulars	After proposed amendment
Air	PM: 20.7 µg/m^3 at a distance of 1.2 km in SW direction SO_2: 13.5 µg/m^3 at a distance of 1.2 km in SW direction NOx: 8.43 µg/m^3 at a distance of 1.2 km in SW direction
Water	19,793.00 m^3/day wastewater will be generated, which will be treated through proposed UF/RO treatment scheme to follow Zero Liquid Discharge concept. After treatment UF/ RO permeate of approximately 13,968.00 m^3/day will be reused as makeup. It is estimated that approximately 5826.00 m^3/day of UF/RO reject water would be generated. RO reject will be used for Slag quenching
Solid and Hazardous waste	--
Traffic load	2040 trucks/day (Additional 240 Trucks /day)

52.11.18 Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration.

Status of Show Cause Notice (SCN) & Notice of Direction (NoD) issued

For each Notice, compliance report along with action plan has been submitted to Regional Office, GPCB & Head Office, GPCB. Based on satisfactory compliance report submission to GPCB no further observations / points raised by GPCB against notices. GPCB inspected facility on 22/07/2021 & 26/08/2021. As per these GPCB observations, no major points regarding the non-compliances and related SCN. Implemented the Mitigation measures / Action plan for further reduction of fugitive emission.

List of Show Cause Notices (SCN):

Sr. No.	Show cause Notice no. & date	Under Section	Reason	Compliance Status	Remarks
1	SCN-551312 Dated 16/01/2020	Air Act	Looking to IR Observation dusting was observed at ground level due to truck movement on dry roads. Also SPM = 247 mg/Nm^3 (limit - 60 mg/Nm^3) in the ambient sampling done at the terrace of the plant.	Compliance Status submitted to HO, GPCB on 24-01-2020. **Action Plan Implemented:** Manual water sprinkling is going on in & around plant as well as on roads. Mechanized road sweeping machines of different categories are being used for the sweeping of the road. For dust reduction in ambient air, company has implemented & completed following action plan in Corex Plant: 1) Installation of automatic dampers in suction point of skip feeding to improve efficiency in Coal Skip area – Jan'20 (Completed) 2) Installation of automatic dampers in suction point of skip feeding to improve efficiency in Coal Skip	For reduction of Dust level at Corex Plant, proposed control measures were Completed in Feb'20. No further observations & communications from GPCB regarding this SCN.

Sr. No.	Show cause Notice no. & date	Under Section	Reason	Compliance Status	Remarks
				area – Feb'20 (Completed) 3) Installation of mist suppression system at silo truck loading area – Feb'20 (Completed) 4) Constructing retainer wall & fixing of sheet to contain the dust within the boundary in Coal Drying Plant Dust bin & Coal Transportation dust bin – Feb'20 (Completed)	

List of Notice of Directions (NoD):

Sr No.	Notice of Direction & Date	Under Section	Reason	Compliance Status	Remarks
1	GPCB/CCA-SRT-1190(3) / ID-14186/561688 dated 09/06/2020	Air Act	1) Brown Coloured dusting was observed from SMP-2 furnace. 2) Dusting was observed in the bottom line feeding area of Stock house. 3) Haphazard storage of fly ash was found in corex-1 plant area. 4) Analysis report of sample collected from Stack attached to stock House-Coal Line 1 of corex plant	Compliance Status submitted to HO, GPCB on 15/06/2020. **<u>Action Plan Implemented:</u>** 1) Installation & Operation of Launder Lancing & Dedusting System at SMP-2 – Mar'21 (Completed) 2) Filter Bags replacement done at SMP2 Dedusting systems – Mar'21 (Completed) 3) Modified the Manhole seal	Detailed Action Plan has been prepared & Completed for SMP2 & Corex Plant. At SMP 2 Plant, Pollution Control measures implemented by Installation and Operation of Launder Lancing & Dedusting System and Bags Replacement at Dedusting areas. At Corex Plant, Pollution Control measures implemented are Modified the Manhole seal arrangement in

Sr No.	Notice of Direction & Date	Under Section	Reason	Compliance Status	Remarks
			shows PM – 371 mg/Nm^3 (Limit – 150 mg/Nm^3) 5) Analysis report of ambient air sample shows PM_{10} – 292.67 mg/Nm^3 which is higher than permissible limits.	arrangement in suction ducts above the vibrofeeder discharge in Stock house of Corex plant – May'20 (Completed) 4) Stored Coal fines removed from the area – May'20 (Completed) 5) Coal Dedusting System Upgradation in Corex – 1 – Repairing & Replacement of pulse valve, Puppet damper, suction duct inspection and cleaning, Damaged bag cleaning & replacement – Jun'20 (Completed)	suction ducts above the vibrofeeder discharge in Stock house and Upgradation of Coal Dedusting System. No further observations & communications from GPCB regarding this NoD.
2	GPCB/CCA-SRT-1190(5)/ ID_14186/572184 dated 04/11/2020	Air Act	1) Brownish Fugitive emission from Corex and SMP-II plant and accumulation of dust (Reddish particulate matter) on leaf of trees. 2) Heavy Dusting due vehicular movement in plant	Compliance Status submitted to HO, GPCB on 18-11-2020. **<u>Action Plan Implemented:</u>** 1) The fugitive emission was temporarily observed only on account of operational / breakdown	Detailed Action Plan has been prepared & Completed for SMP2 Plant. At SMP 2 Plant, Pollution Control measures implemented by Installation and Operation of Launder Lancing & Dedusting System and Bags Replacement at

Sr No.	Notice of Direction & Date	Under Section	Reason	Compliance Status	Remarks
			premises. 3) Result of AAQM sample i.e Particulate matter- 307 mg/Nm3 is exceeding the permissible limit.	issues during the visit of the GPCB, Surat officials and the same was rectified immediately rectified. 2) Appropriate pollution control measures, including regular water sprinkling on roads along with the deployment of mechanized road sweeping machines, are being taken to control the dust emission on roads. 3) Action Plan already implemented as submitted during notice dated 09-06-2020.	Dedusting areas. To Control dusting due to Vehicular movement, Regular water sprinkling on roads along with the deployment of mechanized road sweeping machines. No further observations & communications from GPCB regarding this NoD.
3	GPCB/CCA-SRT-1190(5)/ ID_14186/572186 dated 04/11/2020	Water Act	1) Unit is discharging generated wastewater having minor flow & pH @2 to 4 from central laboratory located in Corex Plant in to nearby storm water drain within	Compliance Status submitted to HO, GPCB on 18-11-2020. **<u>Action Plan Implemented:</u>** 1) The waste water discharge of Central Lab was of temporary nature and was	All the Points for the notice were compiled and closed immediately. Implementation done are: • losing of Temporary discharge immediately and system

Sr No.	Notice of Direction & Date	Under Section	Reason	Compliance Status	Remarks
			factory premises. 2) Unit is discharging treated wastewater in to storm water drain which is ultimately goes to estuary of river tapi which violates the CC&A condition i.e. Zero liquid discharge outside the factory premises. 3) In SMP-II plant, ETP sludge (@ 300 MT) is stored in open land & accumulation of sludge on land in haphazard manner near clarifier area. 4) Accumulation of sludge in haphazard manner near sludge drying bed. 5) Provided hazardous waste storage area seems to be inadequate in capacity with the	closed. Immediate samples were taken in presence of the GPCB officials from upstream & downstream of drain which were within the GPCB Effluent norms. Further, appropriate action is taken to collect acidic water from Central lab in drum which is sent to Effluent Treatment Plant ("ETP") for further treatment. Register also maintained for the disposal of water at ETP. 2) The waste water after being treatment is being used for Recycling, Horticulture, Gardening and plantation. Further, only storm water is being discharged into the Storm water drain. 3) The Sludge had been collected immediately & was shifted at the designated	implemented to treat in ETP with maintaining logbook. • The sludge had been collected immediately & was shifted at the designated Sludge Storage area. • Details has been submitted as asked by GPCB. • No further observations & communications from GPCB regarding this NoD.

Sr No.	Notice of Direction & Date	Under Section	Reason	Compliance Status	Remarks
			actual generation of the unit and roof of the storage area is damaged. 6) Unit has stored huge quantum of granulated slag on open land near jetty. 7) There is no mentioning of Fuel/Raw material i.e. Blending Coal in obtained EC issued in march 2016 w r to proposal. 8) Unit has proposed to use blended coal which is not a authorized fuel. 9) Unit has proposed to sell tar sludge to outside agency. The receptor details of the same is not submitted.	Sludge Storage area in compliance with the direction of your good office. 4) The sludge had been collected immediately & was shifted at the designated Sludge Storage area. 5) For Storage of Sludge, Adequate facility is available with two No. of Designated permanent sheds. The broken roof sheet was due to temporary damage and has already been changed. 6) Granulated Slag is being sold to outside agencies. 7) Coke oven gas which will be generated in Coke Making Process has high calorific value and will be utilized as a fuel in Coke Oven plant. 8) Metallurgical coal (mentioned in	

Sr No.	Notice of Direction & Date	Under Section	Reason	Compliance Status	Remarks
				EIA report) suitable for Coke making process will be used as fuel not blended coal. 9) Upon commencement of production at the Plant production, Tar Sludge will be sold to Authorized agencies as per GPCB/CPCB guidelines.	
4	GPCB/CCA-SRT-340(15)/ID-20680/587088 dated 31/03/2021	Air Act	1) Fugitive emission in the plant and road side due to vehicular movement as well as heavy dust deposition on the factory shed is observed. 2) Dust deposition on leaves of trees is observed at various locations. 3) General housekeeping is observed very poor in the plant area and water sprinkling is not carried out regularly.	Compliance Status submitted to HO, GPCB on 16-04-2021. **Action Plan Implemented:** • To arrest the Fugitive emission in the plant and road side due to Vehicular movement following measures are undertaken: • Fume Extraction system has been modified and revived for efficient suction. • Dust collection and extraction system is strengthened.	Actions have been taken for the all the points immediately and compliance has been submitted to GPCB. Actions Implemented are: • Suction is improved by revival and modification of duct system. • Filter bags are replaced and bag house size increased with high suction capacity. • Deployment of Mechanized Sweeping machines for improvement in fugitive emissions due to vehicular movement.

Sr No.	Notice of Direction & Date	Under Section	Reason	Compliance Status	Remarks
				• Bag house capacity is increased & filter bags have been replaced. • Manual water sprinkling is going on, in & around plant as well as on roads • Road sweeping machines have been increased form 2 nos. to 7 nos. for effective road cleaning. • Manual cleaning of the roads and the surrounding areas is enhanced by increasing additional manpower to 270 nos. per day. • Regular cleaning is being done of Factory shed to remove dust deposition. • Cleaning activity for Dust deposition on Leaves of trees is being taken care through water sprinkling by manually as well as mechanized on regular basis.	• Cleaning of dust depositions on leaves of trees by water sprinkling by manually as well as mechanized resources. • Special drives has been taken for improvement of housekeeping. • No further observations & communications from GPCB regarding this NoD.

Sr No.	Notice of Direction & Date	Under Section	Reason	Compliance Status	Remarks
				• Various actions are undertaken such as Water sprinkling, Cleaning, painting etc. to improve the housekeeping: • Special drives have been launched for improvement of housekeeping • Painting of the Shop-floors • Covers are provided over the Storm water drains • Improvement in Surrounding Housekeeping • Road Repairing Drive at inside & outside plant premises.	

NOTE: ROSHNI B. PATEL VS. UOI & ORS (O.A. NO. 27 OF 2020 (WZ))

Background & Present Status

The applicant in the captioned matter has approached the Hon'ble National Green Tribunal ("**NGT**") regarding the alleged dumping of hazardous waste by Hazira Container Freight Station Private Limited ("**HCFS**") and ArcelorMittal Nippon Steel India Limited ("**AMNS**").

The NGT on 4th August 2020 issued notice to the various respondents in the captioned matter and has directed the respondents to file their replies. AMNS has accordingly already filed a detailed reply denying the various allegations made in the captioned matter and has also clarified the factual position as detailed hereafter.

Response by AMNS

1. **Land presently bearing survey no. 261 is not owned by AMNS**
   a. It has been falsely alleged in the Application filed by the Applicant before the NGT that AMNS is disposing of hazardous waste on a land bearing survey no. 261 owned by AMNS which is adjacent to the land of HCFS and that the aforementioned land falls within Coastal Regulation Zone ("**CRZ**").
   b. Land presently bearing survey no. 261 which is adjacent to the land of HCFS is not

owned by AMNS and hence, AMNS is not disposing of any hazardous waste on the aforementioned land.

c. AMNS owned the earlier land bearing survey no. 261 which has been subsequently numbered as survey no. 83 and this land presently bearing survey no. 83 owned by AMNS is located within the premise of the Plant. Therefore, AMNS has nothing to do with land bearing survey no. 261.

2. Environmental compliance by AMNS

a. AMNS is an environmentally conscious company and it has been making all possible efforts to operate in harmony with the environment. AMNS is operating in compliance with the regulations and conditions imposed by or under existing laws in India.

b. AMNS has been undertaking several programs / activities / initiatives for the benefit of people residing in and around Hazira as a part of its Corporate Social Responsibility ("CSR") initiatives.

3. Disposal of hazardous waste

a. AMNS neither owns the land presently bearing survey no. 261 which is adjacent to the land of HCFS as falsely alleged by the Applicant nor is it disposing of any hazardous waste on the aforementioned land.

b. AMNS has been ensuring that the hazardous waste generated at the Plant is disposed of in compliance with the applicable laws and conditions imposed on AMNS by relevant regulatory authorities. Details of hazardous waste generated at the Plant and its disposal by AMNS is shown in the table below:

Sr. No.	Particulars	Disposal/recycling
1.	Chemical sludge from waste water treatment	Disposal at GPCB approved TSDF site.
2.	Used or spent oil	Sent to registered re-refiner.
3.	Empty barrels / Containers / Liners contaminated with hazardous chemicals / waste	Sent to registered re-refiner.
4.	Zinc Dross	Sent to authorized recycler.
5.	Iron slag	Being recycled internally in the Blast Furnace, Corex and also being used for construction of internal plant roads and village roads.
6.	Granulated slag	Being sold to authorized personnel/agencies.
7.	Fly ash	There is no generation of fly ash from the Plant.

a. There is no fly ash generation from the Plant of AMNS.

b. AMNS procures power pursuant to a power purchase agreement entered into by AMNS ("PPA"), which is very much essential for the seamless operation of its Plant. As per the terms of the PPA, AMNS is being supplied with fly ash generated from the power plant and the same is thereafter in a compliant manner sold to third parties who inter alia undertake to comply with all the applicable environmental compliances in this regard.

c. The Applicant in its Application before the NGT has created an illusion that fly ash is a hazardous waste, however, it is to be noted that fly ash is excluded from the category of hazardous wastes as per the Hazardous and Other Wastes (Management and

Transboundary Movement) Rules, 2016.

Gpcb Action Taken Report

GPCB is Respondent No. 5 in the case before the NGT. GPCB has submitted its Action Taken Report and in the said report, GPCB has stated that AMNS plant was visited by GPCB on 03.09.2020, 26.08.2021 and 23.09.2021 one of the salient features of the inspection report is that at present, no dumping / storage of the fly ash / slag / hazardous waste is observed on the land bearing survey no. 261.

Additional studies done by project proponent

52.11.19 Details of all the additional studies carried out and its recommendations shall be furnished.

Additional studies: Mangrove and CRZ study were done as additional studies. As per the mangrove survey study report there is no mangrove present with in the plant premises.

As per the CRZ study, proposed projects are located outside the CRZ area so there is no need of CRZ clearance for the proposed modernization project.

Details of public representations received if any and response of proponent

- Notice made through advertisement in the Newspapers "Indian Express" and "Gujarat Mitra", on 17/08/2021
- The Public Hearing was conducted on 21/09/2021 at 11:00 hrs. at ArcelorMittal Nippon Steel India Limited, Plant B Security Gate, Hazira Bypass Road, Hazira-394270, Ta. Choryasi, Dist. Surat under the chairmanship of Sh. Y. B. Jhala (GAS), Additional District Magistrate and Residential Additional Collector, Surat. Almost 550 persons attended
- The public hearing was attended by almost 550 persons
- AMNS received 23 no of written letters before PH and 9 no. of submissions during public hearing.

Sr. No	Area	Issues Raised	Commitment By Project Proponent	Response of Project Proponent & Action Plan
1	Medical Facilities	Setting up of Hospital	▪ Co-ordination with District authorities and nearby industries for Setting up of Hospital.	▪ Company will co-ordinate through District Health department and Hazira notified area authorities and with nearby industries to setup full-fledged hospital in the vicinity for the support of the people. Company will provide the necessary financial support in setting up the hospital.
		Providing Health Services	▪ Company is regularly supporting the community by providing health services at	▪ Company is regularly conducting the Health Check-up camps in neighbouring villages of Hazira belt and sets-up 750 Bed COVID hospital for the

Sr. No	Area	Issues Raised	Commitment By Project Proponent	Response of Project Proponent & Action Plan
			company's Care nursing home. ▪ Company has setup the 750 bed COVID hospital for the benefit of the local community.	benefits of the locals to combat from coronavirus. ▪ Also providing health service at our AMNS-Care Nursing Health centre, supported to Hemophilia care centre Civil hospital-Surat for treatment of Hemophilia patients. Further, Medical Check-up Camps & Health Services initiatives will be undertaken as under: ▪ Company will spend Rs. 60 lakhs in 5 years by conducting various Health Camps (Free Doctor consultation and medicine) for the community villages. ▪ Company will organize Health Awareness program on AIDS, Malaria, TB, Anaemia etc. and will spend Rs. 30 lakhs in 5 years. ▪ Company will support Haemophilia Care Centre at New Civil Hospital Surat and will spend Rs. 96 lakhs in 5 years.
		Supporting to Cancer Patients	▪ Company will extend the support to cancer patients.	▪ Company will Extend necessary support to required persons.
2	Education	Providing Education to Locals / Quality Teachers in Schools	Company is providing regular support for the Education enhancement for the locals	▪ Company is providing continuous support to the Nav-Jagruti Vidhya Vihar for Education Enhancement. ▪ Company has provided Two special teachers to the school, and they extended their services for Science, Maths and English. Teacher conducting Special coaching and remedial classes for weak students and improve their

Sr. No	Area	Issues Raised	Commitment By Project Proponent	Response of Project Proponent & Action Plan
				knowledge on mentioned Subject. ▪ Company provided Computer Expert Teacher conducting the Computer Theory and Practical Classes. ▪ Provided computer Set to the Mata Faliya Government Primary School for Educational Purpose use. ▪ Company will take further initiatives in consultation with education department for teachers training referral courses towards imparting quality education. Following Education activities are planned: ▪ Company has earmarked and will spend Rs. 98 lakhs in 5 years for High School Transformational Project (smart class, science lab, tinkering lab etc. under digital education) in partnership with Govt. ▪ Company will spend Rs. 75 lakhs in 5 years for Improvement in basic amenities & providing teaching learning materials in Anganwadi centre and Rs. 1 crore in 5 years for Primary and middle schools.
3	Environment	Environment Pollution	Due to Financial Loss of Previous company Environment improvement projects couldn't implemented. But the New company management will spend on state of art technologies and implement action	Following actions are planned for Environment Improvement: ▪ Company will put up a wind barrier around our boundary, so that dust particles if any to the temple minimized. Already company started the wind barrier for 400mt length at a cost of Rs.5 Cr and the job will be completed by Apr'22.

Sr. No	Area	Issues Raised	Commitment By Project Proponent	Response of Project Proponent & Action Plan
			plan for Environment improvement.	▪ For Further Environment improvement approx. Rs. 400 Crores will be spend which will improve the Environment conditions. Out of which Company is in active stage of implementation of Environment Improvement Action plan which is also submitted to GPCB costing around Rs. 173 crores with time line Jun'22. ▪ For further improvement in Fugitive emissions, Road making & Road repairing works will be carried out inside & outside complex.
		Development of Greenery	Adequate Greenbelt development will be undertaken by the company	▪ Company will increase the greenbelt development programmes by planting more trees inside and outside the premises for betterment of the Environment, targeting Villages, schools, playground for more plantation. ▪ Company will spend Rs. 75 lakhs in 5 years by Plantation and Greening Drive in villages and School premise. ▪ Greenbelt development inside and outside complex by planting 3,47,000 nos. of trees with costing around Rs. 11 crores.
4	Employment	Generation of Employment to locals	Locals will be given preference for the Employment. More than 700 employees of Kantha area are working with company.	▪ Maximum opportunities will be given to the local people according to their education qualification, experience, and skills. Providing maximum employment and skill training to local people. Company already provided employment to the 50 local candidates recently.

Sr. No	Area	Issues Raised	Commitment By Project Proponent	Response of Project Proponent & Action Plan
		Business to Local	Company will make system for the business to locals	▪ Company will make system & preference will be given to locals for the business in the company.
		Permanent Employment for Contractual persons	Company will take necessary steps for Permanent Employment to Contractual persons	▪ Company will provide the Permanent Employment to Local contractual employees based on the performance. ▪ In Oct'21, 100 contractual employees belong to nearby villages given permanent employment.
		Pay Increase for Women in CSR activities	Company will look into matter and will provide necessary assistant.	▪ Company will increase the pay based on the performance.
5	Livelihood	Risk due to Plant Operation	Necessary Risk Control system are installed and Safe operating are in place along with emergency plan.	▪ Company has implemented the risk mitigation measures & necessary control systems are installed. Emergency plans are also prepared. ▪ Company will take the responsibility and necessary corrective actions, if any damage to the people of affected areas and the employee as per regulations.
		Sustainable Livelihood	Company is already assisting the nearby community for Sustainable livelihood.	For sustainable livelihood company will spend 3.45 Crores in 5 years with following steps: ▪ Rs. 1 Crores will be spent for Vocational Skill Training for youths- Setting up Digital/Computer skill centre in partnership with NSD. ▪ Rs. 1.2 Crores will be spent for Setting up Paper Recycling Unit. ▪ Rs. 1.25 Crores will be spent for Promotion of Income Generation Activities- Poultry, Dairy, Pickle, Tailoring & embroidery, vegetable Cultivation etc.

Sr. No	Area	Issues Raised	Commitment By Project Proponent	Response of Project Proponent & Action Plan
		Land Payments	Necessary steps will be taken for resolving the issues.	▪ Company will look into the matter and will take necessary steps for the regularization.
6	Infrastructure	Water logging / Drainage of Rainwater	Water logging issues will be resolved with consultations.	▪ Company has taken initiative for the waterlogging issues and further steps will be taken for the drainage of rainwater.
		Traffic Congestion / Road Accidents	Steps will be taken for resolving the issue	▪ Company will co-ordinate with nearby industries for the solution of Traffic congestion. ▪ The company in consultation with local government administration will take necessary steps to prevent road accidents.
		Infrastructure development of Village	Company is regularly taking steps for infrastructure development.	Community Infrastructure development works will be undertaken in the surrounding villages: ▪ Company will spend Rs. 4.85 Crores in 5 years for Drinking Water supply through pipe line. ▪ Company will spend Rs. 60 lakhs for Construction of Community Centre in 4 villages.
		Sports Activities	Company will spend & support for Sports activities	Company will support village youths by organizing sports tournaments and providing sports materials: ▪ Company will spend Rs. 50 lakhs in 5 years by organizing sports tournaments and providing sports materials. ▪ Company will spend Rs. 26 lakhs in 5 years by organizing Annual Freedom Cup Cricket Tournament for differently abled person
		Emergency Route / Disaster	Definite steps will be taken for setting up the unit.	▪ As per direction of Authorities, the Company will coordinate with

Sr. No	Area	Issues Raised	Commitment By Project Proponent	Response of Project Proponent & Action Plan
		Management Unit		government as well as nearby Industries for setting up the common disaster management / Firefighting facilities and other necessary requirements.
8	CSR Activities	CSR Activities	Company will continue to do CSR Activities for nearby villagers..	▪ Rs. 16 Crore will be spent for CSR Activities within a span of 5 years in nearby villagers considering the suggestion of elders of the town and Sarpanch of the town. It includes mainly education, health, instruments for sports and training.
		Animal Husbandry	Necessary support will be provided.	▪ Company will implement Livestock management program under animal husbandry to increase cattle yield and farmers income. Company will also look into for providing grass for the cattle.

52.11.20 Name of the EIA consultant: M/s. Shree Green Consultants S. No 33, Certificate no NABET/EIA/2124/IA0072; Valid up to 24-02-24.

Certified compliance report from Regional Office

52.11.21 The Status of compliance of earlier EC was obtained from Regional Office, Bhopal vide letter no dated 01/04/2021 in the name of M/s ArcelorMittal Nippon Steel India Limited. The Action taken report regarding the partially/non-complied condition was submitted by PP to IRO, Gandhinagar through e-mail dated 26/11/2021. Review report on ATR has been issued by IRO, Gandhinagar on 07/01/2022 based on ATR received from PP nad subsequently site visit carried out by RO on 17- 18th December, 2021. The details of the observations made by RO in the report dated 07.01.2022 along with its re-assessment / present status as furnished by the PP is given as below.

S No	Non-compliances Details as on 01/04/2021	Observation of RO (abridged) as on 07/01/2022	Condition no.			Response by PP
			EC date	Specific	General	
1	The project proponent shall upload the status of compliance of	Compliance status of EC conditions and	09/03/2016	--	General Condition No. (xi)	Company's new management taken over the unit recently and PP is

S No	Non-compliances Details as on 01/04/2021	Observation of RO (abridged) as on 07/01/2022	Condition no.			Response by PP
			EC date	Specific	General	
	the stipulated environment clearance condition, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF&CC at Bhopal. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	monitored data has not been uploaded on company's website. **Not Complied**				framing the website in consultation with the parent company. After framing the new website, it will be uploaded as per the requirement. PP will be getting system ready by January, 2022. EC & Latest Compliance report uploaded on website.
2	'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.	Mixing of industrial waste water with storm water drains was observed.	09/03/2016	Specific Condition No. (x)	--	As per Environment Clearances granted earlier, AMNS has permission to discharge water to the Tapi Estuary.

S No	Non-compliances Details as on 01/04/2021	Observation of RO (abridged) as on 07/01/2022	Condition no.			Response by PP
			EC date	Specific	General	
		Not Complied				As per latest Consent to Operate (CTO) granted by GPCB, Company has permission to discharge the water into Tapi Estuary for HRC Division, Plate Mill Division and Power Division. (Total Permission - 27572 M^3/day) and currently around 12,000 m^3/day treated effluent is being discharged into Tapi estuary after confirming GPCB discharge standards. In 2016 EC, Ministry has recommended Zero liquid discharge (ZLD) for the proposed expansion facilities, however due to Financial Implications and NCLT earlier management could not be able to complete the ZLD. Now the new management i.e. AMNSI has taken over ZLD project. Pipeline work is already started. Entire project expected to

S No	Non-compliances Details as on 01/04/2021	Observation of RO (abridged) as on 07/01/2022	Condition no.			Response by PP
			EC date	Specific	General	
						complete in phases. First Phase will be completed by Jan'23 and remaining Phase will be completed by Dec'23. The unit has taken an initiative to achieve the target of ZLD and in these directions they have started the construction for separating storm water from the industrial effluent. The Pipe Line work was seen during site inspection. It was informed that they are planning to execute the entire process in phases and the First Phase will most likely be completed by January, 2023 and remaining Phase will be completed by December 2023. At present it is directed to make necessary arrangement to check the outfall of water from the blast furnace unit. The action taken should be intimated within

S No	Non-compliances Details as on 01/04/2021	Observation of RO (abridged) as on 07/01/2022	Condition no.			Response by PP
			EC date	Specific	General	
						15 days to the regional office Gandhinagar. In view of the above and as per site observation the unit are in progress stage to achieve the mandate of ZLD. Although in the present scenario the condition is considered as not complied.
3	At least 5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village panchayat and District Administration. Action taken	Risk and Disaster Management plan, details of expenditure incurred and funds earmarked for Enterprise social commitment, details of policy towards CER, compliance status of CC&A and EIA/EMP report has not been submitted. Partially Complied	09/03/2016	Specific Condition No. (xvii)	--	PP has undertaken community development activities for nearby villages. Till 2019, the unit was under NCLT process and no major CSR activities was carried out. Last year CSR Activity details and action plan for next 05 years is submitted.

S No	Non-compliances Details as on 01/04/2021	Observation of RO (abridged) as on 07/01/2022	Condition no.			Response by PP
			EC date	Specific	General	
	report in this regard shall be submitted to the Ministry's Regional Office.					
4	The project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http:/envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspaper that are widely circulated in the region of which one should be in vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional Office at	Details of newspaper advertisement of EC granted, financial closure and final approval of project, date of commencing land development work has not been submitted. Partially Complied	09/03/2016	--	General Condition No. (xii)	• 2010 EC is an administrative one for merging of earlier separate ECs obtained for company's two units in 2007. There was no change in production as per this 2010 EC. • Paper advertisements for the 2007 ECs only were given by the earlier management and the copy the same is submitted. PP sincerely apologized for this pending action. PP will assure to comply this point for all the ECs hereafter. **Partly Complied** • The unit has published the public notice in two newspapers on 14/03/2016. The PP has apologized for

S No	Non-compliances Details as on 01/04/2021	Observation of RO (abridged) as on 07/01/2022	Condition no.			Response by PP
			EC date	Specific	General	
	Bhopal.					the action taken in the past and ensured that no such lapse will occur in future correspondence.

52.11.22 Ministry was in receipt of public representation dated 16/09/2021 and 19/09/2021 for non-compliance of EC conditions and cancellation of the public hearing regarding project cited above. Accordingly forwarded to IRO, Gandhinagar for seeking point wise reply on public representation on 24/11/2021.

IRO, Gandhinagar submitted letter dated 17/01/2022 to Ministry regarding public representation in which stated that during site visit carried out on 17- 18th December 2021. The points of public representation were covered during site visit and accordingly observation on these points made in Review report issued by IRO, Gandhinagar on 07/01/2022. comments of IRO, Gandhinagar are given as below:

S No	Points of Public representation	Comments of IRO, Gandhinagar
1	The untreated/ half treated effluent from the plant is being disposed in the fragile estuary ecosystem of Tapi River	The treated waste water was used in various system making process within the unit. But a huge volume of water from the Blast Furnace unit were discharged into a drain which was going out of the premises. The water was accumulated inside the premises of blast furnace unit and the raw material handling in the unit was also very poor. The units were draining water outside the premises at three locations for which they have taken the consent from GPCB. The water quality monitoring station was installed at the outlet. The results were within the prescribed limits. The unit has taken an initiative to achieve the target of ZLD and in these directions they have started the construction for separating storm water from the industrial effluent. The Pipe Line work was seen during site inspection. It was informed that they are planning to execute the entire process in phases and the First Phase will most likely be completed by January 2023 and remaining Phase will be completed by December 2023. At present it is directed to make necessary arrangement to check the outfall of water from the blast furnace unit. The action taken should be intimated within 15 days to the regional office

S No	Points of Public representation	Comments of IRO, Gandhinagar
		Gandhinagar. In view of the above and as per site observation the unit are in progress stage to achieve the mandate of ZLD. Although in the present scenario the condition is considered as not complied.
2	The plant is not operating as per Zero Liquid Discharge conditions and remained Non-compliant	Reply has been made at point no 1.
3	Large waste heaps are present in open in the plant causing ground water pollution	No sludge was observed near the ETP plant. It was disposed at TSDF site. A drain was trenched at the ETP site where water was seen accumulated, which needs to be filled in a time bound manner and the report should be submitted to the IRO Gandhinagar. The unit has provided two sludge storage area which were covered by the shed. There needs an improvement in the design of sludge storage area so that rainwater could not mix with the solid waste. The garland drain should be constructed all around to prevent the mixing along with a U shape ramp for loading and unloading of sludge. The area has the potential to develop a green belt all around. The roads around storage area should be made pucca in a time bound manner to prevent the fugitive emissions. No generation of fly ash were seen during site inspection. They don't have coal based power plant.
4	Plant units for the propose expansion plants already constructed before grant of ToR	--
5	Slag & other waste is being disposed into the sea by company	As per the documents provided at site it can be concluded that the unit were utilizing 80% of solid waste in house whereas they are exploring the possibilities with international technology supplier/CSIR labs to utilize 100% waste. The slag storage area was seen and it was informed that they were in negotiation with NHAI to use the slag in road construction. They are also in negotiation in RDSO for replacing ballest with steel slag. In view of the above the condition is considered as complied.

Observations of the Committee

52.11.23 The Committee noted the following:

i. EC is being sought for modification in the existing plant by installation of additional facilities without increasing overall capacity of 9.6 MTPA at Hazira, Surat, Gujarat.
ii. TOR was granted on 8/2/2021.
iii. Total land in possession is 770 ha.
iv. Tapi estuary is 500 m from site and Arabian sea is 2 km, NH-6 is adjacent to the plant site and Hazira Town is 2.45 km. Hazira reserve forest is 1.72 km SSW.
v. There are no mangroves in the project premises, however within the study area there are several.
vi. PM concentration in ambient air are as high as 124.85 $\mu g/m^3$ and incremental ground level concentration of PM are as high as 20.7 $\mu g/m^3$.
vii. Activity wise yearly targets for socio development have not been furnished as per OM 30/9/2020.
viii. Existing green belt in the plant is only 22.21%. Revised time bound action for green belt development in 33% of total area in a time frame of two years shall be submitted.
ix. Following points are noted from the RO report:-
    a. PP has committed to upload monitored data from the plant on company's website by Jan 22.
    b. 12,000 KLD treated water is being discharged in Tapi estuary. As per EC 2016 ZLD was to be achieved. PP now commits ZLD by end Dec 2023.
    c. EMP commitments for SE development have not been met so far. No action plan has been submitted.
    d. PP has not uploaded the EC of 2016 for the information of the public.
    e. Two conditions out of 10 have been partially complied and 2 have not been complied.
x. Performance monitoring of PCDs has not been included in the post project monitoring schedule.
xi. Maximum GLC in the EIA report for PM is mentioned as 34.5 $\mu g/m^3$ at 1.7Km . SO2 as 27.4 $\mu g/m^3$ at 0.5 Km in SW and NOx at 1.9 $\mu g/m^3$ at 1.2Km. This is different from what is given in slide number 34 of presentation given before the EAC.
xii. Chapter 5 onwards the EIA Report chapters are not following the sequence given in Appendix III of EIA Notification 2006.
xiii. Additional TOR Compliance:
    a. TOR point number 2 related to green belt development has not been complied.
    b. TOR point number 4 – there is no firm commitment to reduce Acid fume emissions to <10mg/Nm^3 of HCl in ARP.
    c. TOR point 7 – Incinerator to handle oil sludge and scum from CRM has not been proposed.
    d. TOR point 9 – ZLD not achieved.
    e. TOR point 10 – Mangrove survey has been done only in plant premises and not in the study area as required.
    f. TOR point 11 – CRZ mapping of the project site has not been carried out by the authorized agency, inter alia HTL/LTL mapping, CRZ land classification along with superimposition of the facilities envisaged in the project.
    g. TOR point 12 – Cumulative impact assessment has not been done on the pretext that the capacity of the plant is not going to change while several new facilities that would add pollution are being added to the EC configuration.

h. TOR point 13 – Rs16 Cr has been allotted for CSR. EMP as per OM of 30/9/2020 has not been furnished.
i. TOR point 14 – CEMS signal for the process control in the plant control room has not been proposed.
j. TOR point 19 – Ultra low NOx burners have been proposed in CRM 2 only.

xiv. General TOR point 9 – Head HSE shall report to VP and does not have any direct reporting relationship with MD of the Board. TOR 9(iv) is not addressed properly.
xv. General TOR point 11 – Has not been addressed as per OM of 30/9/2020.
xvi. SPECIFIC TOR:
a. TOR number 3 – Installation of CEMS has not been done so far.
b. TOR number 4 – Analysis of toxic metals including Hg, As, F is not available in EIA report.
c. TOR number 19,20 (Page 40 pdf of EIA report) – On page 2-106 of EIA report details of toxic metals and waste in the slag has not been furnished
xvii. There are lots of non-compliances to TOR conditions in EIA report as mentioned above
xviii. There is no firm commitment on installation of CDQ for the Coke Oven Plant.
xix. Multiple Effect Evaporator(MEE) for RO reject has not been proposed. It is mentioned that RO reject shall be used for BF slag quenching. It may be noted that RO reject is highly toxic and on evaporation during slag quenching shall result into air pollution and heavy corrosion of structures around.
xx. Percentage of hot charging of slabs and billets has not been committed for energy conservation.
xxi. BF gas dry cleaning is not proposed.
xxii. Secondary FES is proposed on EAF in SMP 2. Common system has been proposed for all furnaces which is risky from balancing point of view.
xxiii. As per GBCB consent 27572 KLD treated effluent is discharged in Tapi river while EC of 2016 mentions ZLD.
xxiv. Chapter 2 of EIA report is not in the format of Appendix III of EIA Notification of 2006. Chapter 4 is generic. Impacts have not been quantified except for incremental concentration of pollutants. Mitigation measures have also not been quantified.
xxv. In new Sinter plants technologies like MEROS for dioxin and furan emission control and Sinter cooler waste heat recovery for power generation have not been proposed.
xxvi. Impact matrix in table 4.7 of EIA report does not present realistic scenario in the absence of any quantification and significance analysis of impacts.
xxvii. Post Project Performance monitoring schedule for PCDs is not given.
xxviii. Only CSR activities have been listed in chapter 7. PH related and SIA related activities have not been described and budgeted as per OM 30/9/2020.
xxix. Chapter 8 is EMP (Chapter 10 as per EIA Notification 2006) .
xxx. Environment Management Cell details are not available as required under TOR 9.
xxxi. Chapter on alternate site and technology has been kept blank.
xxxii. Chapter 12 heading is wrong, not as per EIA Notification. It is mentioned as "Consultant Engaged".
xxxiii. Signature of EIA team are scanned.

Recommendations of the Committee

52.11.24 In view of the foregoing and after detailed deliberations, the committee recommended to return the proposal in its present form to address the shortcomings enumerated at 52.11.23 and submit the revised application as per the provisions of EIA Notification, 2006. Further,

the Committee warned the EIA consultant for submission of poor quality of EIA report and advised to improve upon the quality of EIA report.

52.12 Proposal for Expansion of Integrated Cement Plant (clinker 3.6 MTPA to 7.2 MTPA; Cement 5 MTPA to 10 MTPA) by Installation of Line-II by **M/s. RCCPL PVT LTD** located at Village Bharauli & Itahara, **District Satna, Madhya Pradesh** [Online Proposal No. IA/MP/IND/230332/2021, File No. J-11011/375/2011-IA.II(I)] **– Extension of validity of Environment Clearance – regarding.**

52.12.1 M/s. RCCPL Private Limited has made an online application vide proposal no IA/MP/IND/230332/2021 dated 04/01/2022 along with Form-6 and sought for Extension of validity of Environment Clearance (EC) accorded by Ministry vide letter no. J-11011/375/2011-IA(I) Dated 5th February 2015.

Details submitted by Project proponent

52.12.2 The project of M/s. RCCPL PVT LTD was granted Environment Clearance by the Ministry vide letter No. J-11011/375/2011-IA.II(I) dated 5/02/2015 for a project titled "Integrated Cement Plant (clinker 3.6 MTPA to 7.2 MTPA; Cement 5 MTPA to 10 MTPA) by Installation of Line-II by M/s. RCCPL PVT LTD located at Village Bharauli & Itahara, District Satna, Madhya Pradesh" under the provisions of EIA Notification, 2006.

52.12.3 Due to change in management, as Reliance Cement Company Pvt Ltd has been takeover by M/s. Birla Corporation Limited in August 2016 the project was re-appraised by the new management and project lenders, re-engineering due to the above caused delay in grant of mining leases of the mines of 2nd line and demand growth of cement was not as estimated also caused delay. Project proponent has requested to extend the validity of Environmental Clearance dated 5/02/2015 for another three years i.e. till 4/02/2025.

52.12.4 The details of the project as per EC

S. no	Product	Existing Line-I	Proposed Line-II	TOTAL
1	Clinker production (MTPA)	3.6	3.6	7.2
2	Cement production (MTPA)	5.0	5.0	10
3	Auxiliary Fuel	Furnace Oil, High Speed Oil		
4	Land Requirement(ha)	150	16	166
5	Water requirement & Source	7900 m^3/d Groundwater	1380 m^3/d Groundwater	9280 m^3/d Groundwater
6	Power Requirement	75mw	60mw	135mw
7	Power Source	CPP/Nearest grid substation		
8	Project Cost	Rs 2500 cores	Rs1663 cores	Rs4163 cores
9	Environmental Protection cost	Rs 200 cores	RS 135 cores	Rs 335 cores

Observations of the Committee

52.12.5 The Committee noted the following:

i. EC was given on 5/2/2015 for expansion of ICP from 3.6 to 7.2 MTPA clinker, 5 to 10 MTPA cement by installing Line 2 of Reliance Cementation at Satna, MP.
ii. Validity of EC will expire on 4/2/2022.
iii. Three years of extension in validity is requested.
iv. Plant got delayed due to takeover by Reliance from Birla Corporation, cost overrun and COVID-19.
v. Extent of the work completed and the balance work to be completed and a bar chart for the same has furnished. As per the bar chart, the project will be implemented by Feb, 2025.

Recommendations of the Committee

52.12.6 In view of the foregoing and after deliberations, the Committee recommended to extend the validity of Environment Clearance for a period of three years beyond 4/02/2022, i.e., from 5/02/2022 to 4/02/2025 subject to stipulation of environmental safeguards prescribed in the EC dated 5/02/2015.

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ANNEXURE –1

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

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

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco/sensitive areas and environmentally sensitive places)
iii. Co/ordinates (lat/long) of all four corners of the site.
iv. Google map/Earth downloaded of the project site.
v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
vii. Landuse break/up of total land of the project site (identified and acquired), government/private / agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
ix. Geological features and Geo/hydrological status of the study area shall be included.
x. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
xii. R&R details in respect of land in line with state Government policy.

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

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).
ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha).*
iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis/à/vis the project location and the recommendations or comments of the Chief Wildlife Warden/thereon.
v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.
vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6. **Environmental Status**

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

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

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

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

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

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

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

viii. Soil Characteristic as per CPCB guidelines.

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

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

xi. Socio/economic status of the study area.

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

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

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

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

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

8. **Occupational health**

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

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

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

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

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

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

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

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ANNEXURE/2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

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

ADDITIONAL ToRs FOR PELLET PLANT

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

ADDITIONAL ToRs FOR CEMENT INDUSTRY

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

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

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

ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY

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

ADDITIONAL ToRs FOR COKE OVEN PLANT

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

ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

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

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

Executive Summary

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

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

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Email **Sundar Ramanathan**

Re: DRAFT MOM OF 52 EAC MEETING HELD ON 27-28 JAN 2022

From : cnpandey@iitgn.ac.in Thu, Feb 03, 2022 03:59 PM

Subject : Re: DRAFT MOM OF 52 EAC MEETING HELD ON 27-28 JAN 2022 1 attachment

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

Dear Mr Sundar,
Please find the final and approved MoM for EAC 52. Please take further action regarding uploading the same on Parivesh.
Best wishes,
C. N. Pandey,
Chairman EAS Industry I